CHAPTER 15. LEXICAL NOMINALIZATIONS IN KOREAN

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1 Introduction

In one of the first demonstrations of the theoretical prowess of transformational grammar, Lees (1960) proposed to capture the relatedness of nominalizations and sentences through transformations that converted underlying sentences to surface nominalizations. Under this view, all nominalizations are de-sentential and derived in the syntax, which entails a blurring of the boundary between word formation and syntax. Against this backdrop, Chomsky (1970) argued that a unified syntactic analysis of nominalizations fails to capture crucial differences between syntactic nominalizations (cf. 1a) and lexical deverbal nominalizations (cf. 1b).

(1) a. [John's rejecting all offers of help] has led to his eventual demise
    b. [John's examination of the patient] led to a new diagnosis

While maintaining that syntactic nominalizations (gerunds) are derived in the syntax, Chomsky proposed that deverbal nominalizations such as (1b) should be treated differently.[1] Newmeyer (2008) summarizes the motivations that led Chomsky (1970) to divide nominalizations into two types in terms of following three arguments.

(2) a. Idiosyncracy Argument
    b. Internal Structure Argument
    c. Frozen Structure Argument

The Idiosyncracy Argument is based on the observation that while syntactic nominalizations are regular and compositional, lexical nominalizations are not. The input to lexical nominalizations may not exist (*mote vs. motion, *ush vs. ush-er), and the output of lexical nominalizations may have non-compositional and idiosyncratic interpretations, unlike syntactic nominalizations. Assuming syntactic rules are general and exceptionless, these considerations speak against deriving lexical nominalizations in the syntax. The Internal Structure Argument is built on the observation that unlike gerunds, the internal syntax of DPs projected from lexical nominalizations is identical to that of those containing underived nouns as heads.[2] The Frozen Structure Argument is based on the logic of ordering. If lexical nominalizations are derived in the syntax, they should be able to operate on the outputs of transformations, but it is claimed that this is not possible. These facts motivate a lexicalist analysis of deverbal nominalizations. Grimshaw (1990) is a landmark treatise among lexicalist analyses, where a crucial explanatory burden is attributed to argument/event structure, which is orthogonal to the lexicon/morphology-syntax divide.

   Chomsky's logic for separating lexical and syntactic nominalizations has been questioned in recent analyses espousing a unified syntactic analysis of syntactic and lexical nominalizations (Alexiadou, 2001, etc.). The reasons to pursue a unified syntactic analysis are many. Theoretically, argument/event structure is deemed by many to be a matter of syntax proper (Hale & Keyser, 1993; Borer, 2003; Ramchand, 2009, etc.). So is morphotactics in an influential theory of morphology, Distributed Morphology (Halle & Marantz, 1993). The decomposition of lexical items into Roots and category-assigning functional heads (Marantz, 2007) is claimed to be able to deal with the non-productivity and idiosyncracy of lexical (aka, low) nominalizations, thus neutralizing the Idiosyncracy Argument.

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[1] Marantz (1997) reminded us that, contrary to folk history, Chomsky's proposal was not to introduce rules in the lexicon/morphology to derive nominals from verbs but to posit an underspecified entry that could be realized as a verb or a noun depending on context, with morphology playing at most an incidental role.

[2] That is, while the phrases projected from gerunds display a mixture of nominal and verbal properties internally, the internal syntax of DPs headed by lexical nominalizations is uniformly nominal. The argument is challenged by subsequent findings in Grimshaw (1990) and Fu, Roeper and Borer (2001), as we will see shortly.

Empirically, unified analyses receive support from the fact that the class of lexical nominalizations most like syntactic nominalizations, argument-bearing *complex event nominals* (Grimshaw, 1990), are putatively always deverbal (Borer, 2005), which suggests that argument structure may not be cross-categorial after all. In addition, nominalizers employed in syntactic nominalizations also function to derive lexical nominalizations, which suggests a continuity between the two (Yoon, 1996a, 1996b; Kaiser, 1998).[3] Most importantly, Grimshaw (1990) and Fu, Roeper, and Borer (2001, FRB hereafter) claimed that the internal syntax of DPs projected from complex event nominals may differ from that constructed from simple nouns, which challenges the robustness of the Internal Structure Argument. Similarly, the Frozen Structure Argument has been argued not to be valid (Bruening, 2013, 2018), or if it is, to be amenable to a syntactic analysis of lexical nominals (Alexiadou, 2009; Harley & Noyer, 1998; Harley 2009a—though see Newmeyer, 2008).

The goal of the chapter is to examine the viability of unified syntactic analyses of lexical nominalizations in Korean, through investigation of the following questions.

(3) a. Do lexical nominalizations in Korean display complex event behavior and/or pass diagnostics that have been argued to support a syntactic analysis of lexical nominalizations?

b. Do lexical nominalizations operate on bases that are created in the syntax, which entails, by the logic of ordering, that the resulting nominalizations are formed in the syntax?

The first question concerns the Internal Structure Argument and will be evaluated by examining deverbal nominalizations containing simple bases. The logic of the second question is identical to that of the Frozen Structure Argument, which used ordering to determine the locus of formation of lexical nominalizations. To answer the first question, we test Korean deverbal nominalizations with a number of proposed diagnostics that have been taken to support a syntactic analysis of lexical nominalizations, in particular, those proposed in Grimshaw (1990) and FRB (2001). To answer the second, we investigate a class of deverbal nominalizations whose bases have been argued to be derived in the syntax.

We shall see that lexical nominalizations with simple bases fail to display complex event diagnostics or evidence for the presence of an underlying VP. In fact, we shall see that the overall validity of these diagnostics needs to be re-assessed, even in English. Examination of lexical nominalizations containing complex bases leads to the same conclusion. There is no reason to think that the complex bases are created syntactically, and hence, there can be no argument from ordering supporting the syntactic analysis of lexical nominalizations.

The organization of the remainder of the paper is as follows. In Section 2, we review properties of syntactic nominalizations and introduce examples of lexical nominalizations that potentially instantiate complex event nominals. Section 3 applies diagnostics for complex event nominals to lexical nominalizations containing simple bases. Section 4 examines nominalizations containing complex bases and addresses the issue of whether Nominalizer Uniformity holds in Korean. Section 5 is the conclusion.

2 Nominalizations in Korean

The properties of syntactic nominalizations in Korean provide the backdrop to those of lexical nominalizations, so we will review them briefly. Syntactic nominalizations are created by suffixing the nominalizer *-um* or *-ki* to (inflected) verbs. While they attach to verbs, they scope over a clausal constituent, as indicated by the bracketing shown below.

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[3] This is the generalization dubbed *Nominalizer Uniformity* in Kaiser (1998). There are dedicated lexical nominalizers that do not participate in deriving syntactic nominalizations. However, there appear to be no languages with nominalizers found solely in syntactic nominalizations, which suggests a continuity between lexical and syntactic nominalizations not naturally captured in analyses based on Chomsky (1970), where one might expect a more radical separation between the two types of nominalizations.

(4) a. [Cheli-ka pap-ul   nemwu   kupha-key   mek-ess]-**um**-i pwunmyengha-ta
    C-nom   meal-acc too   hurried-adv   eat-pst-nmz-nom evident-decl
    'It is obvious that Cheli ate too hurriedly'

  b. (Ne-nun) acikto [hananim-i/?uy wuli-lul   salangha-si]-**m**-ul molu-ni?
    You-top still God-nom/gen we-acc   love-sbj.hon-nmz-acc not.know-Q
    'Do you still not know that God loves us?'

  c. (Na-nun) [Cheli-ka/*uy pap-ul   cey ttay mek-ko iss]-**ki**-lul   palan-ta
    I-top C-nom/gen   meal-acc proper time eat-comp be-nmz-acc hope-decl
    'I hope that Cheli is taking his meals on time.'

  d. [Cheli-ka manhi phikonhay-ess]-**ki** ttaymwuney swuep-ul ppaci-ess-ulke-ta
    C-nom   a.lot tired-pst-nmz   because   class-acc miss-perf-mod-decl
    'Cheli likely missed class because he was really tired.'

