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RESEARCH ARTICLE

Semantic taxonomy, direct compositionality, and unlike nominal coordinations in Korean[1]

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Abstract

This paper investigates Korean nominal coordination, a distant conjunct of which is semantically incompatible with the subcategorizing verb in a sentence. This type of nominal coordination is supported by both corpus-based and experimental data. Such coordinations pose a challenge to previous approaches to coordination in the literature. Specifically, any theory directly linking the subcategorizing verb to such a distant conjunct encounters the issue of semantic incompatibility. To address this issue, based on Lee (2020), I propose associating the distant conjunct with a direct hypernym of the verb. While the primary focus is on conjunctive nominal coordinations, the hypothesis also extends to disjunctive nominal coordinations. This semantic taxonomy-based account is then formally implemented in Head-driven Phrase Structure Grammar (Pollard & Sag 1994; Sag et al. 2003), adapting the generalized conjunction from Partee & Rooth (1983). Furthermore, I argue that this analysis can serve as a basis for explaining other related constructions in Korean.

1. Introduction

This paper aims to account for nominal coordinations in Korean (see Korean coordinations in Cho & Morgan 1988; J.-M. Yoon 1996; Chung 2001, 2004; H. Lee 2005; J.-S. Kim 2006; Park 2006, 2007; Kim & Yang 2006, 2011; S.-Y. Cho 2008; Lee & Oh 2011; among others). A typical example of Korean nominal coordination is presented in (1). (Note that sources of some Korean examples used in this paper are not explicitly provided, which means that the judgements regarding these examples rely solely on the author's native speaker intuition; corpus and experimental data are also provided in Section 2.)

[1] This paper builds on and expands Lee (2020) by incorporating new corpus and experimental data, introducing more generalized constraints, providing expanded discussions of potential alternatives, offering a rigorous formalization, and suggesting possible extensions to related constructions.

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(1) *kunye-ka* [*phica-wa* *kuliko* *phasutha-lul*] *mek-ess-ta.*
she-NOM pizza-and and pasta-ACC eat-PST-DECL[2]
'She ate the pizza and the pasta.'

In (1), this nominal coordination[3] has two conjuncts (coordinands): the first conjunct has the morphological coordinator *-wa* 'and', while the second conjunct is attached with the accusative marker *-lul* 'ACC'. The lexical coordinator *kuliko* 'and' appears right before the second conjunct (see types of coordinators in Section 2.1). The sentence (1) means that the subject ate the pizza and she ate the pasta; the subcategorizing verb (the rightmost expression called *pivot* in Postal 1998: 97; Sabbagh 2007: 352) is shared by both conjuncts. Sharing an expression is considered a crucial property of coordinations albeit exceptions have been discussed in the literature (see, e.g. Ross 1970; Sag 1976; Johannessen 1996, 1998; Haspelmath 2007; Ito & Chaves 2008; Abeillé et al. 2016; Shiraïshi et al. 2019). For instance, in (2), the conjuncts in the nominal coordinations do not share the pre- or post-nominal expression due to an agreement mismatch.

(2) (a) *Esta* *canção* *anima* *as/*os* *mentes*
This song animate the.FPL/MPL minds.FPL
e *corações* **brasileiras/brasileiros.*
and hearts.MPL Brazilian.FPL/MPL
'This song animates Brazilian minds and hearts.'
(Portuguese, Villaviciencio et al. 2005: 145, (4))

(b) *les* *objectifs* *et* *caractéristiques* ***essentielles***
the.PL objective.M.PL and characteristic.F.PL essential.F.PL
(FrWaC, gouv.fr) (French, An & Abeillé 2022: 281, (14d))

(c) *haksayng-kwa* *kuliko* *sensayng-nim-i* *o*(-si)-ess-ta.*
student-and and teacher-HON-NOM come-HON-PST-DECL
'Students and teachers came.' (see similar Korean examples in An 2007)

In (2), the closest conjuncts must match with the "shared" elements. This syntactic proximity effect (or Closest Conjunct Agreement in Benmamoun et al. 2009; An & Abeillé 2022) is commonly observed in coordination and related constructions across languages (e.g. *Mary bought ___ but John didn't buy any books about linguistics* in Kayne 1994: 146) (see Williams 1990; Beavers & Sag 2004: 64).[4] Similarly, as shown in (3), when the closest conjuncts in nominal coordinations are semantically incompatible with the subcategorizing verbs, the sentences are clearly unacceptable:

[2] The Leipzig Glossing Rules are used, with the exception of HON 'honorific'.

[3] The coordinations in examples like (1) are nominal rather than verbal. Consider the following example:

(i) *kunye-ka* *nonmwun-kwa* (**chenchenhi*) *kuliko* (**cayppalli*) *capci-lul* *ilk-ess-ta.*
she-NOM paper-and slowly and quickly magazine-ACC read-PST-DECL
'She read the paper and the magazine.'

In (i), an adverb cannot appear inside a conjunct, implying its non-verbal nature. However, an adjective can modify the conjuncts, indicating their nominal characteristics.

[4] Examples like (2) suggest that inflectional differences can be disregarded in coordination (see the concept of vehicle change in Fiengo & May 1994, where certain features like gender and number can be disregarded when assessing identity).

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(3) (a) *#ku-ka onul-un* [*khephi han can-kwa kuliko sakwa han ccok-ul*]
he-NOM today-TOP coffee one cup-and and apple one piece-ACC
masi-ess-ta.
drink-PST-DECL
(lit.) 'Today he drank a piece of apple and a cup of coffee.'[5]

(b) *#ku-ka kakey-eyse* [*sinpal-kwa kuliko moca-lul*] *sin-e po-ass-ta.*
he-NOM shop-at shoe-and and hat-ACC wear-COMP see-PST-DECL
(int.) 'He tried on the hat and the shoe at the shop.'

Although the first conjuncts in (3) are semantically compatible with the verbs, this does not render the sentences acceptable. However, if we replace the closest conjuncts with a noun phrase (NP) semantically compatible with the verbs, the sentences become acceptable. This contrast suggests that the closest conjuncts in nominal coordinations must be semantically compatible with the subcategorizing verbs. This requirement illustrates a form of semantic proximity effect.

Interestingly, if the order of the conjuncts in (3) is reversed, the resulting sentences become acceptable (Lee 2020: 149, (3)) (see also the experimental data in Section 2.3):

(4) (a) *ku-ka onul-un* [*sakwa han ccok-kwa kuliko khephi han can-ul*]
he-NOM today-TOP apple one piece-and and coffee one cup-ACC
masi-ess-ta.[6]
drink-PST-DECL
(lit.) 'Today he drank a cup of coffee and a piece of apple.'
= 'Today he drank a cup of coffee and ate a piece of apple.'

(b) *ku-ka kakey-eyse* [*moca-wa kuliko sinpal-ul*] *sin-e po-ass-ta.*[7,8]
he-NOM shop-at hat-and and shoe-ACC wear-COMP see-PST-DECL
'He tried on the shoe and the hat at the shop.'

In (4a), the distant conjunct *sakwa han ccok-kwa* 'a piece of apple' is semantically incompatible with the verb *masi-ess-ta* 'drank'. Similarly, in (4b), the distant conjunct *moca-wa* 'hat' is semantically incompatible with the verb *sin-e po-ass-ta* 'tried on'. Note that *sin-* 'wear' is only applicable to nouns like *sinpal* 'shoe' or *yangmal* 'sock' but not to *moca* 'hat'. Conversely, nouns like *moca* 'hat' can be used with *ssu-* 'wear'. Both verbs exhibit selectional restrictions on their objects,[9] unlike their English counterpart *wear* (or *put*

[5] Since Korean is a head-final language, the verb follows its object. What is important here is the distance between the conjuncts and the verb. Hence, the order of the conjuncts in the Korean sentence is reversed in the English translation.

[6] The verb *masi-* 'drink' is limited to liquids, while *mek-* 'eat' can be used for both liquids and solids, so they are not always interchangeable.

[7] *Sin-e po-ass-ta* 'tried on' is a serial verb in Korean (see Chung & Kim 2008).

[8] As a reviewer pointed out, replacing *sin-e po-ass-ta* with *sin-ess-ta* in (4b) results in a degraded sentence. This observation leads to a hypothesis: the more the conjuncts share, the better the sentence sounds. In (4b), the conjuncts share more elements (*po-ass-ta* and a direct hypernym of *sin*), compared to the sentence with *sin-ess-ta* (where only a direct hypernym of the verb is shared). This hypothesis is supported by normal sentences without incompatibility, which are not only acceptable but also better than those with incompatibility. This preference aligns with the hypothesis because, in normal sentences, the conjuncts share the entire verb.

[9] Note that *ssu-* 'wear' and *sin-* 'wear' are distinct words, not variations of a single lexeme with vague features.

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on). Despite these semantic incompatibilities, the sentences in (4) are considered acceptable. This suggests that even semantic sharing or identity is not necessary for Korean nominal coordinations. Below are two corpus examples of similar cases (see more corpus data in Section 2.2):

(5) (a) *…Pin Laten-i mikwun kwunpok-kwa mikwuksan-sikyey-lul*
Bin Laden-NOM US.military uniform-and US.made-watch-ACC
cha-ko iss-nun kes-un…
wear-COMP exist-REL thing-TOP
'…the fact that Bin Laden was wearing a US-made watch and a US military uniform…'
(https://news.kbs.co.kr/news/view.do?ncd=248317)

(b) *panana-wa sikppang thosuthu kuliko khephi-lul masi-ess-supnita.*
banana-and bread toast and coffee-ACC drink-PST-DECL
(lit.) 'I drank the coffee, toast, bread, and banana.'
= 'I drank the coffee, ate the toast, ate the bread, and ate the banana.'
(https://cardo.tistory.com/m/79?category=924392)

For convenience, I will refer to these nominal coordinations as SEMANTICALLY UNLIKE NOMINAL COORDINATION (SUNC) throughout this paper. Although this paper focuses on SUNCs functioning as objects of verbs, they may also occur as subjects of verbs:

(6) *aki-eykey saylosan moca-wa kuliko simpal-i*
baby-to brand.new hat-and and shoe-NOM
sin-ki-e-ci-ess-ta.
wear-PASS-COMP-become-PST-DECL
'The brand-new hat and shoe were put on the baby.'