Syntactic nominalizations display properties expected of their counterparts in other languages. In addition to having a nominal over verbal/clausal functional structure, gen-marked subjects/possessors are possible (marginally for *-um* nominalizations). While externally nominal, they are incompatible with determiners/demonstratives or plural-marking, suggesting that the nominalizer is a functional head at the top of nominal hierarchy (D, most likely). The interpretation of the nominalization is eventive or propositional. No result or agent nominal interpretation is possible. Internally, the structure is fully verbal/clausal. Adverbs (both high and low) are allowed but not adjectives; with the exception of gen-marking on subjects of *–um* nominalizations, verbal/clausal case-marking is found on dependents; negation, auxiliaries, tense/aspect, VP and sentential coordination are allowed. The size/type of constituent that undergoes nominalization is easy to determine because of the transparent morphology of Korean and regular morphotactics. Finally, *-um* and *-ki* nominalizations differ in factivity, and hence, are compatible with different matrix predicates (cf. 4a, b vs. c). Not surprisingly, the consensus on syntactic nominalizations is that they are derived in the syntax through nominalization of verbal/clausal constituents (Yoon 1996a, 1996b).

 Turning to lexical nominalizations, according to Ko (1989), there are about fifty odd suffixes involved in deriving lexical nominalizations in Korean. The bases include verbs, adjectives, and bound roots. The following, cited from C-S. Kim (1996: 113), is a representative list of lexical nominalizers and resulting nominalizations.

(5) ciwu$_V$-**kay** 'eraser' (ciwu-: erase)
   tul$_V$-**kkes** 'stretcher' (tul-: carry/lift up)[4]
   nuli$_A$-**kwangi** 'slow poke' (nuli-: be slow)
   po$_V$-**ki** 'example' (po-: see)
   nulk$_A$-**tali** 'geezer', 'dotard' (nulk-: be old)
   mit$_V$-**um** 'faith' (mit-: believe)
   wul$_V$-**po** 'cry baby' (wul-: cry)
   mek$_V$-**i₁** 'catch', 'food' (mek-: eat)
   kem$_A$-**twungi** 'black person' (pejorative) (kem-: be black)
   ttwungttwung$_R$-**i₂** 'fat person' (pejorative) (ttwungttwung-: root)

Of these, *-i, -kay, -um,* and *-ki* are productive to varying degrees in Modern Korean. The potential event/action nominalizers are **-i, -ki, -um**. Among them, *-um* and *-ki* are far more productive than *-i*. The two are also used productively as syntactic nominalizers, displaying Nominalizer Uniformity. Our focus therefore is on lexical nominalizations formed with *-um* and *-ki*.

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[4] Though listed among lexical nominalizations by Ko (1989), this word is the result of reanalysis/lexicalization of the noun *k(k)es* modified by a relative clause (*tu(l)-l*, 'carry-rel'). See also *mek-ul-kkes* ('food').
  Reanalysis/lexicalization is also involved in the creation of words such as *celm-un-i* (young-rel-person, 'young person'), *nulk-un-i* ('old-rel-person, 'elderly'), and *eli-n-i* (child-rel-person, 'child'), where *-i* cannot be identified with the nominalizing suffix *-i* as it occurs after a relative/adnominal ending.

2.1 Preliminaries

We examine nominalizations containing both simple and complex bases. The reason is as follows. There are relatively few simple/underived native stock predicates in Korean, and so not surprisingly, productive coinages of nominalizations often involve bases that are complex. For nominalizations of simple, there is only one possible analysis—affixation. Things are different when the base is complex.

 Complex bases will be schematized **X-V**. There are several types to consider. The first contains complex verb bases (X=V), while in the second X=N. For the former, only the affixation analysis makes sense. This is because there are no [N V-N] compounds in Korean.

(6) a. [N [V mil-e-nay]-kiN] ('crowding out') vs. *[N [V mil-e]-[N nay-ki]]
    push-comp-out-nmz
  b. [N [V kki-e-mac.chwu]-mN] ('fitting in by force') vs. *[N [V kki-e]-[N mac.chwu-m]]
    squeeze-comp-fit-nmz

However, for the latter, two parses are possible, as shown below.

(7) a. nach-kali-m ('shyness with strangers') cwul-nem-ki ('(doing) jump rope')
    face-cover-nmz   rope-hop-nmz
     Affixation   Compounding
  b. [N [? nachN-kaliV]-mN] or [N [nachN]-[N [kaliV-mN]]
    [N [? cwulN-nemV]-kiN] or [N [cwulN]-[N [nemV-kiN]]

Granting that some N-V-affix forms might have the second parse (C-S. Kim, 1996; C-K Shi, 1998), we assume that the affixation parse is correct for the majority of such forms.[5]

 There is actually a third, more complex, type of base (allowed with –ki only), for which only the affixation analysis (cf. 8e) makes sense.

(8) a. wu-nun-ai-ttek-hana-te-cwu-**ki**
    cry-rel-child-rice.cake-one-more-give-nmz
    'act akin to treating a pestering child preferentially'
  b. pyeth-ey-malli-**ki**
    sun-loc-dry-nmz
    'drying (clothes) in the sun'
  c. phal-kwuphi-e-phye-**ki**
    arm-bend-comp-straighten-nmz
    'performing push-ups'
  d. pwukhan-ceytaylo-al-**ki**
    N.Korea-properly-get.to.know-nmz
    'getting to know N.Korea properly'
  e. [N [? wu-nun-ai-ttek-hana-te-cwu]-**ki**] vs. *[N [? wu-nun-ai-ttek-hana-te]-[N cwu-**ki**]]
    [N [? pyet-ey-malli]-**ki**]
    [N [? phal-kwup-hi-e-phye]-**ki**]
    [N [? pwukhan-ceytaylo-al]-**ki**]

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[5] Evidence against the compound analysis comes from the following considerations:

  (i) Lack of compound-internal 'linking s' (*sai-sios*) epenthesis:
    N-V-affix   N-N compound
    kul-cis-ki (letter-write-nmz, 'composing') vs. *kul-**s**-kongpwu* (letter-study, 'learning to read')
    pal-totwu-m (feet-extend-nmz, 'tiptoeing') vs. *pal-**s**-cangtan* (feet-beat), 'keeping time with feet')
  (ii) The fact that V-affix is not an independently attested noun (**kali-m*, etc.).

2.2 Derived Eventive Nominals

Since the derived nominals that figure centrally in the argument for syntactic approaches are eventive nominals with argument/event structure, we need tests for eventive interpretations. The first diagnostic that identifies a nominal as eventive is the ability to occur in a light verb construction with *ha-ta*. As seen in (9a), the test correctly distinguishes eventive nominals (such as *moi-m*, 'meeting') from result nominals (such as *chayk*, 'book'). Results of the second test with predicates that require eventive readings (cf. 9b) align with those of the first.

(9) a.   moi-m-ul   ha-ta
            meet-nmz-acc   do-decl
            'hold a meeting'
     a'.   *chayk-ul   ha-ta
            book-acc   do-decl
            'do a book'
     b.   moi-m-i   nemwu   olay   ka-ss-ta
            meet-nmz-nom   too   long   go-pst-decl
            'the meeting lasted too long'
     b'.   *chayk-i   nemwu   olay   ka-ss-ta
            book-nom   too   long   go-pst-decl
            'the book lasted too long'

2.3 Complex Event vs. Simple Event Nominals

Grimshaw (1990) famously distinguished between a class of simple event nominals and complex event nominals. Potential counterexamples to the Internal Structure and Frozen Structure Arguments come from the latter, not the former. One property that is claimed to distinguish complex event and simple event (or result) nominals is the obligatory expression of arguments of the base verb. In (10a), the addition of the complex event modifier *intentional* is claimed to force the obligatory expression of the internal argument.

(10) a.   The intentional **examination** *(of the patients) lasted a long time
            (complex event nominal)
     b.   The **exam(ination)/event/race** lasted a long time
            (simple event, result nominal)

In addition to obligatory argument expression, Grimshaw (1990) identified additional properties that distinguish the two types of nominals. The following is an illustrative summary.

Table 15.1 Complex event diagnostics (from Alexiadou & Grimshaw, 2008: 3)

Result Nominals	Complex Event Nominals
a. Non-Θ-assigner, No obligatory arguments	Θ-assigners Obligatory arguments
b. No event reading	Event reading
c. No agent-oriented modifiers	Agent-oriented modifiers
d. Subjects are possessives	Subjects are arguments
e. *by* phrases are non-arguments	*by* phrases are arguments
f. No implicit argument control	Implicit argument control
g. No aspectual modifiers	Aspectual modifiers
h. Modifiers like *frequent*, *constant* only with plural	Modifiers like *frequent*, *constant* appear with singular
i. May be plural	Must be singular

Two additional diagnostics of complex event nominals that directly bear on the Internal Structure Argument are proposed by FRB. The authors argue that an underlying VP can be detected in a DP headed by complex event nominals. Specifically, low adverbs and VP proforms are claimed to be possible when a complex event nominal heads a DP, but not when a simple event/result nominal is the head.

(11) a. His explanation of the situation **so thoroughly** did not impress the tenants
     His resignation **so suddenly** gave rise to wild speculations
  a'. *His version of the accident **so thoroughly** did not impress the police
     *?The trip/event **so suddenly** took a toll on the staff
  b. ?Sam's destruction of the documents this morning was preceded by Bill's **doing so** yesterday.
  b'. *?Bill's journey before the break and my **doing so** afterward were both carefully planned

Before proceeding, it is important to clarify that Grimshaw (1990) did not take the properties of complex event nominals she identified to necessitate a syntactic analysis of this class of nominals but appealed to argument/event structure to explain the differences between complex event and result nominals. However, the facts unearthed by FRB cannot easily be accounted for in a lexical analysis invoking argument structure. That is why in the subsequent literature, the Grimshaw-FRB diagnostics have been interpreted overwhelmingly in syntactic terms.

Now, why details and nomenclatures differ, all unified syntactic analyses assume that the differences between complex event and simple event/result nominals are attributable to the height of the structure targeted by the nominalization, an idea that is modeled on the analysis of different types of syntactic nominalizations in the literature. The following is illustrative of how a unified syntactic analysis of lexical and syntactic nominalizations work.

(12) (Adapted from Alexiadou and Grimshaw 2008:13)

    a. [D   [AspP *ing*   [VoiceP   [vP   [√
    b. [D   [n *ing*   [VoiceP   [vP   [√
    c. [D   [n *ation*   [vP   [√
    d. [D   [n *ation*   [√

Just as verbal (12a) and nominal (12b) gerunds are distinguished by the height of verbal functional projections that are nominalized, complex event (12c) and simple event (12d) nominals are distinguished by the amount of structure that undergoes nominalization. In particular, complex event nominals have a vP, unlike simple event nominals that nominalize a Root without verbal structure. In this style of analysis, argument/event structure is a property of verbs and is projected in the syntax as vP. FRB's evidence for an underlying VP is predicted under these assumptions. So is the putative generalization that argument-bearing nominals are always deverbal.

Syntactic analyses of complex event vs. simple event/result nominals make an important prediction—all of the properties of nominals are predicted to behave together. A nominal will allow *all* of the complex event properties or *none*. This is a prediction we want to test with deverbal nominals in Korean.

3 Complex Event Diagnostics for Korean Lexical Nominalizations

Before proceeding, we need to determine how the diagnostics for complex event nominals proposed by Grimshaw and FRB play out in Korean morphosyntax. This is because while the application of some diagnostics to the Korean data is straightforward, that of others is not.

Let us start with the diagnostics proposed in Grimshaw (1990) (Table 15.1). According to Grimshaw, complex event nominals mandate the full syntactic expression of argument structure. However, given that Korean has pervasive null arguments, the lack of surface arguments need not entail that this diagnostic fails to hold. The conclusion should not change even with the addition of complex event diagnostics (agent modifiers, aspectual modifiers, implicit control). Interpretation of a nominal as event is not relevant to distinguishing complex event and

simple event nominals. Furthermore, in English, there is a unique prenominal possessor position. If the possessor is an adjunct, the requirement that the full argument structure of a complex event nominal be expressed cannot be met since in English an external argument of the base verb in nominalizations can only be expressed as a prenominal possessor. This diagnostic will not work in Korean where adjuncts and external arguments can co-occur. The test involving *by*-phrases is similarly not applicable in general since the base of lexical nominalizations in Korean does not usually admit passive morphology. And it is well known that while nouns can optionally be marked plural, the properties of plural-marking in Korean differ from English. By contrast, the complex event diagnostics proposed in FRB offer no complications when applied to Korean. Bearing these differences in mind, we will apply complex event diagnostics to nominalizations that contain simple bases, formed via affixation of *-um* and *-ki*.

3.1 V-*um* Nominalizations

First, the arguments of the base verb need not be expressed overtly.

(13) a.   **(Yenghi-uy)** **(Tongswu/casin-kwa-uy)** ssawu-m-i   kyesoktoy-n-ta
        Y-gen   T/self-with-gen   fight-nmz   continue-prs-decl
        '(Yenghi's) fight (with Tongswu/herself) is ongoing.'

    b.   **(Cheli-uy)** (**caki calmos-uy)**   nwiwuchi-m-un   swunkan-ppwun-i-ess-ta
        C-gen   self wrong-gen   show.remorse-nmz-top   moment-only-cop-pst-decl
        '(Cheli's) remorse (for his mistakes) did not last long.'

    c.   **(Yeyswunim-uy)** (**caki**   **ceycatul-uy)** kaluchi-m-un   sam-nyen-tongan-i-ess-ta
        Jesus-gen   self   disciples-gen teach-nmz-top   3-years-during-cop-pst-decl
        '(Jesus's) teaching (of his disciples) took place for three years'

The addition of other complex event diagnostics (agentive/aspectual modifiers, implicit control) does not impact the pattern of argument expression.

(14) a.   (Yenghi-uy) **uytocekin**   (Tongswu/casin-kwa-uy)   ssawu-m
        Y-gen   intentional   T/self-with-gen   fight-nmz
        '(Yenghi's) intentional fight (with Tongswu/herself)'

    a'.   (Cheli-uy)   **uytocekin**   (caki calmos-uy)   nwiwuchi-m
        C-gen   intentional   self wrong-gen   show.remorse-nmz
        '(Cheli's) intentional remorse (for his mistakes)'

    b.   **sam-nyen-tongan-uy** (Yeyswunim-uy) (caki   ceycatul-uy) kaluchi-m

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              3-year-during-gen    Jesus-gen        self      disciples-gen teach-nmz
              '(Jesus's) teaching (of his disciples) for three years'
       b'.    twu sikan-tongan-uy  (Yenghi-uy)  (Tongswu-wa-uy)  ssawu-m
              2-hour-during-gen     Y-gen          T-with-gen       fight-nmz
              '(Yenghi's) fight (with Tongswu) for two hours'
       c.     [PRO    nala-lul          cikhi-ki wiha-n]  (Taliban-kwa-uy)  ssawu-m
                      country-acc       protect-in.order  (T-with-gen)      fight-nmz
              'The fight (with the Taliban) to protect the homeland'
       c'.    [PRO    seysang-ulo   ponay-ki wiha-n]    (caki ceycatul-uy)     kaluchi-m
                      world-to      send.out-in.order   (self disciples-gen)   teach-nmz
              'The teaching (of his disciples) in order to send them out to the world'
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And, unlike English, adjunct and external argument possessives can co-occur in Korean.