In (6), the passive verb *sin-ki-e-ci-ess-ta* 'were put on' is not shared by both conjuncts because only the closest conjunct *sinpal-i* 'shoe-Nom' is semantically compatible with the verb.

An important question arises regarding how an appropriate verbal meaning is linked to the distant conjuncts in SUNCs. This semantic issue is theoretically important because it presents a substantial challenge to previous analyses of coordinations (as discussed in Section 3). To my best knowledge, major previous approaches have not considered nominal coordinations of this kind and fail to predict them. However, any ideal theory of coordination must account for this new data. In this paper, I propose that a direct hypernym of the subcategorizing verb is semantically linked to a distant conjunct which is semantically incompatible with the verb. For example, a direct hypernym of *masi-* 'drink' is *mek-* 'eat', so in (4a), *mek-ess-ta* 'ate' is semantically associated with the distant conjunct *sakwa han ccok-kwa* 'a piece of apple'. Similarly, a direct hypernym of *sin-* 'wear' is *chakyongha-* 'wear', and in (4b), *chakyonghay po-ass-ta* 'tried on' is semantically associated with the distant conjunct *moca-wa* 'hat'. If this approach is on the right track, it could enhance our understanding of Korean unlike nominal coordinations, highlighting the important role of semantic taxonomy (semantic network) in syntactic theory.

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The rest of this paper is organized as follows. Section 2 introduces different types of Korean coordinators and provides both corpus and experimental data on nominal coordinations. In Section 3, I examine previous approaches and alternative accounts, demonstrating their inability to explain the new data. In Section 4, I propose a semantic taxonomy-based account with constraints on both the closest and distant conjuncts. These constraints are supported with predictions involving adverb modifications and additional data on disjunctive nominal coordinations. Section 5 offers a direct compositional formalization of the proposed account. I argue in Section 6 that the semantic taxonomy-based account is applicable to analyzing other related constructions in Korean. Finally, this paper concludes in Section 7 with a brief discussion on why such nominal coordinations are employed in Korean.

2. Korean data

Firstly, this section shows that coordinations in Korean can have different types of coordinators. Subsequently, both corpus examples and experimental data are presented.

2.1. Coordinators

Generally, coordinations include an explicit coordinator, which can be either morphological or lexical (see Yu-Cho & Sells 1995; Kim & Yang 2006). Morphological coordinators (a kind of affix) are further classified based on the syntactic category of conjuncts: -(*k*)*wa*, -*hako*, and -(*i*)*lang* are nominal coordinators, while -*ko* is a verbal coordinator:

(7) (a) *kunye-ka* [*khullaysik-kwa/hako/ilang phapsong-ul*] *tul-ess-ta.*
she-NOM classic-and/and/and pop.song-ACC listen-PST-DECL
'She listened to the pop song and the classical piece.'

(b) *kunye-ka patak-ul* [*ssul*(-ko) tatt-ass-ta*].
she-NOM floor-ACC sweep-and clean-PST-DECL
'She cleaned and swept the floor.'

The lexical coordinator *kuliko* 'and' is a word; it can be used in both nominal and verbal coordinations:

(8) (a) *kunye-ka* [*khullaysik kuliko phapsong-ul*] *tul-ess-ta.*
she-NOM classic and pop.song-ACC listen-PST-DECL
'She listened to the pop song and the classical piece.'

(b) *kunye-ka patak-ul* [*ssul*(-ko) kuliko tatt-ass-ta*].
she-NOM floor-ACC sweep-and and clean-PST-DECL
'She cleaned and swept the floor.'

The nominal coordinations in (7a) and (8a) have either a morphological or a lexical coordinator. However, a nominal coordination can lack an explicit coordinator altogether when a pause separates the conjuncts. By contrast, a morphological coordinator is obligatory for verbal coordinations like (7b) and (8b). Note also that nominal coordinations can possess both morphological and lexical coordinators simultaneously, as already seen in (1) and

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(4) above. Thus, we can identify four logically possible forms of nominal coordinations based on the types of coordinators (Lee 2020: 151–152, (6)):

(9) (a) *ku-ka onul-un* [*sakwa han ccok*(*-kwa*/*hako*/*ilang*)
he-NOM today-TOP apple one piece-and/and/and
(*kuliko*) *khephi han can-ul*] *masi-ess-ta.*
and coffee one cup-ACC drink-PST-DECL
(lit.) 'Today he drank a cup of coffee and a piece of apple.'
= 'Today he drank a cup of coffee and ate a piece of apple.'

(b) *ku-ka kakey-eyse* [*moca*(*-wa*/*hako*/*lang*) (*kuliko*) *sinpal-ul*]
he-NOM shop-at hat-and/and/and and shoe-ACC
sin-e po-ass-ta.
wear-COMP see-PST-DECL
'He tried on the shoe and the hat at the shop.'

The variants in (9) essentially convey the same meaning; however, this variety of nominal coordinations presents additional challenges for coordination theories.

2.2. Corpus data

Nominal coordinations with SUNCs can be found on the Web. First, in the following examples, no explicit coordinator is present:

(10) (a) *…swul, tampay-lul phiwu-kena…*[10]
alcohol cigarette-ACC smoke-or
(lit.) '…they smoke cigarette and alcohol or…'
= '…they smoke cigarette and drink alcohol or…'
(https://www.mk.co.kr/news/economy/view/2010/03/122674/)

(b) *…nolan syechu, ankyeng-ul ssu-ko iss-nun Ryu Junyeol…*
yellow shirt eyeglass-ACC wear-COMP exist-REL Ryu Junyeol
'…Ryu Junyeol, who is wearing a pair of eyeglasses and a yellow shirt, …'
(https://news.joins.com/article/20021980)

Note that in (10b), the distant conjunct *nolan syechu* 'yellow shirt' is semantically incompatible with the verb *ssu-* 'wear'. Second, the morphological coordinator *-kwa* is attached to the distant conjuncts in (11).

(11) (a) *…swul-kwa tampay-lul phiwu-konhay-ss-ta.*
alcohol-and cigarette-ACC smoke-used.to-PST-DECL
(lit.) '…she used to smoke cigarette and alcohol.'
= '…she used to smoke cigarette and drink alcohol.'
(https://news.joins.com/article/1498889)

[10] We can categorize *phiwu-* 'smoke' as a hyponym of *met-* 'eat'. Indeed, *tampay-lul mek-ess-ta* (lit.) 'ate the cigarette' can be interpreted as 'smoked the cigarette'. Similarly, both *smoke* and *drink* can be categorized as ingest verbs (Kearns 2011: 231).

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(b) *…nayngikwuk-kwa sikumchi-lul mwuchi-ess-supnita.*
shepherd's.purse.soup-and spinach-ACC season-PST-DECL
(lit.) '…I seasoned the spinach and the shepherd's purse soup.'
= '…I seasoned the spinach and cooked the shepherd's purse soup.'
(https://m.blog.daum.net/won_j/1403?category=1209959)

Third, only the lexical coordinator *kuliko* is placed between the two conjuncts in (12).

(12) (a) *…leyinkhothu kuliko kkaman senkullasu-lul ssu-n Im Chengha*
raincoat and black sunglass-ACC wear-REL Im Chengha
'…Im Chengha, who wore a pair of black sunglasses and a raincoat.'
(http://www.cine21.com/news/view/?mag_id=88452)

(b) *…kamcathwikim kuliko swul-ul masi-mye…*
fried.potato and alcohol-ACC drink-while
(lit.) '. while I drank alcohol and fried potato…'
= '…while I drank alcohol and ate fried potato…'
(http://blog.naver.com/PostView.nhn?blogId=primehjm&logNo=110188372424)

Fourth, in the examples in (13), both morphological and lexical coordinators are used.

(13) (a) *…masissnun kwaca-wa kuliko maykcwu-lul masi-myense…*
delicious cookie-and and beer-ACC drink-while
(lit.) '…while I drank beer and delicious cookies…'
= '…while I drank beer and ate delicious cookies…'
(https://m.blog.naver.com/PostView.nhn?blogId=sobongg&logNo=220903981851&proxyReferer=https:%2F%2Fwww.google.com%2F)

(b) *…mayil pam tampay-wa kuliko socwu-lul masi-ess-telaysssupnita.*
every night cigarette-and and soju-ACC drink-PST-DECL
(lit.) '…every night I drank soju and cigarette.'
= '…every night I drank soju and smoked cigarette.'
(http://newsprout.org/jboard/?p=detail&code=board1&id=336&page=20)

In addition, we can find SUNCs with more than two conjuncts:

(14) (a) *panpaci, syechu, moca-lul ssu-kon naka-n-ta.*
shorts shirt hat-ACC wear-and go.out-PST-DECL
'I wear a hat, a shirt, and a pair of shorts and go out.'
(https://m.blog.naver.com/PostView.nhn?blogId=rokkor2&logNo=221535712936&proxyReferer=https:%2F%2Fwww.google.com%2F)

(b) *…twulccay atul-eykey os-kwa kalakci-wa sinpal-ul sin-ki-ese…*
second son-to clothes-and ring-and shoe-ACC wear-CAUS-by
'By making the second son wear the shoe, ring, and clothes, …'
(https://cdk153.tistory.com/579)

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(c) *aisukhulim-ilang khwukhi khephil-lul masi-ess-supnita.*
ice.cream-and cookie coffee-ACC drink-PST-DECL
(lit.) 'I drank the coffee, cookie, and ice cream.'
= 'I drank the coffee, ate the cookie, and ate the ice cream.'
(https://www.tripadvisor.co.kr/ShowUserReviews-g294454-d2660559-r537642000-The_Cookie_Factory-Zagreb_Central_Croatia.html)

The empirical data suggest that SUNC is possible in Korean, at least for some native speakers. Notably, some corpus examples presented in this paper (11 out of 23) are sourced from news articles, which are considered to use standard and formal language.