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(15)   Yenghi-uy        cinan     pen-uy        Tongswu-wa-uy   ssawu-m
       Y-gen            last      time-gen      T-with-gen      fight-nmz
       'Yenghi's fight with Tongswu on a previous occasion'
```

What is interesting is that with some eventively interpreted nominals, it is not possible to have the full, overt, expression of arguments. For example, the nominal *ttayli-m* 'beating' has a dyadic verbal base, but it is marginal for both arguments to surface. The same holds for *manna-m* 'meeting'.

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(16) a.    *?apeci-uy   Cheli-uy      ttayli-m
           father-gen   C-gen         hit-nmz
           'father's beating of Cheli'
           vs.
           apeci-uy/Cheli-uy        ttayli-m
           father-gen/C-gen         hit-nmz
           'father's/Cheli's beating'
     b.    *?John-uy    Mary-uy       manna-m
           J-gen        M-gen         meet-nmz
           'John's encounter with Mary'
           vs.
           John/Mary-uy      manna-m
           J/M-gen           meet-nmz
           'John's/Mary's encounter'
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Importantly, the difficulty of full argument expression does not change even when complex event modifiers are added.

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(17) a.    *?apeci-uy   uytocekin/yele pen-uy      Cheli-uy     ttayli-m
           father-gen   intentional/frequent       C-gen        hit-nmz
           'father's intentional/frequent beating of Cheli'
     b.    *?John-uy    uytocekin/yele pen-uy      Mary-uy      manna-m
           J-gen        intentional/repeated       M-gen        meet-nmz
           'John's intentional/repeated meetings with Mary'
     c.    *?[PRO tongsayng-eykey pon-ul         poi-ki wiha-n]  apeci-uy    C-uy     ttayli-m
                  brother-to      example-acc    show-in.order   father-gen  C-gen    hit-nmz
           'father's beating of Cheli in order to set an example for his brother'
```

The complex event diagnostics put forth by FRB do not work for Korean. As seen below, adverbs are disallowed in deverbal nominalizations. Adjectival modification is required. Adverbs are fine in syntactic gen-acc nominalizations, by contrast (18b).

(18) a. Cheli-uy   ***hwaksilha-key/hwaksilha-n***   calmos-**uy**   nwiwuchi-m
         C-gen   sure-adv/sure-adn   wrong-gen   regret-nmz
         'Cheli's definite/*definitely regret of his mistakes'
   b.   Cheli-uy   **hwaksilha-key**   calmos-**ul**   nwiwuch-m
         C-gen   sure-adv   wrong-acc   regret-nmz
         'Cheli's definitely regretting his mistakes'

VP pro-forms are out, while nominal pro-forms are possible (though somewhat marginal).

(19) a. *Cheli-uy   calmos-uy   nwiwuchi-m-i   Yenghi-uy   **kuleh(-key ha)-m**-pota
          C-gen   wrong-gen   regret-nmz-nom   Y-gen   do.so-(comp do)-nmz-than
         tel   cinsilhay-ss-ta⁶
         less   truthful-pst-decl
         'Cheli's regret of his mistakes was less truthful than Yenghi's doing so.'
   b.   Cheli-uy   calmos-uy   nwiwuchi-m-i   Yenghi-(uy) **(ku)kes**-pota
         C-gen   wrong-gen   regret-nmz-nom   Y-(gen)   that-than
         tel   cinsilhay-ss-ta
         less   truthful-pst-decl
         'Cheli's regret of his mistakes was less truthful than Yenghi's'

We turn now to deverbal nominalizations employing -*ki*.

3.2 V-*ki* Nominalizations

The results of applying complex event diagnostics to this class of nominalizations are identical to those for V-*um* nominals, except that the internal argument of the base of V-*ki* nominalizations cannot be expressed as a gen-marked complement, but only as part of the complex N-V base. The pattern does not change when additional complex event diagnostics are added (20d).

(20) a   **3-haknyensayngtul-uy/nophu-n**   **swucwun-uy**   ilk-/ssu-/paywu-ki
         3-graders-gen/high-adn   standard-gen   read/write/learn-nmz
         '3ʳᵈ graders'/advanced reading/writing/learning'
   b.   **hanca-(*?uy)**   ilk-/ssu-/paywu-ki
         Chinese-gen   read-/write-/learn-nmz
         'reading/writing/learning of Chinese characters'
   c.   **3-haknyensayngtul-uy**   **hanca-(*?uy)**   ilk-/ssu-/paywu-ki
         3-graders-gen   Chinese-gen   read-/write/learn-nmz
         '3ʳᵈ graders' reading/writing/learning of Chinese characters'
   d.   haksayngtul-uy   **uytocekin/yele pen-uy**   hanca-(*?uy) ilk-/ssu-/paywu-ki
         students-gen   intentional/frequent   Chinese-gen   read-/write-/learn-nmz
         'the students' intentional/frequent reading/writing/learning of Chinese characters'

---

⁶ VP pro-form is better in syntactic gen-acc nominalizations. Compared to (19a), the following is acceptable.

   (i)   Cheli-uy   calmos-ul   nwiwuchi-m-i   Yenghi-uy   **kuleh(-key ha)-m**-pota
          C-gen   wrong-acc   regret-nmz-nom   Y-gen   do.so-(comp do)-nmz-than
         tel   cinsilhay-ss-ta
         less   truthful-pst-decl
         'Cheli's regretting his mistakes was less truthful than Yenghi's doing so.'

3.3 Verdict

The following is a summary of how the complex event diagnostics work for Korean deverbal nominalizations.

Complex event diagnostics for Korean nominalizations: summary

(21) a.	Obligatory arguments	Y/N
b.	Agent-oriented modifiers	Y
c.	Internal arguments with adjuncts	Y (but not relevant)
d.	Implicit control of purposive adjuncts	Y
e.	Aspectual modifiers	Y
f.	VP adverbs	N
g.	VP pro-forms	N

Recall that a key prediction of syntactic accounts is that a nominal should display all of the complex event diagnostics or none. This is so because these accounts posit that argument/event structure is represented in the syntax as a verbal projection, which in turn predicts that we should find aspectual/event modifiers, adverbs, and VP pro-forms in the presence of argument structure. However, we do not find the diagnostics behaving together in Korean, even when language-specific factors are taken into account. Arguments of the base verb cannot always be expressed.[7] The addition of further complex event diagnostics (agentive and aspectual modifiers, implicit control) has no impact on the pattern of argument expression. If lexical nominalizations have a verbal projection, adverbs and VP pro-forms should occur in them, but they cannot.[8]

The facts of Korean pose a significant challenge to the central premise underlying syntactic accounts of complex event nominalizations that view argument structure as stemming from a verbal projection. As a matter of fact, the assumption that there is a set of diagnostics that coherently distinguish between a class of complex event and simple event/result nominals has been challenged even for English. Based on a systematic examination of corpus data, Lieber (2016) argues that every one of the complex event diagnostics proposed in Grimshaw (1990) is counter-exemplified. Park and Park (2017) and Bruening (2018) come to the same conclusion. When taken together with the fragility of judgments regarding the diagnostics proposed by FRB, this implies that the empirical generalizations that potentially challenge the Internal Structure Argument rest on a shaky foundation.[9]

There is another class of argument-bearing nominals in Korean whose properties reinforce this conclusion. These are Sino-Korean Verbal Nouns (VN), such as *yenkwu*, 'research', *swuhayng* 'execution', which bear argument/event structure and allow their full syntactic expression, but do not allow adverbs or VP pro-forms (Yoon & Park, 2003; Park, 2013).

(22) a.   Cheli-uy   **sip-nyen-tongan-uy/uytocek-in**   thongsalon-uy   yenkwu
        C-gen   10-years-during-gen/intentional-adn syntax-gen   research
        'Cheli's (intentional) research on syntax (for 10 years)

      b.   [PRO   caki   hakkyo-uy   myengseng-ul   nophhi-**ki wihan**]
                self   school-gen   reputation-acc   elevate-in order
        Cheli-uy   cisokcek-in   thongsalong-uy   yenkwu
        C-gen   continual-adn   syntax-gen   research
        'Cheli's continuing research on syntax in order to boost the reputation of his university'

---

[7]   This is the case with some V-*um* nominalizations (cf. 16) and systematically so for all V-*ki* nominalizations (cf. 20).