2.3. Experimental data

I conducted an acceptability judgment task involving 60 self-reported native Korean speakers via an online survey using Google Forms. The participants, undergraduates at Jeonju University, received an approximately $2 mobile coupon as compensation. The experiment employed a 2 × 3 factorial design, manipulating SECOND CONJUNCT (with two levels: 'compatible', 'incompatible') and FIRST CONJUNCT (with three levels: 'compatible', 'hypernymic', 'incompatible'). In the experiment, 'compatible' indicates that the verb is semantically compatible with the conjunct, 'hypernymic' indicates that the verb is semantically incompatible with the conjunct but a direct hypernym of the verb is, and 'incompatible' indicates that neither the verb nor its direct hypernym is semantically compatible with the conjunct; however, a verb beyond the hypernym is semantically compatible with the conjunct. A sample set of test items is provided in (15). In the experiment, all materials were presented in Korean.

(15) (a) **Condition 1: compatible | compatible**
[Chelswu drank black tea in the morning, then he read a newspaper seriously while drinking coffee.]
Chelswu-ka achim-ey hongcha-wa kuliko khephi-lul masi-ess-e.
Chelswu-NOM morning-in black.tea-and and coffee-ACC drink-PST-DECL
'Chelswu drank coffee and black tea in the morning.'

(b) **Condition 2: compatible | hypernymic**
[Chelswu ate toast in the morning, then he read a newspaper seriously while drinking coffee.]
Chelswu-ka achim-ey thosuthu-wa kuliko khephi-lul masi-ess-e.
Chelswu-NOM morning-in toast-and and coffee-ACC drink-PST-DECL
(lit.) 'Chelswu drank coffee and toast in the morning.'

(c) **Condition 3: compatible | incompatible**
[Chelswu washed his hands in the morning, then he read a newspaper seriously while drinking a coffee.]
Chelswu-ka achim-ey son-kwa kuliko khephi-lul masi-ess-e.
Chelswu-NOM morning-in hand-and and coffee-ACC drink-PST-DECL
(lit.) 'Chelswu drank coffee and hand in the morning.'

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(d) **Condition 4: incompatible | compatible**
[Chelswu drank black tea in the morning, then he read a newspaper seriously while thinking of Yenghui.]
Chelswu-ka achim-ey hongcha-wa kuliko Yenghui-lul masi-ess-e.
Chelswu-NOM morning-in black.tea-and and Yenghui-ACC drink-PST-DECL
(lit.) 'Chelswu drank Yenghui and black tea in the morning.'

(e) **Condition 5: incompatible | hypernymic**
[Chelswu ate toast in the morning, then he read a newspaper seriously while thinking of Yenghui.]
Chelswu-ka achim-ey thosuthu-was kuliko Yenghui-lul masi-ess-e.
Chelswu-NOM morning-in toast-and and Yenghui-ACC drink-PST-DECL
(lit.) 'Chelswu drank Yenghui and toast in the morning.'

(f) **Condition 6: incompatible | incompatible**
[Chelswu washed his hands in the morning, then he read a newspaper seriously while thinking of Yenghui.]
Chelswu-ka achim-ey son-kwa kuliko Yenghui-lul masi-ess-e.
Chelswu-NOM morning-in hand-and and Yenghui-ACC drink-PST-DECL
(lit.) 'Chelswu drank Yenghui and hand in the morning.'

12 sets of test items were created with different lexicalizations. 72 test sentences were distributed across 6 lists using a Latin square design. In each list, 12 test items were mixed with 21 fillers of varying degrees of acceptability. Each list also included 3 instruction items and 9 practice items, followed by a pseudo-randomized mix of test and filler items. Consequently, each participant viewed a total of 45 items. Participants rated how well sentences fit given contexts on a 7-point Likert scale, with 1 being 'definitely impossible' and 7 being 'definitely possible'; these contexts ensure that the sentences were interpreted with distributive readings.

The experimental results are summarized in Table 1, and the means for the six conditions in the experiment are presented in Figure 1 (note that judgments have been z-transformed).

Table 1. Means, standard deviations, and 95% confidence intervals for each condition (N = 120)

			95% Confidence interval	
	Mean	Standard deviation	Lower	Upper
Condition 1	0.850	0.602	0.741	0.959
Condition 2	0.018	0.711	–0.111	0.147
Condition 3	–0.812	0.323	–0.870	–0.753
Condition 4	–0.955	0.254	–1.001	–0.909
Condition 5	–0.950	0.281	–1.001	–0.899
Condition 6	–0.985	0.191	–1.020	–0.950

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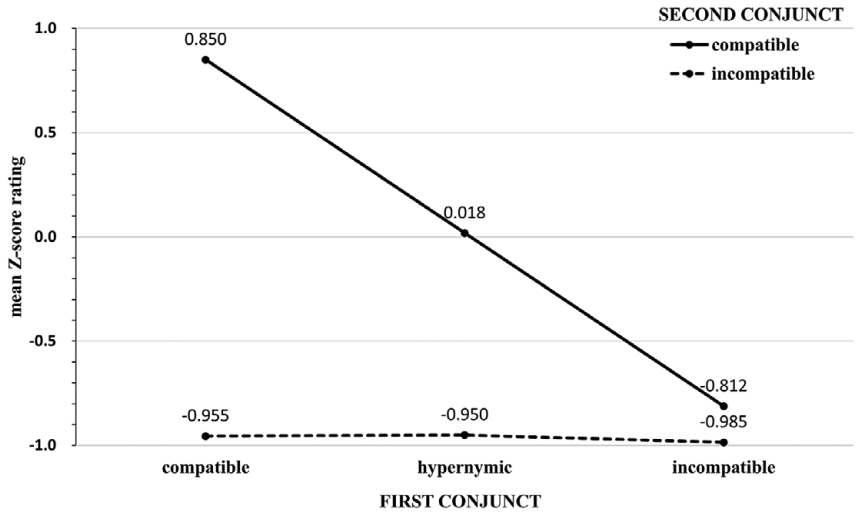

Figure 1. Average ratings by conditions.

A 2 × 3 repeated-measures analysis of variance (ANOVA) revealed a significant main effect of SECOND CONJUNCT, $F(1,119) = 786.081$ ($p < 0.001$), a significant main effect of FIRST CONJUNCT, $F(2,238) = 233.081$ ($p < 0.001$), and a significant interaction, $F(2,238) = 206.228$ ($p < 0.001$). These results indicate that when the closest conjunct is semantically incompatible with the subcategorizing verb, it is deemed quite unacceptable (mean = –0.955 for Condition 4, mean = –0.950 for Condition 5, and mean = –0.985 for Condition 6). However, even when the closest conjunct is compatible with the subcategorizing verb, it is not necessarily acceptable. In such cases, the status of the distant conjunct matters. Sentences with SUNCs in Condition 2 (mean = 0.018) are significantly different from sentences in Condition 1 (mean = 0.850) ($p < 0.05$) and those in Condition 3 (mean = –0.812) ($p < 0.05$), indicating that sentences with SUNCs are generally acceptable, though they are not as good as normal sentences in Condition 1. Sentences in Condition 3 (mean = –0.812) are not significantly different from the quite unacceptable ones in Condition 6 (mean = –0.985) ($p > 0.05$).

There was a total of 12 sentences in the target condition (Condition 2). Figure 2 shows the means of these 12 sentences, each headed by one of the 12 verbs. The average ratings of the 5 verbs are above 0, but those of the 7 verbs are below 0. It appears that wearing-verbs tend to allow SUNCs, but cooking-verbs tend not to allow SUNCs. The significance of verb types should be further examined, along with other potential factors such as the similarity between conjuncts.[11] Nonetheless, the combination of the current experimental and corpus data suggests the existence of SUNCs in Korean.

[11] The similarity between conjuncts appears to play a significant role in SUNCs. For instance, the following sentence with *panci-wa* sounds better than the one with *sinpal-kwa*:

(i) *ku-ka kakey-eyse* [*panci-/sinpal-kwa kuliko sikyey-lul*] *cha-ss-ta.*
he-NOM shop-at ring-/shoe-and and watch-ACC wear-PST-DECL
'He wore the watch and the ring/shoe at the shop.'

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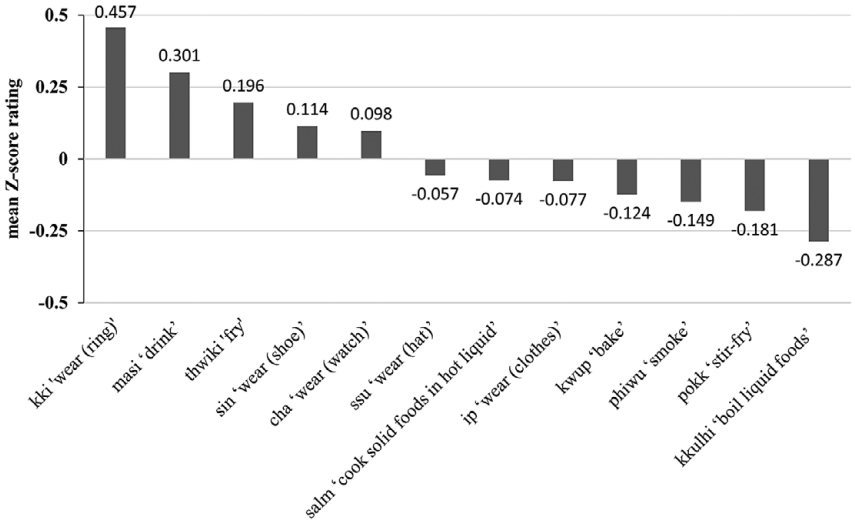

Figure 2. Average ratings by verbs in Condition 2.

3. Previous analyses

Before introducing a hypothesis in Section 4 to account for SUNCs, I argue here that existing major approaches are insufficient to explain them (see Lee 2020: Section 3).

3.1. Conjunction reduction

A rule that intuitively appears reasonable for licensing coordination was introduced by Chomsky (1957). Known as the Conjunction Reduction rule, as defined in (16), it offers a way to generate certain basic coordinations.