[8]   Among works that adopt a syntactic approach, we find that some do not accept the FRB diagnostics. If we think about it, a syntactic approach necessarily makes the prediction that VP diagnostics should work for lexical nominalizations because argument structure entails the presence of v/VP. In fact, evidence for v/VP is the strongest empirical argument in support of syntactic analyses, as emphasized by FRB, since the Grimshaw diagnostics can be accounted for equally well under a lexicalist account (see Alexiadou & Grimshaw, 2008 on this point).

[9]   While some researchers do not accept adverbs in complex event nominalizations (see previous note), there are others who contend that adverbs can be added even to simple event/result nominals. The following reflects the judgements of Newmeyer (2008). Notice that the nominals here cannot be complex event nominals in Grimshaw's (1990) system.

    (i)   I must deplore the **recourse** all too frequently to underhanded tactics
    (ii)   America's **attack** on Iraq was even less justified than the latter's doing so to Kuwait

c.   Cheli-uy   chelceha-**n**/*-**key**   caki   uymwu-uy   swuhayng
      C-gen   thorough-adn/-adv   self   responsibility-gen   execution
      'Cheli's thorough execution of his responsibilities'

d.   *Cheli-uy   panghak-tongan-uy   yehayng-i   Yenghi-uy   **kuleh**(-**key ha**)-m-pota
      C-gen   break-during-gen   travel-nom   Y-gen   do.so-nmz-than
      te   caymi-iss-ess-te-nkes   kath-ta
      more   fun-have-pst-mod   seem-decl
      'Cheli's trip during his vacation seems to be have been more fun than Yenghi's'

d'.   Cheli-uy   panghak-tongan-uy   yehayng-i   Yenghi-(uy)   **(ku)kes**-pota
      C-gen   break-during-gen   travel-nom   Y-gen   that-than
      te   caymi-iss-ess-te-nkes   kath-ta
      more   fun-have-pst-mod   seem-decl
      'Cheli's trip during his vacation seems to have been more fun than Yenghi's'

Aspectual/agentive modifiers are compatible with VNs (22a), as is implicit agent control (22c). This should make VNs complex event nominals embedding a verbal projection. However, adverbs and VP proforms are banned. Adnominal modification and DP proforms must be employed.

The behavior of Korean VNs and deverbal lexical nominalizations shows that the foundational premise of syntactic accounts of lexical nominalizations is not supported. The re-evaluation of the English evidence for complex event nominals undertaken in Lieber (2016) and other work, coupled with the indeterminacy surrounding the arguments put forth in FRB, cast doubt on the existence of the so-called complex event diagnostics. A syntactic analysis of Korean lexical nominalizations cannot be built on potential challenges to the Internal Structure Argument because there are no systematic differences in the internal syntax of DPs projected from complex event nominals and other nominals.

4 Nominalizations with Complex Bases

In this section, we evaluate another possible argument for the syntactic analysis of lexical nominalizations in Korean, modeled on the Frozen Structure Argument. The Frozen Structure Argument is predicated on the logic of derivational ordering. Chomsky (1970) assumed that lexical nominalizations are formed in the lexicon. Since the output of the lexicon feeds syntax and not vice versa, it follows that lexical nominalizations cannot be formed on the output of syntactic processes, such as passive and raising. Recently, Bruening (2018) has challenged Chomsky's (1970) claim that lexical nominalizations are incompatible with raising in English, casting doubt on the Frozen Structure Argument. In Korean, however, raising is incompatible with lexical nominalizations, and bases of lexical nominalizations that carry passive morphology are small in number. Nevertheless, we can construct a potential ordering argument with nominalizations that contain complex bases. If these bases are derived in the syntax, then the ensuing nominalization must also be syntactic. Since there is a tradition of analyzing some complex bases in syntactic terms, this argument holds promise.

There are two types of complex bases to consider: the first containing N-V bases and the second that has more complex phrasal bases.[10]

4.1 Type I: N-V Base

Recall we adopted an affixation parse for this type of nominalization. What remains is to identify the nature of the base and examine how it is constructed.

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[10]   We will not be discussing complex bases containing compound verbs (V-V) but will focus on those where the first member is a nominal (Type I), or a complex phrase (Type II). V-V bases might be instantiations of Type II bases, since the first V has a linking/complementizing ending.

(23)　　[$_N$ [? nach$_N$-kali$_V$]-**m**$_N$] (=7b)
　　　　[$_N$ [? cwul$_N$-nem$_V$]-**ki**$_N$]

The base of these nominalizations can be paraphrased as VPs, where N functions as the accusative-marked object of V.

(24) a.　nach-kali-m　　　　　Cf.　　　nach-ul　　　kali-ta
　　　　　face-hide-nmz　　　　　　　　　face-acc　　　hide-decl
　　　　　'shyness with strangers'
　　　b.　kul-cis-ki　　　　　　　　　　　　kul-ul　　　　cis-ta
　　　　　letter-compose-nmz　　　　　　　letters-acc　　compose-decl
　　　　　'composition'
　　　c.　pal-ppay-m　　　　　　　　　　　pal-ul　　　　ppay-ta
　　　　　feet-pull.out-nmz　　　　　　　　feet-acc　　　pull.out-decl
　　　　　'backing out'

And while some N-V bases are paraphrased as sentences where N functions as a nom-marked subject, the noun is never interpreted as Agent but rather as Theme/Patient (Shi, 1998; M-K. Kim, 2004).

(25) a.　phi-tol-ki　　　　　　Cf.　　　phi-ka　　　　tol-ta　　　　　　　('phi' = Theme)
　　　　　blood-circulate-nmz　　　　　　blood-nom　　circulate-decl
　　　　　'blood circulation'
　　　b.　chung-mil-li-ki　　　　　　　　chung-i　　　　mil-li-ta　　　　　('chung' = Theme)
　　　　　fault.line-push-pass-nmz　　　　fault.line-nom　push-pass-decl
　　　　　'fault line shift'
　　　c.　pay-pwulu-m　　　　　　　　　pay-ka　　　　pwulu-ta　　　　　　('pay' = Theme)
　　　　　stomach-full-nmz　　　　　　　stomach-nom　　full-decl
　　　　　'fullness'

A Google search yielded the following, but the context made it clear that the meaning literally is 'racing a horse' and '(game where the player is) walking a horse':

(26) a.　mal-talli-ki
　　　　　horse-race-nmz
　　　　　'horse-racing (game)'
　　　b.　mal-ket-ki
　　　　　horse-walk-nmz
　　　　　'horse-walking (game)'

As we can tell, N-V bases display the earmarks of noun incorporation, which has been argued to be derived in the syntax in Baker (1988) and much subsequent work. If the base is derived in the syntax, then, by the logic of ordering, nominalization of the base must also be syntactic (Shi, 1998, 2015).

　So, is the syntactic derivation of N-V bases feasible? The following suggests that the answer is negative. There are denominal predicates in Korean that show clear evidence of syntactic derivation (Shi, 1998; Yoon 2017). A cogent reason to consider denominal predicates such as *hakca-tap-* (scholar-be.like-decl), 'be scholarly', to be derived in the syntax is the transparency of the noun base to syntactic processes such as modification. Yoon (2017) shows that in addition to external modification, this type of denominal predicate systematically violates most proposed tests of lexical integrity, which would make sense if the predicate is derived in the syntax. By comparison, the N of N-V bases of lexical nominalizations is not transparent to syntactic processes such as external modification.