(16) Conjunction Reduction rule:[12]
If S_1 and S_2 are grammatical sentences, and S_1 differs from S_2 only in that X appears in S_1 where Y appears in S_2 (i.e. $S_1 = ..X..$ and $S_2 = ..Y..$), and X and Y are constituents of the same type in S_1 and S_2, respectively, then S_3 is a sentence, where S_3 is the result of replacing X by $X + and + Y$ in S_1 (i.e. $S_3 = ..X.. + and + ..Y..$). (Chomsky 1957: 36)

As per this rule, a constituent (e.g. X) can be replaced by a coordinated constituent (e.g. X+and+Y) when specific conditions, such as constituency and identity of types, are satisfied. For example, the Conjunction Reduction rule can generate the sentence S3 in (17).

(17) S1: Astrid is ironing the shirts.
S2: Astrid is ironing the blouses.
→ S3: Astrid is ironing [the shirts and the blouses].

[12] This rule requires that conjuncts be of the same syntactic category, which cannot account for examples like *He's a Republican and proud of it.* Such examples can be explained by Wasow's generalization that 'an element in construction with a coordinate constituent must be syntactically construable with each conjunct' (Pullum & Zwicky 1986: 752). However, SUNCs pose a challenge for both Wasow's generalization and the Conjunction Reduction.

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Nevertheless, the Conjunction Reduction rule cannot generate SUNCs, as illustrated in (18).

(18) (a) *ku-ka onul-un saylowun moca-lul sse/*sin-e po-ass-ta.*
he-NOM today-TOP brand.new hat-ACC wear.COMP/wear-COMP see-PST-DECL
'Today he tried on the brand new hat.'

(b) *ku-ka onul-un saylowun sinpal-ul sin-e/*sse po-ass-ta.*
he-NOM today-TOP brand.new shoe-ACC wear-COMP/wear.COMP see-PST-DECL
'Today he tried on the brand new shoe.'

(c) *ku-ka onul-un saylowun moca*(*-wa*) (*kuliko*) *sinpal-ul*
he-NOM today-TOP brand.new hat-and and shoe-ACC
*sin-e/*sse po-ass-ta.*
wear-COMP/wear.Comp see-PST-DECL
'Today he tried on the brand new shoe and hat.'

(d) *ku-ka onul-un saylowun sinpal*(*-kwa*) (*kuliko*) *moca-lul*
he-NOM today-TOP brand.new shoe-and and hat-ACC
*sse/*sin-e po-ass-ta.*
wear.COMP/wear-COMP see-PST-DECL
'Today he tried on the brand new hat and shoe.'

Given that the verb in (18a) differs from that in (18b), applying the Conjunction Reduction rule to both sentences to generate (18c) or (18d) is not feasible. Moreover, the rule does not address the transition from accusative NPs (e.g. *moca-lul* 'hat-ACC' in (18a)) to NPs with a morphological coordinator (e.g. *moca-wa* 'hat-and' in (18c)). In addition, several issues have been identified with the Conjunction Reduction rule when dealing with other coordination constructions: e.g. *Tom and Mary met in Seoul* cannot be derived from **Tom met in Seoul, and Mary met in Seoul* (see Lakoff & Peters 1966; McCawley 1968; Hudson 1970; Dougherty 1970, 1971), and the meaning of *Poland's national flag is white and red* differs from that of *Poland's national flag is white and Poland's national flag is red* (Haspelmath 2007: 39, (99a)). Therefore, it appears more promising to explore a new approach for handling SUNCs.

3.2. Right node raising

According to the right node raising (RNR),[13] an expression is raised out of conjuncts and attached to the right of them (i.e. rightward across the board (ATB) movement) (see, e.g. Ross 1967; Dougherty 1970; Hankamer 1971; Maling 1972; Bresnan 1974; Postal 1974; Abbott 1976; Hudson 1976; Sabbagh 2007). Two English examples are provided in (19).

(19) (a) Jack may be-and Tony certainly is-a werewolf. (Postal 1974: 126, (82a))
(b) Tom said he would, and Bill actually did, eat a raw eggplant.
(Postal 1974: 126, (82b))

[13] Normally, RNR refers to a certain construction or phenomenon, but the term itself presupposes a movement-based theory. In this context, I use RNR as a name for a movement-based theory (see also Abbott 1976).

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In accordance with the RNR, *a werewolf* in (19a) undergoes movement from both conjuncts *Jack may be a werewolf* and *Tony certainly is a werewolf* to the end of the sentence, and it is shared by the two conjuncts (see Korean RNR constructions in Chung 2004; Sohn 2004; J.-S. Kim 2006; Park 2007). However, this RNR approach is not applicable to SUNCs. For instance, in (18c), the two conjuncts do not share the verb *sin-e po-ass-ta* 'tried on' because *sin-* 'wear' never takes *moca* 'hat' as its object. Similarly, in (18d), the two conjuncts do not share the verb *sse po-ass-ta* 'tried on' because *ssu-* 'wear' never takes *sinpal* 'shoe' as its object. Hence, it is not plausible to posit that the verb is raised out of the two conjuncts. Furthermore, the RNR analysis (like the Conjunction Reduction rule) needs to account for the syntactic transition from an accusative NP to an NP with a morphological coordinator.

In addition, the RNR analysis is known to have other problems.[14] For instance, consider the following English sentence with the relational modifier *same*:

(20) John whistled _____, and Mary hummed _____, *the same tune.*
(Jackendoff 1977: 192, (7.59))

The sentence (20) can have an internal reading: the tune that John whistled was identical to the tune that Mary hummed.[15] This internal reading requires semantic plurality. However, if *the same tune* is assumed to come from each conjunct, the plurality requirement is not observed since the subject in each conjunct is singular. A similar issue arises in Korean (Chung 2004; Park 2007): the collective verb *moi-* 'gather' and the plural marker *-tul* necessitate a plural subject, yet the following sentences are acceptable despite each conjunct having a singular subject:[16]

(21) (a) *John-un palpyoca-lo* (*kuliko*) *Bill-un tholonca-lo*
John-TOP presenter-as and Bill-TOP discussant-as
ku seymina-ey moi-ess-ta. (Park 2007: 87, (5c))
the seminar-at gather-PST-DECL
'John and Bill gathered at the seminar as a presenter and a discussant, respectively.'

(b) *John-un nonmwun-ul* (*kuliko*) *Mary-nun chayk-ul*
John-TOP paper-ACC and Mary-TOP book-ACC
yelsimhi(*-tul*) *ilk-ess-ta.* (Chung 2004: 799, (17c))
diligently-PL read-PST-DECL
'John diligently read papers and Mary diligently read books.'

In short, a substantial revision of the RNR analysis is required to explain examples like (21) as well as SUNCs.

[14] Other issues with the RNR analysis have been raised in the literature. For instance, the following pair of sentences convey distinct meanings: *I borrowed a total of $3,000 from the bank and my sisters stole a total of $3,000 from the bank* ≠ *I borrowed, and my sisters stole, a total of $3000 from the bank* (Abbott 1976: 642, fn, 3). See also Citko (2017: 8–19) for a summary of various problems of the RNR analysis.

[15] The internal or external reading has been discussed in Jackendoff (1977: 192), Carlson (1987), Moltmann (1992), Abels (2004: 50–56), and Citko (2017: 17–18). The internal reading of 'John and Bill whistled the same tunes' entails that the tunes that John whistled are identical to those whistled by Bill. The external reading of the same sentence entails that the tunes whistled by John and Bill are identical to some other contextually specified tunes.

[16] Summative agreements (e.g. *The pilot claimed that the first nurse, and the sailor proved that the second nurse, were spies* from Postal 1998) resemble the examples in (21) (see also Yatabe 2003; Beavers & Sag 2004; Chaves 2014). In particular, Chaves (2014) proposes a non-movement analysis of summative agreements, employing the '⊕' operator.

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3.3. Deletion analysis

Rather than employing a movement-based approach such as the RNR, a deletion analysis can be suggested to explain coordinations (see Hankamer 1979; Wexler & Culicover 1980; Kayne 1994; Wilder 1994, 1997; Hartmann 2000; Merchant 2001, 2016; Yatabe 2001; Beavers & Sag 2004; Abels 2004; Ha 2008; among others).[17] For example, in (22a), the object of the first conjunct is deleted, and in (22b), the verb of the first conjunct is deleted under the identity condition, which states that an operation can only be applied when conjuncts have identical expressions (see a deletion analysis of Korean data in J.-S. Kim 1998, 2006; Sohn 2001).

(22) (a) She likes ~~the movie~~ and he dislikes the movie.
(b) *John-un yenge-lul* ~~*paywu-n-ta*~~ *kuliko Bill-un pwule-lul*
John-TOP English-ACC study-PRS-DECL and Bill-TOP French-ACC
paywu-n-ta.
study-PRS-DECL
'John studies English, and Bill studies French.'

However, this approach encounters the same problems of the Conjunction Reduction and RNR analyses because they basically rely on the identity condition.[18,19] For instance, consider the following example:

(23) *achim-ulo namca-nun sakwa-lul* ~~*masi-ess-ta*~~ (*kuliko*) *khephi-lul*
breakfast-for man-TOP apple-ACC drink-PST-DECL and coffee-ACC
masi-ess-ta.
drink-PST-DECL
'The man drank the coffee and ate the apple for breakfast.' (surface structure interpretation)

In (23), *masi-ess-ta* 'drank' in the first conjunct is deleted since it is identical to the verb in the second conjunct. However, (23) actually suggests that SUNCs cannot be generated by deletion, because the putative underlying structure is already unacceptable. Additionally, it must address the challenge of explaining the shift from an accusative NP (*sakwa-lul* 'apple-ACC') to an NP with a morphological coordinator (*sakwa-wa* 'apple-and'). Moreover, some coordinations that pose problems for the RNR analysis also present challenges for the

[17] Note that the details of the deletion analyses differ from each other. As pointed out by a reviewer, for instance, Yatabe (2001) and Chaves (2014) present a deletion analysis concerning only a particular type of RNR constructions.

[18] The semantic identity condition for deletion (also referred to as the mutual entailment condition in Merchant 2001: 26) is a criterion motivated by discrepancies in form (e.g. *Tom finished his homework before Mary did* ~~*finish her homework*~~). However, this condition is known to have problems of both over- and under-generation (see Hartman 2009; Merchant 2013, 2016; Kroll 2019; Saab 2016; among others). Furthermore, it is evident that this condition is not applicable to SUNCs.

[19] As pointed out by a reviewer, deletion analyses have been revised to address some mismatches in RNR constructions (see Chaves 2014 for summative reading; Shiraïshi et al. 2019 for verb mismatch; Abeillé et al. 2023 for voice mismatch). However, these analyses cannot be directly applied to SUNCs. For instance, Shiraïshi et al. (2019) offer a deletion analysis for sentences like the following, utilizing lexeme identity.

(i) Her publicist Max Clifford said: "I think she's going to be remembered as a young girl who has, and who will, save an awful lot of lives". (news.bbc.co.uk/2/hi/entertainment/)

In (i), *saved* and *save* share the same lexeme. However, SUNCs go beyond the scope of lexeme identity.

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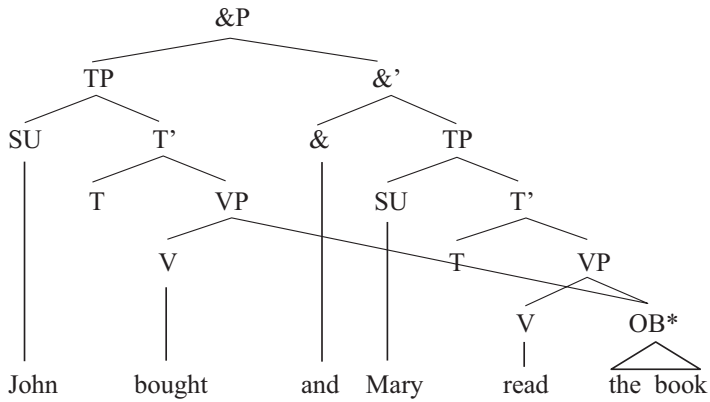
deletion analysis: e.g. the putative underlying structures of the sentences in (21) are considered unacceptable. Therefore, a significant revision of the deletion analysis is necessary to account for SUNCs.

3.4. Multiple dominance analysis

Wilder (1999, 2008) put forward a multiple dominance analysis of coordinations. For instance, in (24a), the verbs of both conjuncts share *the book* (see also McCawley 1982; Goodall 1987; Muadz 1991; Moltmann 1992; Citko 2011; Grosz 2015 for the concept of multiple dominance and related proposals). Under a multiple dominance analysis, the basic syntactic structure of (24a) can be depicted as (24b).

(24) (a) John bought and Mary read the book.

(b)



Chung (2004) employed the multiple dominance analysis to examine certain Korean coordinations. He contended that in (21b), both conjuncts share *yelsimhi*(*-tul*) *ilk-ess-ta* 'diligently read', resembling the structure in (24b) (see also Park 2006). That is, *yelsimhi*(*-tul*) *ilk-ess-ta* 'diligently read' is directly linked to both conjuncts, with the two subjects in the conjuncts deemed to fulfill the plural subject condition of the plural marker *tul.* Similar phenomena in English were discussed in Postal (1998: 173), Yatabe (2003), Beavers & Sag (2004: 63–65), and Grosz (2015: 6–13). However, the multiple dominance analysis shares some problems with the other approaches mentioned above. In particular, it does not account for SUNCs. For instance, consider (18c) above. The distant conjunct *moca-wa* 'hat-and' should not be directly linked with the serial verb *sin-e po-ass-ta* 'tried on' because of semantic incompatibility and case mismatch (an accusative object is required by the serial verb), and similarly for (18d).

Finally, we can consider combinations of the previous approaches; for instance, a deletion analysis may be combined with a movement analysis (Citko 2017: 8, (11)). However, since the basic approaches have problems, any combination of them is unlikely to account for SUNCs. Nonetheless, this does not necessarily imply a complete rejection of prior analyses; they could potentially be adapted to account for troublesome examples. However, implementing such adjustments would likely demand significant theoretical complexity. I find it more plausible to assume that (i) the "shared" expression is licensed at the position where it appears in a sentence (i.e. it lacks an underlying structure), and (ii) the "shared" expression

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syntactically combines with an entire coordinate structure rather than directly with each conjunct in it.

3.5. Potential alternatives

We can observe that the verbs related to the conjuncts of a SUNC have similar meanings, though they are not identical. One might argue then that we could relax the strict identity condition in previous approaches to accommodate SUNCs. Instead of strict identity, we could consider similarity as sufficient to permit syntactic operations within coordinations (Lee 2020: 164–165). For example, it can be assumed that deletion is applied when the related verbs have similar meanings, as illustrated in (25).

(25) *ku-ka onul sakwa han ccok-ul ~~mek-ess-ta~~*
he-NOM today apple one piece-ACC eat-PST-DECL
kuliko khephi han can-ul masi-ess-ta.
and coffee one cup-ACC drink-PST-DECL
'Today he drank a cup of coffee and ate a piece of apple.'

The surface form of (25) carries the equivalent meaning as the underlying structure, which is a desirable outcome. However, in this alternative, -(*l*)*ul* in the first conjuncts still needs to be changed to -(*k*)*wa* to derive the relevant sentence with a SUNC. In addition, this approach can allow for unintended interpretations. For example, in (26), the verb of the first conjunct is deleted since its meaning resembles that of the verb in the second conjunct.[20]

(26) (a) *ku-ka Jane-ul ~~tangki-ess-ta~~ kuliko Mary-lul mil-ess-ta.*
he-NOM Jane-ACC pull-PST-DECL and Mary-ACC push-PST-DECL
'He pushed Mary and pushed Jane.' (surface structure interpretation)

(b) *ku-ka Jane-ul ~~mil-ess-ta~~ kuliko Mary-lul tangki-ess-ta.*
he-NOM Jane-ACC push-PST-DECL and Mary-ACC pull-PST-DECL
'He pulled Mary and pulled Jane.' (surface structure interpretation)

The surface form of (26a) is expected to convey the meaning that the subject pushed Mary and pulled Jane. However, this is not the case. The correct interpretation is that the subject pushed Mary and pushed Jane. Thus, in (26a), when *-ul* in the first conjunct is replaced with *-kwa*, the resulting sentence with nominal coordination (i.e. *ku-ka Jane-kwa kuliko Mary-lul mil-ess-ta*) carries a different meaning from its underlying structure. Example (26b) encounters the same issue, where the underlying and surface structures suggest different meanings.

Another potential account of SUNCs is that the verbal meaning associated with a distant conjunct comes from the utterance context, as illustrated below:

(27) A: *Minho-ka toyncangkwuk-ul coliha-l cwul al-ko kuliko*
Minho-NOM bean.paste.soup-ACC cook-REL how know-and and
sikumchi-lul mwuchi-l cwul al-a?
spinach-ACC season-REL how know-Q
'Does Minho know how to cook bean paste soup and season spinach?'

[20] The verbs *tangki-* 'pull' and *mil-* 'push' are considered antonyms to each other; however, they have a similar meaning in that they both describe events where something receives force and thus moves in a certain direction. In the WordNet, *pull* and *push* are registered as sister terms (co-hyponyms) with *move* being their direct hypernym.

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B: *ung*, *pwuekh-eyse toyncangkwuk*(*-kwa*) (*kuliko*)
yes, kitchen-in bean.paste.soup-and and
sikumchi-lul mwuchi-ess-e.[21]
spinach-ACC season-PST-DECL
(lit.) 'Yes, he seasoned the spinach and the bean paste soup in the kitchen.'
= 'Yes, he seasoned the spinach and cooked the bean paste soup in the kitchen.'

According to this pragmatic account, the distant conjunct in (27B) is associated with *coliha-* 'cook' since it is mentioned earlier in (27A). A key prediction of this pragmatic alternative is that any verbal meaning can be linked to a distant conjunct when a plausible context is provided. However, the following example does not support this prediction:

(28) A: *Minho-ka toyncangkwuk-ul mek-ul cwul al-ko kuliko*
Minho-NOM bean.paste.soup-ACC eat-REL how know-and and
sikumchi-lul mwuchi-l cwul al-a?
spinach-ACC season-REL how know-Q
'Does Minho know how to eat bean paste soup and season spinach?'

B: *#ung*, *pwuekh-eyse toyncangkwuk*(*-kwa*) (*kuliko*) *sikumchi-lul mwuchi-ess-e.*
yes, kitchen-in bean.paste.soup-and and spinach-ACC season-PST-DECL
(lit.) 'Yes, he seasoned the spinach and the bean paste soup in the kitchen.'
= 'Yes, he seasoned the spinach and cooked the bean paste soup in the kitchen.'

Example (28B) is not an appropriate response to (28A) since the former does not entail that Minho seasoned the spinach and ate the bean paste soup. Both (27B) and (28B) have the same meaning, irrespective of the contexts. In the next section, I propose a solution to the issue of how an appropriate verbal meaning arises in relation to SUNCs.

4. A semantic taxonomy-based account

In Section 1, the semantic proximity effect was introduced using the examples in (3). In addition, the closest conjunct must satisfy the syntactic requirements of the subcategorizing verb, such as case and honorification, as shown in (2c). In contrast, distant conjuncts are exempt from these syntactic requirements. Furthermore, semantic incompatibility between the distant conjunct and the verb is permitted. In this section, based on Lee (2020), I propose using the concept of semantic taxonomy (particularly the hypernym-hyponym relation) to derive appropriate interpretations for sentences containing SUNCs.

4.1. Constraints on unlike nominal coordination

Nominal coordinations typically consist of conjuncts that are semantically compatible with the subcategorizing verb, as illustrated in (29) (mean = 0.850 for Condition 1).

[21] Although the English verb *season* can be used with fluid food like soup, the Korean verb *mwuchi-* 'season' can be used only with vegetable side dishes.

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(29) *Minswu-ka* [*capci*(*-wa*) (*kuliko*) *sinmwun-ul*] *soktokhay-ss-ta.*
Minswu-NOM magazine-and and newspaper-ACC quickly.read-PST-DECL
Correct interpretation: 'Minswu quickly read the newspaper and the magazine.'
Incorrect interpretation: 'Minswu quickly read the newspaper and slowly read the magazine.'