(27) a.　na-nun　　　　Tongswu-uy　**hwullyungha-n**　hakca-taw-um-ul　　　conkyenghan-ta
　　　　　I-top　　　　　T-gen　　　　　excellent-adn　　scholar-like-nmz-acc　respect-decl
　　　　　'I respect that Tongswu comports himself in a manner worthy of his reputation as an excellent scholar.'
　　　b.　Ayki-ka　　　**yeppu-n**　　　　nach-kali-m-ul　　　han-ta
　　　　　baby-nom　　pretty-adn　　　　face-cover-nmz-acc　do-decl

    =/= 'The baby is hiding its pretty face from strangers'
    = 'The baby is being shy with strangers, which is cute'

  c. Tongswu-nun   **eleywu-n**   mal-tha-ki-lul   ha-ko   iss-ta
      T-top   difficult-adn   horse-ride-nmz-acc do-comp be-decl
    =/= 'Tongswu is riding a difficult horse.'
    = 'Tongswu is doing horse-riding, which is difficult for him.'

The modifier *yeppu-n* 'pretty' in (27b) and *elyewu-n* 'difficult' in (27c) can only modify the entire nominalization, not the N of the N-V base, unlike *hwullyungha-n* 'excellent' in (27a) that modifies the N within the nominalized denominal predicate.

    Another argument against the syntactic derivation of N-V bases is that for some bases, the N-V relationship is not something that is allowable under syntactic incorporation (C-S Kim 1996; Hong, 1999). In particular, there are nominalizations with complex N-V bases where N functions as an adjunct, which cannot undergo syntactic incorporation in Baker's (1988) system.[11]

(28) a.   ppeng-thwi-**ki**
        pop.sound-toast-nmz
        'wafer that is toasted with a popping sound'
    b.   pantal-ssel-**ki**
        half.moon-chop-nmz
        'chopping food in the shape of half moon'
    c.   pom-pey-**ki**
        spring-cut-nmz
        'tree/crop harvested in spring'
    d.   yeph-cha-**ki**
        side-kick-nmz
        'side kick (in martial arts)'

Within contemporary understandings of syntactic theory, it is unclear whether Baker's (1988) argument that motivated a syntactic analysis of noun incorporation based on the restricted theta role of the incorporated noun is valid, since the core theoretical assumptions that undergirded the original analysis (specifically, UTAH, ECP) are no longer widely accepted. On the empirical side, noun incorporation patterns that transgress the theoretical strictures of Baker's system have been discovered in several languages such as Chukchi and Ainu.

    Given this state of affairs, the argument for the syntactic nature of noun incorporation must rest on facts such as evidence of word-internal transparency, rather than the theta role of the incorporated nominal. It is here that we find a pronounced difference between the N-V bases and syntactically formed N-V structures (such as N-*tap-*), which suggests that the former is not constructed in the syntax

    In sum, while a syntactic incorporation analysis of N-V bases looks initially promising, both language-internal evidence and theoretical considerations militate against it, which in turn implies that the base is formed through lexical N-V compounding.

4.2 Type II: X*-V Base

A stronger *prima facie* evidence that the complex base of the nominalizer is created in the syntax, and hence, by the ordering logic, that the resulting nominalization is also syntactic, comes from nominalizations containing a second type of complex base, which is allowed only with *-ki*.

    As we see below, the bases can be paraphrased as VPs.

(29) a.   wu-nun-ai-ttek-hana-te-cwu-**ki**
        cry-rel-child-rice.case-one-more-give-nmz

---

[11] One might attempt to explain these away as N-N compounds. While the compound parse might work for (28d) since *cha-ki* is a listed noun (e.g., *cha-ki-wa cilu-ki* 'kicking and punching'), it does not work for *thwi-ki*, *ssel-ki, pey-ki* in (28a-c), which do not exist independently as nouns.

'act akin to treating a pestering child preferentially'
a'. (na-nun) wu-nun ai-eykey ttek-(ul) hana te cwu-ess-ta
(I-top) cry-adn child-to rice.cake-(acc) one more give-pst-decl
'(I) gave one more piece of rice cake to a crying child.'
b. pyeth-ey-malli-**ki**
sun-loc-dry-nmz
'drying (clothes) in the sun'
b'. (na-nun os-ul) pyeth-ey malli-n-ta
(I-top clothes-acc) sun-loc dry-prs-decl
'I dry clothes by hanging them out in the sun.'
c. phal-kwuphi-e-phye-**ki**
arm-bend-comp-straighten-nmz
'(performing) push-ups'
c'. (na-nun) phal-ul kwuphi-(ess-taka) phi-ess-ta
(I-top) arm-acc bend-(pst-comp) straighten-pst-decl
'(I) bent and then straightened my arm.'
d. pwukhan-ceytaylo-al-**ki**
N.Korea-properly-get.to.know-nmz
'getting to know N.Korea properly'
d'. (na-nun) pwukhan-ul ceytaylo a(l)-n-ta
(I-top) N.Korea-acc properly know-prs-decl
'I have an unbiased understanding of North Korea.'

Interestingly, in addition to creating event/action nominalizations, this type of nominalization occurs as the non-head constituent of phrasal compounds.

(30) a. [pwukhan-ceytaylo-al-ki]-**wuntong**
N.Korea-properly-know-nmz-movement
'movement to get to know NKorea in an unbiased way'
b. [phal-kwuphi-e-phye-ki]-**sihap**
 arm-bend-comp-straighten-nmz-contest
'push-up contest'
c. [iwus-mence-insaha-ki]-**khaympheyin**
neighbor-first-greet-nmz-campaign
'campaign to be the first to greet one's neighbor'
d. [wu-nun-ai-ttek-hana-te-cwu-ki]-**phuloceykthu**   (Google search)
cry-adn-child-rice.cake-one-more-give-nmz-project

That the internal structure of the complex base of the nominalization is syntactic/phrasal is uncontroversial. However, we need to dig deeper into the properties of the base before concluding that nominalizations containing such bases are formed in the syntax.

   There is a proposal that derives the base syntactically that can easily be rejected. Shi (1998) argued that just as N-V bases are created in the syntax through noun incorporation, the complex bases of the second type are created through repeated incorporation/head movement. However, Shi's proposal encounters technical problems within the framework that he adopted (Baker, 1988), since head movement/incorporation is constrained to only move the head of a complement XP to the head of the selecting constituent, but all kinds of constituents are included in the complex base, in violation of the hypothesized constraints on head movement.

   Shi's motivation for positing head movement was to capture the fact the complex base behaves as a 'word'. That is, while the base has the usual trappings of syntactic collocations (word order, adverbs, etc.), its internal structure is opaque to syntactic processes (cf. 31a, b), unlike the internal structure of minimally contrasting syntactic nominalizations (cf. 31a', b').

(31) a. *[pwukhan-**ettehkey**-al]-ki-wuntong-ul   (ne-nun)   ha-ko   iss-ni?[12]
         N.Korea-how-know-nmz-movement-acc   (you-top)   do-comp   be-Q
         Lit: 'In what way are you running a campaign to get to know North Korea?'
    a'. [pwukhan-ul **ettehkey**   al]-ki   wihay   (ne-nun)   nolyekha-ko   iss-ni?
         N.Korea-acc how   know-comp in.order   (you-top)   make.effort-comp   be-Q
         'In what way are you making an effort to get to know North Korea?'
    b. *[ceytaylo-__al]-ki-ka   poswuchung-uy   pantay-ey   pwutithi-n   **pwukhan**
        properly-know-nmz-nom   conservative-gen opposition-loc   meet-adn   N.Korea
        Lit: 'North Korea, (the efforts) to get to know which properly ran into opposition from conservatives'
    b'. [ceytaylo   __ al-]-ki-ka   swip-ci   anh-un   **ku**   **salam**
         properly   know-nmz-nom   easy-comp   neg-adn   that   person
         'That person, whom it is not easy (for us) to get to know'

Rather than positing incorporation to account for the internal opacity of the complex base, we attribute the opacity of the complex base by assuming that the base string is an XP that has undergone XP-to-X^0 reanalysis, with the result of the reanalysis undergoing –*ki* nominalization. Schematically;

(32)   [$_{VP}$ pwukhan ceytaylo al-]

→ Reanalysis

[$_V$ pwukhan-ceytaylo-al-]

→ *ki*-nominalization

[$_N$ pwukhan-ceytaylo-al-ki]

The reanalysis proposal not only explains why the internal structure of the complex base looks parallel to that of phrases (because a VP is reanalyzed), but also why it is opaque (because it is a 'word', V^0).