The sentence (29) has only one meaning: Minswu quickly read the magazine, and he quickly read the newspaper. It cannot convey a meaning where the newspaper was read quickly while the magazine was read slowly. This suggests that if a distant conjunct is semantically compatible with the verb, then the verb must be semantically associated with that conjunct. Put differently, only when a distant conjunct is semantically incompatible with the verb does another verbal meaning become associated with it instead. This leads to a question: Can any nominal expression semantically incompatible with the verb appear as a distant conjunct? Examining the examples in (30), which are evidently unacceptable, sheds light on this matter.

(30) (a) *#ku-ka onul-un* [*nolan sinpal*(*-kwa*) (*kuliko*) *khephi han can-ul*]
he-NOM today-TOP yellow shoe-and and coffee one cup-ACC
masi-ess-ta.
drink-PST-DECL
(lit.) 'Today he drank a cup of coffee and a yellow shoe.'

(b) *#ku-ka onul-un* [*khephi han can*(*-kwa*) (*kuliko*) *nolan sinpal-ul*]
he-NOM today-TOP coffee one cup-and and yellow shoe-ACC
sin-e po-ass-ta.
wear-COMP see-PST-DECL
(lit.) 'Today he tried on a yellow shoe and a cup of coffee.'

The distant conjuncts 'a yellow shoe' and 'a cup of coffee' are semantically incompatible with the verbs 'drank' and 'tried on', respectively. In this respect, the sentences in (30) resemble those with a SUNC discussed above. However, the former are deemed unacceptable (mean = –0.812 for Condition 3), whereas the latter sound fine (mean = 0.018 for Condition 2). To explain this difference, I propose the following constraints about conjuncts in Korean nominal coordinations:[22]

(31) (a) **The Closest Conjunct Constraint (CCC)**: The closest conjunct of a nominal coordination must be syntactically and semantically compatible with the subcategorizing verb.[23]

(b) **The Distant Conjunct Constraint (DCC)**: If and only if a distant conjunct of a nominal coordination is semantically incompatible with the subcategorizing verb, a direct hypernym of the verb is semantically associated with the conjunct.

[22] This represents a more generalized version of the constraints proposed in Lee (2020: 168, (36)).

[23] In the literature, the proximity effect, or the Closest Conjunct Agreement, normally focuses on syntactic requirements. In contrast, the CCC includes both the syntactic and semantic requirements.

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According to the Distant Conjunct Constraint (henceforth DCC), (30a) is unacceptable since the distant conjunct 'a yellow shoe' is semantically incompatible with a direct hypernym (e.g. *mek-ess-ta* 'ate') of *masi-ess-ta* 'drank'. Similarly, (30b) is unacceptable since the distant conjunct 'a cup of coffee' is semantically incompatible with a direct hypernym (e.g. *chakyonghay po-ass-ta* 'tried on') of *sin-e po-ass-ta* 'tried on'. Alongside the unacceptable sentences, the acceptable ones with SUNCs in (9), repeated in (32), can be explained by the same constraint.

(32) (a) *ku-ka onul-un* [*sakwa han ccok*(*-kwa*/*hako*/*ilang*)
he-NOM today-TOP apple one piece-and/and/and
(*kuliko*) *khephi han can-ul*] *masi-ess-ta.*
and coffee one cup-ACC drink-PST-DECL
(lit.) 'Today he drank a cup of coffee and a piece of apple.'
= 'Today he drank a cup of coffee and ate a piece of apple.'

(b) *ku-ka kakey-eyse* [*moca*(*-wa*/*hako*/*lang*) (*kuliko*) *sinpal-ul*]
he-NOM shop-at hat-and/and/and and shoe-ACC
sin-e po-ass-ta.
wear-COMP see-PST-DECL
'He tried on the shoe and the hat at the shop.'

In (32), the closest conjuncts (the accusative NPs) are both syntactically and semantically compatible with the transitive verbs. The distant conjunct 'a piece of apple' in (32a) is semantically associated with a direct hypernym (*mek-ess-ta* 'ate') of *masi-ess-ta* 'drank', and the distant conjunct 'the hat' in (32b) is semantically linked to a direct hypernym (*chakyonghay po-ass-ta* 'tried on') of *sin-e po-ass-ta* 'tried on'. These examples conform to the DCC. Next, two predictions of the DCC are examined.

4.2. Prediction: adverb modification

The unacceptable sentences in (33) are almost identical to the acceptable counterparts in (32). The verbs of the former are modified with the adverb *chenchenhi* 'slowly' (Lee 2020: 169–170, (38)):

(33) (a) *#ku-ka onul-un* [*sakwa han ccok*(*-kwa*/*hako*/*ilang*)
he-NOM today-TOP apple one piece-and/and/and
(*kuliko*) *khephi han can-ul*] *chenchenhi masi-ess-ta.*
and coffee one cup-ACC slowly drink-PST-DECL
(lit.) 'Today he slowly drank a cup of coffee and a piece of apple.'

(b) *#ku-ka kakey-eyse* [*moca*(*-wa*/*hako*/*lang*) (*kuliko*) *sinpal-ul*]
he-NOM shop-at hat-and/and/and and shoe-ACC
chenchenhi sin-e po-ass-ta.
slowly wear-COMP see-PST-DECL
(int.) 'He slowly tried on the shoe and the hat at the shop.'

The contrasts between (32) and (33) indicate that the inclusion of adverb modification makes the sentences in (33) unacceptable. This unacceptability aligns with the DCC. First, I assume

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that *chenchenhi masi-ess-ta* 'slowly drank' takes *masi-ess-ta* 'drank' as its direct hypernym.[24] This direct hypernym is semantically incompatible with the distant conjunct 'a piece of apple' in (33a), thus violating the DCC (a last resort). The same explanation can be applied to sentence (33b). It is noteworthy that the sentences in (32) are acceptable despite also containing an adverbial expression (*onul-un* 'today-TOP' or *kakey-eyse* 'shop-at'). This is because the adverbial expression does not directly modify the verb; instead, the verb first combines with the nominal coordination as its object. Consequently, an appropriate direct hypernym of the verb can be linked with the distant conjunct, complying with the DCC. It is predicted then that placing the adverbial expression between the nominal coordination and the verb would render the resulting sentences unacceptable. This prediction is supported by the following examples:

(34) (a) *#ku-ka* [*sakwa han ccok*(*-kwa*/*hako*/*ilang*)
he-NOM apple one piece-and/and/and
(*kuliko*) *khephi han can-ul*] *onul-un masi-ess-ta.*
and coffee one cup-ACC today-TOP drink-PST-DECL
(lit.) 'Today he drank a cup of coffee and a piece of apple.'

(b) *#ku-ka* [*moca*(*-wa*/*hako*/*lang*) (*kuliko*) *sinpal-ul*]
he-NOM hat-and/and/and and shoe-ACC
kakey-eyse sin-e po-ass-ta.
shop-at wear-COMP see-PST-DECL
(int.) 'He tried on the shoe and the hat at the shop.'

Alternatively, one might argue that the sentences in (33) and (34) are unacceptable because the main verbs initially combine with an adverb (adjunct) rather than the nominal coordinations (the complements of the verbs). However, considering that in Korean, the relative order of adjunct and complement does not really matter (see free word order or scrambling of Korean in J.-H. Cho 1994; R.-H.-Y. Kim 2003), we can reasonably attribute the unacceptability of these sentences to the violation of the DCC (a last resort).[25]

[24] Hypernym-hyponym relation is normally defined among lexical items, but sense relation is not limited to single words. Lyons (1977: 293–295) argues that hyponyms can be defined with a modification of their hypernyms: e.g. *tyrant* is a hyponym of *ruler*, and *despotic ruler* or *cruel ruler* is synonymous with *tyrant.* Based on this, I assume that phrasal expressions can also participate in hypernym-hyponym relations. For example, *chenchenhi masi-ess-ta* 'slowly drank' is a direct hyponym of *masi-ess-ta* 'drank'. This relationship can be verified with the non-symmetrical entailment between sentences with these expressions: e.g. *Bill slowly drank the coffee* entails *Bill drank the coffee* but not vice versa.

[25] As a reviewer noted, another possible explanation may involve processing factors rather than purely semantic ones: for the DCC to apply, the closest conjunct should not be separated from the verb. A similar phenomenon is observed in French:

(i) *Ces étudiants et étudiantes sont* ***nouveaux***.
this.PL student.M.PL and student.F.PL are new.M.PL
'These male and female students are new.' (An & Abeillé 2022: 277, (7))

In (i), the closest conjunct *étudiantes* 'student.F.PL' does not agree in gender with the predicative adjective *nouveaux* 'new.M.PL' since the Closest Conjunct Agreement does not apply here due to the intervening verb *sont* 'are'. Further research is needed to explore this possibility in future studies.

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4.3. Prediction: disjunction

The conditions about conjuncts in (31) predict that disjunctive nominal coordinations should observe them (see Lee 2020: 170–171). Consider the corpus examples in (35).

(35) (a) *…swul-ina tampay-lul phiwu-ess-ko…*
alcohol-or cigarette-ACC smoke-PST-and…'
(lit.) '…he smoked cigarette or alcohol and…'
= '…he smoked cigarette or drank alcohol and…'
(https://www.happycampus.com/report-doc/3413257/)

(b) *…umsik ttonun umlyo-lul masi-nun hayngwi-ka…*
food or beverage-ACC drink-REL action-NOM
(lit.) '…actions such that drivers drink beverage or food…'
= '…actions such that drivers drink beverage or eat food…'
(http://www.hanhodaily.com/news/articleView.html?idxno=63578)

The distant conjuncts in (35) are semantically incompatible with the verbs, yet the sentences are actually used and properly interpreted. However, when the DCC is not satisfied, as in (36), the sentences are clearly unacceptable.

(36) (a) *#salamtul-i kukos-eyse* [*moca-na* (*ttonun*) *khephi-lul*] *masi-n-ta.*
people-NOM there-at hat-or or coffee-ACC drink-PRS-DECL
(lit.) 'People drink coffee or hat there.'

(b) *#salamtul-i kukos-eyse* [*moca ttonun khephi-lul*] *masi-n-ta.*
people-NOM there-at hat or coffee-ACC drink-PRS-DECL
(lit.) 'People drink coffee or hat there.'

In addition, when an adverb appears between the disjunctive object and the verb, as in (37), the sentence sounds quite unnatural.

(37) (a) *salamtul-i* [*ppang-ina* (*ttonun*) *khephi-lul*] (*#kukos-eyse*) *masi-n-ta.*
people-NOM bread-or or coffee-ACC there-at drink-PRS-DECL
(int.) 'People drink coffee or eat bread there.'

(b) *salamtul-i* [*ppang ttonun khephi-lul*] (*#kukos-eyse*) *masi-n-ta.*
people-NOM bread or coffee-ACC there-at drink-PRS-DECL
(int.) 'People drink coffee or eat bread there.'

This is expected by the DCC. If both conjunctions and disjunctions adhere to the same conditions, we can expect the constraints to apply to their combinations as well. This is illustrated in (38).

(38) (a) *…kwaca-na ppang kuliko thi-lul masi-mye…*
cookie-or bread and tea-ACC drink-while
(lit.) '…while they drink tea and bread or cookie, …'
= '…while they drink tea and eat bread or eat cookie, …'
(http://newcms.kmu.ac.kr/bbs/intlkor/244/43643/download.do)

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(b) *…panpaci-wa sulliphe ttonun sayntul-ul sin-nun pwun-i…*
shorts-and slippers or sandals-ACC wear-REL person-NOM
'…person who wears sandals or sleepers and shorts…'
(https://m.blog.naver.com/PostView.nhn?blogId=kyochonsp&logNo=222064695538&proxyReferer=https:%2F%2Fwww.google.com%2F)

All these disjunctive coordinations could be explained using the semantic taxonomy-based account.

4.4. Further alternatives

I have argued that the concept of semantic taxonomy (particularly the hypernym-hyponym relation) is crucial in explaining SUNCs. This idea may be implemented in the minimalist program (Chomsky 1993, 1995, 2000). For instance, one could argue that if the sub-categorizing verb is semantically incompatible with the object in the distant conjunct, as in (39a), then a direct hypernym of the verb is copied over in logical form (LF), as shown in (39b).

(39) (a) *ku-ka ppang-ul kuliko khephi-lul masi-ess-ta.* ***SPELLOUT***
he-NOM bread-ACC and coffee-ACC drink-PST-DECL
(lit.) 'He drank the coffee and the bread.'
= 'He drank the coffee and ate the bread.'

(b) *ku-ka ppang-ul mek-ess-ta kuliko khephi-lul masi-ess-ta.* ***LF***
he-NOM bread-ACC eat-PST-DECL and coffee-ACC drink-PST-DECL
'He drank the coffee and ate the bread.'

(c) *ku-ka ppang-kwa kuliko khephi-lul masi-ess-ta.* ***PF***
he-NOM bread-and and coffee-ACC drink-PST-DECL
(lit.) 'He drank the coffee and the bread.'
= 'He drank the coffee and ate the bread.'

However, this LF-copying approach has several problems. First, the grammar must "see" in SPELLOUT the non-local semantic relation between the object in the distant conjunct and the verb. It is unclear how the grammar can check in SPELLOUT whether the semantic incompatibility holds in the long-distance. Second, the accusative case marker *-ul* must be somehow changed to the morphological coordinator *-kwa* in phonetic form (PF), as seen in (39c). Third, an empirical problem is that the meaning of the form in PF differs from the meaning represented in LF. The PF in (39c) is ambiguous between the collective reading (indicating that the subject drank the coffee with the bread) and the distributive reading (indicating that the subject drank the coffee and ate the bread, separately), whereas the LF in (39b) only represents the latter interpretation.

Adapting the PF-deletion approach, one might propose that if the object in the non-final conjunct conflicts semantically with the verb in the final conjunct, and the verb in the non-final conjunct is a direct hypernym of the verb in the final conjunct, as in (40a), then the verb in the non-final conjunct can be deleted in PF, as in (40b).

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(40) (a) *ku-ka ppang-ul mek-ess-ta kuliko khephi-lul*
he-NOM bread-ACC eat-PST-DECL and coffee-ACC
masi-ess-ta. ***SPELLOUT/LF***
drink-PST-DECL
'He drank the coffee and ate the bread.'

(b) *ku-ka ppang-kwa* ~~*mek-ess-ta*~~ *kuliko khephi-lul masi-ess-ta.* ***PF***
he-NOM bread-and eat-PST-DECL and coffee-ACC drink-PST-DECL
(lit.) 'He drank the coffee and the bread.'
= 'He drank the coffee and ate the bread.'

However, this PF-deletion approach has almost the same problems as the LF-copying approach. First, it is unclear how the grammar can check the non-local semantic relations in SPELLOUT: (i) the semantic incompatibility between the object in the non-final conjunct and the verb in the final conjunct and (ii) the hypernym-hyponym relation between the two verbs in the conjuncts. Second, the accusative case marker *-ul* must be changed to the morphological coordinator *-kwa* in PF. Third, the meaning of the PF in (40b) is ambiguous between the collective and distributive readings, but the LF in (40a) only represents the latter reading.[26]

By contrast, I assumed above that the verb combines with the entire nominal coordination as its object, as represented in (41); the distant conjunct is part of the nominal coordination. During the process of composing the predicate's meaning, if the verb is found semantically incompatible with the distant conjunct *ppang-kwa* 'bread-and' (specifically the noun *ppang* 'bread'), then a direct hypernym of the verb is instead associated with it (see details in Section 5). This eliminates the need to assess long-distance semantic incompatibilities.

(41) *ku-ka* [[*ppang*(*-kwa*) (*kuliko*) *khephi-lul*] *masi-ess-ta*].
he-NOM bread-and and coffee-ACC drink-PST-DECL
(lit.) 'He drank the coffee and the bread.'
= 'He drank the coffee and ate the bread.'

Furthermore, this approach avoids the theoretical burden of syntactically changing the accusative case marker -(*l*)*ul* to the morphological coordinator -(*k*)*wa*: e.g. *ppang-kwa* 'bread-and' can be licensed in the lexicon by a lexical rule (see details below). The collective readings of nominal coordinations may be derived in a manner similar to the collective reading of the object in *He drank the coffee and the water* (for instance, through the application of the **C** operator to NP coordinations, as discussed in Winter 2001). However, my focus here remains on distributive readings.

5. An HPSG-based direct compositionality

In Section 4, a semantic taxonomy-based account of SUNCs was proposed. In this section, I present a direct compositional analysis of sentences with SUNCs in Head-driven Phrase

[26] Note that English sentences like the following can have a similar problem with the PF-deletion approach (Carnie 2013: 462–463):

(i) Calvin$_i$ will strike himself$_i$ and Otto$_k$ will strike himself$_{k/*i}$ too. (Carnie 2013: 462, (12)) ***SPELLOUT/LF***

(ii) Calvin will strike himself and Otto will [$_{VP}$ ____] too. (Carnie 2013: 463, (13)) ***PF***

The sentence (i) has only one reading (the sloppy interpretation), whereas the sentence (ii) is ambiguous between the sloppy and strict readings; the PF-deletion may not fully account for the ambiguity of (ii).

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Structure Grammar (HPSG) (see the framework in Pollard & Sag 1994; Sag et al. 2003), adapting the generalized conjunction from Partee & Rooth (1983). I suggest below that nominal coordinations in Korean have a headed binary structure, with the final conjunct serving as the head. While this is not the only way of formally implementing the idea, I suggest that HPSG can straightforwardly capture the phenomenon.

5.1. Direct hypernym

The hyponym (or hypernym) can be defined as an intensional relation like the following (Zimmermann & Sternefeld 2013: 178):

(42) A is a hyponym of B if and only if $[\![A]\!]^w \subseteq [\![B]\!]^w$ holds for all possible worlds w.

For example, *cat* is a hyponym of *animal* since the set denoted by *cat* is a subset of the set denoted by *animal* in all possible worlds. Similarly, *masi-* 'drink' is a hyponym of *mek-* 'eat' since the set (of ordered pairs) denoted by *masi-* 'drink' is a subset of the set (of ordered pairs) denoted by *mek-* 'eat' in all possible worlds:

(43) (a) $[\![masi\ (drink)]\!]^w = \{ <x, y> \mid$ drink'(x, y) in the possible world w$\}$
(b) $[\![mek\ (eat)]\!]^w = \{ <x, y> \mid$ eat'(x, y) in the possible world w$\}$
(c) $[\![masi\ (drink)]\!]^w \subseteq [\![mek\ (eat)]\!]^w$

Note that according to (43), a synonym is a kind of hyponym. However, what is need here is a proper hyponym rather than a bilateral hyponym (synonym) (see Lyons 1977: 292). A proper hyponym can be identified by non-symmetrical entailment relations (unilateral implications) (Lyons 1977: 292), illustrated by the following:

(44) (a) *#Minho-ka ku kes-ul masi-ess-ciman, mek-ci-nun anh-ass-ta.*
Minho-NOM the thing-ACC drink-PST-but eat-COMP-TOP NEG-PST-DECL
(lit.) 'Minho drank the thing, but he did not eat it.'

(b) *Minho-ka ku kes-ul mek-ess-ciman, masi-ci-nun anh-ass-ta.*
Minho-NOM the thing-ACC eat-PST-but drink-COMP-TOP NEG-PST-DECL
'Minho ate the thing, but he did not drink it.'

This one-way entailment suggests that *masi-* 'drink' is a proper hyponym of *mek-* 'eat'. The hypernym-hyponym relations can be represented by a set of ordered pairs, as shown in (45a).[27] Using this set, the direct hypernym(s) of an expression can be identified, as in (45b).