Now, reanalysis should not be equated with diachronic lexicalization. While reanalysis can lead to diachronic lexicalization, all kinds of phrases can be productively reanalyzed on the fly, most of which do not undergo lexicalization.[13] It is also clear that reanalysis cannot be equated with regular structure-building in syntax (which we take to be accomplished by Merge). Sato (2010, based on Johnson, 2003) models reanalysis as Renumeration, an operation that targets an XP that has not yet Merged with another syntactic object, apply Spell-out, and send it to the lexical choice (Numeration, Lexical Array) of the derivation, which makes it an atomic syntactic object that subsequent operations of Merge can target. Sato's analysis clearly shows that Renumeration is different from Merge. Syntactic nominalizations do not involve Renumeration. In (31a', b'), an XP built by Merge undergoes Merge with the *ki*-nominalizer in the syntax, whereas -*ki* attaches to the output of reanalysis in the case of lexical *ki*-nominalizations containing complex, reanalyzed bases in (30a-d) and (31a, b).

The reanalysis-*cum*-nominalization proposal allows us to make sense of the fact that this type of nominalization can occur as a non-head member of phrasal compounds. This is because the best analyses of phrasal compounds all posit XP-to-N reanalysis (or something similar) for the non-head constituent, making phrasal compounds a sub-type of attributive N-N compounds (Ackema & Neeleman, 2004; Harley, 2009b; Pafel, 2015; etc.).

While reanalysis is sufficient to turn a phrase into an X^0 in many languages (including English), there are languages where reanalysis is accompanied by nominalization (German), and where the renanalyzed/nominalized constituents occur as part of phrasal compounds (Turkish).[14]

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[12] The reason for the ill-formedness of (31a) cannot be that the *wh*-word is inside a potential island (if we count the phrasal compound as a type of complex NP). *wh*-in-situ inside islands is widely attested in Korean, as is well-known. In fact, the *wh* is inside an adjunct island in (31a').

[13] In (30), the only example showing lexicalization of the base is (30b). The others are nonce formations.

[14] Nominalization is not necessary when a nominal phrase is reanalyzed. The following are examples of reanalyzed/lexicalized DPs (see also Footnote 4).

(i)   tu(l)-l-kkes   eli-n-i   anc-un-khi   kenne-l-mok
       carry-adn-thing   young-adn-person   sit-adn-height   cross-adn-juncture

(33) <u>German</u> (Lawrenz, 2006: 8-9)
    a.   Licht-in-Strom-Umwandl-**er**
        Light-in-current-convert-nmz
        'light-in-current converter'
    b.   Kinder-über-Mittag-Betreu-**ung**
        Children-on-noontime-care.take-nmz
        'Child care during noon hour'

(34) <u>Turkish</u> (Aylin Coskun, p.c. See also Trips & Kornfilt, 2015)[15]

a.	bir.türlü	mutlu	ol-a-ma-**ma**-mız	düşün-ce-si
	never	happy	be-abil-neg-nf.nmz-1pl.pos	think-nmz-cm

        'the thought that we can never be happy'

b.	Ali'-nin	sınav-ı	geç-**eceğ**-i	yalan-ı
	Ali-gen	exam-acc	pass-nmz-acc	lie-cm

        'the lie that Ali will pass the exam'

c.	ic	camasir-in-i	göster-**me**	oyun-u (Trips & Kornfilt 2015:308)
	internal	laundry-3sg-acc	show-nf.nmz	game-cm

        'show your underwear game'

Before we move on, we need to address a potential challenge to the reanalysis proposal. Reanalysis predicts a complete parallel between phrasal XPs and their reanalyzed counterparts, but this is not the case, as we see below (M-K. Kim, 2004).[16] While complements of verbs can be included in reanalysis, overt accusative marking is banned (35a, c). Tense/aspect cannot be included in a reanalyzed phrase (35b). Neither can the object be modified by the demonstrative *ku* 'that' (35d).

(35) a.   [pwukhan-*?**ul**-ceytaylo-al]-ki-wuntong
       NKorea-**acc**-properly-know-nmz-movement
    b.   [pwukhan-ceytaylo-al-***keyss**]-ki-wuntong
       NKorea-properly-know-**fut**-nmz-movement
    c.   [phal-***ul**-kwupi-e-phye]-ki-sihap
       arm-**acc**-bend-comp-straighten-nmz-contest
    d.   [wu-nun-ai-***ku**-ttek-hana-te-cwu-]-ki-phuloceykthu
       cry-rel-child-that-rice.cake-one-more-give-comp-be-nmz-project

These constraints do not hold of syntactic *ki*-nominalizations (cf. 32a'). Interestingly, the Turkish data, which contains accusative-marked objects within the string that is reanalyzed, indicate that the ban on these elements is not a general property of reanalysis either.[17]

   M-K. Kim (2004) argues that these restrictions are due to the interpretive properties of lexical -*ki* nominalizations, which must have a *dispositional/conventional action* interpretation.[18] According to C-S. Kim (1986), a lexical -*ki*

	'stretcher'	'child'		'height when seated'	'crosswalk'
(ii)	ankyeng-takk-nun-kes		patak-chengsoha-nun-kes		
	glasses-wipe-adn-thing		floor-clean-adn-thing		
	'lens-cleaning cloth'		'floor cleaner'		

The presence of complements of the verb, adnominal inflection inside the word, and word order can best be explained if these words result from reanalysis and undergo lexicalization.

[15] That these are compounds and not nominals modified by relative clauses is shown by the compound marker (CM) that occurs on the final noun.

[16] In order to ensure we have a reanalysis parse, we placed the nominalizations inside phrasal compounds.

[17] Another difference between Turkish phrasal compounds and Korean phrasal compounds with Type II bases is the opacity of internal structure. Unlike Korean, the internal structure of the non-head is not completely opaque to syntactic processes in Turkish. See Göksel (2015) for examples and discussion.

[18] The fact that lexical -*ki* nominalizations require a dispositional interpretation is demonstrated clearly by the following minimal interpretive contrast with syntactic -*ki* nominalizations.

nominalization denotes an action according to a certain norm. Any grammatical element that induces an episodic/specific event interpretation is restricted from the reanalyzed XP that is nominalized by -*ki*. As is well-known, overt accusative-marking in Korean has a correlation with specificity in many instances. Tense/aspect are interpreted with respect to a specific event. Demonstratives contribute specificity as well.[19]

   The explanation offered above may also help us to understand why genitive-marked internal arguments of -*ki* nominalizations are marginal and must be expressed as part of the complex base. We saw that this is a systematic difference between lexical -*um* and lexical -*ki* nominalizations. The relevant contrast is repeated below.

(36) a.   Cheli-uy   hanca-ilk-ki
          C-gen   Chinese-read-nmz
          'Cheli's (class on) Chinese character-reading'
    a'. *?Cheli-uy   hanca-**uy**   ilk-ki
          C-gen   Chinese-gen   read-nmz
     b.   cengpwu-uy   enlon-ttayli-ki
          government-gen   press-hit-nmz
          'Government's media-bashing'
    b'. *cengpwu-uy   enlon-**uy**   ttayli-ki
          government-gen   press-gen   hit-nmz
     c.   Cheli-uy   pomwul-chac-ki
          C-gen   treasure-find-nmz
          'The treasure-hunting game that Cheli took part in'
    c'. *Cheli-uy   pomwul-**uy**   chac-ki
          C-gen   treasure-gen   find-nmz

It seems that genitive-marked complements within nominalizations resist a dispositional/conventional action interpretation, just as accusative-marked complements do. That genitive-marking of complements of nominals is incompatible with a dispositional interpretation is also argued for in S-S. Kim & Sells' study (this volume) of dispositional versus episodic Sino-Korean personal nominals. They note that with respect to the ability to take a genitive-marked complement, the Sino-Korean nominal *cakka*, which refers to an author by profession (which therefore has a dispositional interpretation), differs from the noun *ceca*, which can refer to someone who has written something on a particular occasion but is not necessarily a professional writer (thus, interpreted episodically).[20]

(37) a.   tonghwa-cakka   vs.   ??tonghwa-**uy**   cakka
          child.story-writeer   child.story-gen   writer
          'author of children's books'
     b.   ??tonghwa-ceca   vs.   tonghwa-**uy**   ceca

    (i)   (na-nun) pomwul-chac-ki-lul   hayss-nuntey hana-to   mos-chac-ass-ta
          (I-top)   treasure-find-nmz-acc   did-but   not.one-even   neg-find-pst-decl
          '(I) took part in the treasure-hunting game but could not find even one (=treasure).'
    (ii) #(na-nun) pomwul-**ul**   chac-ki-nun   hayss-nuntey hana-to   mos-chac-ass-ta
          (I-top)   treasure-acc   find-nmz-top   did-but   not.one-even   neg-find-pst-decl
          '#(I) did find one treasure, but could not find even one.'

[19] Reanalyzed words containing internal arguments mentioned in Footnote 14 behave similarly. Acc-marking is banned internal to the reanalyzed word, as the following contrast reveals.

    (i)   a. ankyeng-**ul**   takk-nun   kes-i   coh-keyss-ta
              glasses-acc   wipe-adn   thing-nom   good-mod-decl
              'It would be good (for you) to clean your glasses.'
          b. ankyeng-(*?**ul**)-takk-nun-kes-ul   saylo   sa-ss-ta
              glasses-(*?acc)-wipe-adn-thing-acc   newly   buy-pst-decl
              '(I) bought a new lens-cleaning cloth'

    Acc-marking of complement is out because *takk-* 'wipe' in the reanalyzed word does denote a specific event of lens-cleaning.

[20] The string *tonghwa-uy cakka* is acceptable if it means 'the author of that children's storybook', where is specific book is being mentioned. Likewise, the string *tonghwa ceca* is acceptable if it can be parsed as involving the deletion of genitive case from *tonghwa-uy ceca*. In the genitive drop parse, it can only mean 'the writer of a specific children's storybook'.

   child.story-writer   child.story-gen writer
   'writer of (that specific) children's book'

By contrast, lexical *-um* nominalizations (and Verbal Nouns) do not impose a dispositional interpretation and are compatible with genitive-marked internal arguments.[21]

4.3 One vs. two *-um*/*-ki*: Nominalizer Uniformity

The discussion in the previous section leads us to reconsider whether Nominalizer Uniformity (NU) (Yoon, 1996a, 1996b; Kaiser, 1998) holds in Korean. NU refers to the generalization that across languages, the same nominalizer(s) is/are used to derive both lexical and syntactic nominalizations, which suggests a continuity between the two that is not naturally captured in accounts where the two are derived in different components of the grammar. By contrast, unified syntactic accounts of nominalizations lead to the expectation that NU will hold across languages.

 While superficially NU appears to hold in Korean, the detailed study of lexical *-ki* nominalizations in the previous section leads us to question whether *-ki* in its lexical and syntactic incarnations are identical. If NU holds, there is a single nominalizer, and any difference between the two must be accounted for independently of the nominalizer, by appeal to properties of the bases that are nominalized. The only function of the nominalizer is to affect a category change at different levels.[22]

 Properties of the base do indeed account for many differences between lexical and syntactic nominalizations. For example, clausal/verbal case-marking and adverbs are admitted in syntactic nominalizations because the constituent that undergoes nominalization is larger than the base of lexical nominalizations. However, lexical *-ki* nominalizations and syntactic *-ki* nominalizations differ in ways that cannot be blamed solely on the base. Concretely, lexical *-ki* nominalizations are interpreted dispositionally, and it is not clear that this is due to the property of the base of lexical nominalizations, especially when lexical *-um* nominalizations do not have the same restriction. Most likely, it is an inherent property of lexical *-ki* that syntactic *-ki* does not possess.[23]

 In sum, while NU may be valid for *-um*, there are reasons to posit distinct lexical vs. syntactic *-ki*s in Korean. This is based on the fact that lexical *-ki*, even when it attaches to a reanalyzed base, imposes its distinctive interpretive requirements compared to syntactic *-ki*. And, of course, the well-known fact that bases that are stative cannot be turned into state nominalizations through the affixation of lexical *-ki* but are admissible for syntactic *-ki* nominalizations is another reason to posit two distinct *-ki*s.[24]

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[21] The base *hanca-ilk-* 'Chinese read' in (36) could be derived by N-V compounding or by reanalysis. What is important is that for it to feed lexical *-ki* nominalization, the complement of the verb cannot be expressed as a genitive-marked dependent.

[22] For example, Borer (2005) notes that *ing-of* nominalizations are possible with bases that are Activities or Semelfactives, but not Achievements, unlike gerunds that do not have such a restriction. This might be taken to imply that the nominalizing formative (*-ing*) in the two types of nominalizations are different, despite the surface appearance of NU.

  (i) a. the sinking of the ships
    b. the falling of the stock prices
    c. the jumping of the cows
  (ii) a. *the arriving of the train (vs. arrival of the train)
    b. *the erupting of Vesuvius (vs. the eruption of Vesuvius)
    c. *the exploding of the balloon (vs. the explosion of the balloon)

 However, this difference need not be attributed to the nominalizer, if parts of a decomposed lexical aspectual structure can be selectively targeted for nominalization, as argued by Fabregas and Marin (2012).

[23] One might imagine a way to make the dispositional reading derive from the base by adding a generic operator that binds the event variable for bases of nominals interpreted dispositionally (cf. Roy & Soare, 2012). This would allow lexical *-ki* to function solely as a nominalizer with no additional properties.

  If you think about it, this move does not suffice, since we still need to ensure that lexical *-ki* only combines with a base that has a generic operator, while lexical *-um* and syntactic *-ki* need not.

[24] As is well known, lexical *-um* can derive state nominalizations, but lexical *-ki* cannot, and yields only measure/degree nouns. Syntactic *-ki* nominalizations admit all types of predicates within the nominalized constituent.

  (i) mwusewu-m   kippu-m   sulphu-m

5 Summary and Conclusion

In this chapter, we investigated the properties of lexical nominalizations in Korean in order to evaluate whether their properties provide support for unified syntactic analyses of all nominalizations. We examined potential challenges to the Internal Structure Argument and found that Korean lexical nominalizations pose no challenge to it. The behavior of argument-bearing nominalizations in Korean demonstrates that argument structure/event structure is not an exclusive property of verbs, which falsifies a central prediction of unified syntactic approaches. We also examined lexical nominalizations containing complex bases, to see if an ordering argument can be constructed for the syntactic derivation of nominals containing them. While some have argued that complex bases are derived in the syntax, there are empirical and theoretical problems with the proposed analysis. The most complex type of phrasal base of -*ki* nominalizations does not lead us to a different conclusion since the bases result from reanalysis. Finally, we considered whether NU holds for lexical and syntactic nominalizations in Korean. Our conclusion is that at least for -*ki*, we must posit two distinct nominalizers rather than a single nominalizer that displays NU, a conclusion that undermines a conceptual argument for unified syntactic analyses.

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	afraid-nmz	happy-nmz	sad-nmz
	'fear'	'happiness'	'sadness'
(ii)	khu-ki	kiwul-ki	sey-ki
	big-nmz	be.slanted-nmz	strong-nmz
	'size/*state of being big'	'slope/*state of being slanted'	'intensity/*state of being strong'

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