(45) (a) *D-hypernym* = $\{<x, y> \mid$ y is a direct hypernym of x$\}$
$= \{< [\![masi\ (drink)]\!], [\![mek\ (eat)]\!] >, \ldots,$
$< [\![sin\ (wear\ (shoes))]\!], [\![chakyongha\ (wear)]\!] >,$
$< [\![ssu\ (wear\ (hat))]\!], [\![chakyongha\ (wear)]\!] >, \ldots,$
$< [\![kkulhi\ (boil/cook\ (soup))]\!], [\![coliha\ (cook)]\!] >,$

[27] Building a semantic taxonomy for a language is a huge project and what is an appropriate semantic taxonomy is a big issue. In this paper, I do not intend to build a comprehensive semantic taxonomy; a fraction of it like (45a) seems sufficient to illustrate how the proposed semantic taxonomy-based analysis works.

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< ⟦*mwuchi* (*season* (*vegetable dish*))⟧, ⟦*coliha* (*cook*)⟧ >, …,
< ⟦*chenchenhi masi* (*slowly drink*)⟧, ⟦*masi* (*drink*)⟧ >,
< ⟦*ppalli masi* (*quickly drink*)⟧), ⟦*masi* (*drink*)⟧ >, …}

(b) *D-hypernym*(x) = {y | <x, y> ∈ *D-hypernym*}

For example, the direct hypernyms of certain verbal expressions can be selected as follows:

(46) (a) *D-hypernym*(⟦*masi* (*drink*)⟧) = { ⟦*mek* (*eat*)⟧ }
(b) *D-hypernym*(⟦*chenchenhi masi* (*slowly drink*)⟧) = { ⟦*masi* (*drink*)⟧ }

These selected direct hypernyms can be used to provide an appropriate verbal meaning to predicates with a SUNC.

5.2. Lexical items

Bare nouns *pap* 'rice' and *khephi* 'coffee' can refer to definite entities; it is thus assumed that ⟦*pap*⟧ = the-rice', and ⟦*khephi*⟧ = the-liquid-coffee'. The lexemes *pap* 'rice' and *khephi* 'coffee' can then be represented using the following feature structures:

(47) (a) *pap* 'rice':

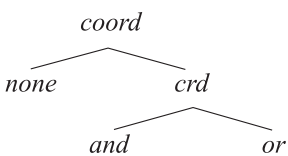
$$\begin{bmatrix} \text{PHON} & < pap > \\ \text{SYNSEM} & \begin{bmatrix} \text{LOCAL} & \begin{bmatrix} \text{CATEGORY} & \begin{bmatrix} \text{HEAD} & [\text{POS } noun] \\ \text{COORD} & none \end{bmatrix} \\ \text{CONTENT} & [\text{the-rice'}] \end{bmatrix} \end{bmatrix} \end{bmatrix}$$

(b) *khephi* 'coffee':

$$\begin{bmatrix} \text{PHON} & < khephi > \\ \text{SYNSEM} & \begin{bmatrix} \text{LOCAL} & \begin{bmatrix} \text{CATEGORY} & \begin{bmatrix} \text{HEAD} & [\text{POS } noun] \\ \text{COORD} & none \end{bmatrix} \\ \text{CONTENT} & [\text{the-liquid-coffee'}] \end{bmatrix} \end{bmatrix} \end{bmatrix}$$

In (47), the two lexemes have [COORD *none*], indicating that they can function as either the subject or object of a verb (see fn. 28 below). Note also that the following type hierarchy for the COORD values is assumed, based on Abeillé & Chaves (2021: 733):

(48)



The morphological coordinator *-(k)wa* is an affix and its meaning can be indirectly defined by the lexical rule (68a) in Appendix A; the generalized conjunction is adapted from Partee & Rooth (1983). Applying the lexical rule to *pap* 'rice' (47a), we can derive *pap-kwa* 'rice-and' (49) (SS = SYNSEM).

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(49) *pap-kwa* 'rice-and':

$$\left[\begin{array}{l}\text{PHON} \ <\textit{pap-kwa}> \\ \text{SS}\left[\text{LOC}\left[\begin{array}{l}\text{CAT}\left[\begin{array}{l}\text{HEAD}\left[\text{POS } \textit{noun}\right] \\ \text{COORD } \textit{and}\end{array}\right] \\ \text{CONT}\left[\lambda g_{<a,\,b>}.\ \lambda y_{a}.\ [\lambda P_{a}.\ P(\text{the-rice}')](y)\ \Pi\ g(y)\right]\end{array}\right]\right]\end{array}\right]$$

In (49), *pap-kwa* 'rice-and' has the feature [COORD *and*], indicating that it cannot serve as either the subject or object of a verb (see the use of the COORD feature in Kim & Yang 2006, Abeillé & Chaves 2021). In CONT(ENT), the type of g is the variable <a, b> (type-polymorphism) since N-*kwa* can be part of either a nominative subject (as in (6)) or an accusative object, depending on the case of the final conjunct. Besides explicit coordinators like *-(k)wa*, a pause can also serve as a coordinator. In (50), a pause right after *khephi* 'coffee' designates it as the first conjunct in the nominal coordination.

(50) *Minha-ka khephi*, *ppang-ul sa-ss-ta.*
Minha-NOM coffee bread-ACC buy-PST-DECL
'Minha bought the bread and the coffee.'

If a pause does not occur in the position, (50) means that Minha bought coffee-flavored bread. Thus, I assume that N-*pause* has the same meaning as N-(*k*)*wa*, and N-*pause* is licensed by a lexical rule, which parallels (68a) in Appendix A except that a pause (instead of -(*k*)*wa*) is added to the phonology (e.g. *pap-pause*).

The accusative NPs (which can serve as a closest conjunct) can be licensed via the lexical rule (67a) in Appendix A. When applied to *khephi* 'coffee' (47b), it yields *khephi-lul* 'coffee-ACC' (51).

(51) *khephi-lul* 'coffee-ACC':

$$\left[\begin{array}{l}\text{PHON} \ <\textit{khephi-lul}> \\ \text{SS}\left[\text{LOC}\left[\begin{array}{l}\text{CAT}\left[\begin{array}{l}\text{HEAD}\left[\begin{array}{l}\text{POS } \textit{noun} \\ \text{GCASE } \textit{acc}\end{array}\right] \\ \text{COORD } \textit{none}\end{array}\right] \\ \text{CONT}\left[\lambda P_{<e,\,<e,\,t>>}.\ \text{P(the-liquid-coffee}')\right]\end{array}\right]\right]\end{array}\right]$$

This accusative NP can also be used as an object in normal transitive verb sentences.

The lexical coordinator *kuliko* is optional (e.g. *pap-kwa*/*-pause* (*kuliko*) *khephi-lul* 'rice-and/-pause and coffee-ACC'), as it becomes redundant when a morphological coordinator precedes *kuliko*. Thus, I assume that *kuliko* denotes an identity function, as depicted in (52).

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(52) *kuliko* 'and':

$$\begin{bmatrix} \textit{word} \\ \text{PHON} \ \langle \textit{kuliko} \rangle \\ \\ \text{SS} \begin{bmatrix} \text{LOC} \begin{bmatrix} \text{CAT} \begin{bmatrix} \text{HEAD} \begin{bmatrix} \text{POS} \ \textit{conj-cdn} \end{bmatrix} \\ \text{COORD} \ \textit{and} \\ \text{SUBJ} \langle \ \rangle \\ \text{COMPS} \langle \ \rangle \end{bmatrix} \\ \text{CONT} \begin{bmatrix} \lambda Q_{\langle a,b \rangle} . \, Q_{\langle a,b \rangle} \end{bmatrix} \end{bmatrix} \end{bmatrix} \end{bmatrix}$$

The part of speech (POS) value of *kuliko* is *conj-cdn* (conjunctive coordinator). Accordingly, the COORD feature is assigned the value *and.*

Lastly, the feature structure of *masi-ess-ta* 'drank' is provided in (53). This can be licensed via some lexical rules, with *masi-* 'drink' being the morphological root.

(53) *masi-ess-ta* 'drink-PST-DECL':

$$\begin{bmatrix} \textit{word} \\ \text{PHON} \ \langle \textit{masi-ess-ta} \rangle \\ \\ \text{SS} \begin{bmatrix} \text{LOC} \begin{bmatrix} \text{CAT} \begin{bmatrix} \text{SUBJ} \langle \boxed{1} \rangle \\ \text{COMPS} \langle \boxed{2} \rangle \\ \text{ARG-ST} \langle \boxed{1}\text{NP}[\text{GCASE} \ \textit{nom}], \boxed{2}\text{NP}[\text{GCASE} \ \textit{acc}] \rangle \end{bmatrix} \\ \text{CONT} \begin{bmatrix} \lambda y\text{: y is liquid}.\lambda x.\text{drank}'(x, y) \end{bmatrix} \end{bmatrix} \end{bmatrix} \end{bmatrix}$$

According to (53), *masi-ess-ta* 'drank' should take a nominative NP as its subject and an accusative NP as its object (complement).[28] For instance, the normal verb phrase (VP) *khephi-lul masi-ess-ta* 'coffee-ACC drink-PST-DECL' can be licensed using the word *khephi-lul* 'coffee-ACC' derived from (51) and the verb *masi-ess-ta* 'drank' (53).

5.3. Syntactic rules

The main verb of a sentence must agree with the closest conjunct of a nominal coordination in terms of honorification, as shown in (2c) above. In addition, the case of an entire nominal coordination is determined by the case of the final conjunct.[29] This implies that the honorification and case information of the final conjunct must be passed up to the entire coordination. This process of percolation can be achieved by considering the final conjunct as the syntactic head of coordinations in Korean (see Kim & Yang 2006: 197). This also aligns with the head-final nature of Korean. Concerning the internal structure of coordinations, I assume that it is only binary (cf. Kim & Yang 2006). This view is supported by the following conversation:

[28] It is assumed here that *verb* => ARG-ST([COORD *none*]), ensuring that expressions like distant conjuncts with a morphological coordinator (e.g. N-*kwa*) do not function as subjects or objects.

[29] Similarly, the tense and mood of the final conjunct in a verbal coordination determines the tense and mood of the entire verbal coordination. This also suggests that the final conjunct acts as the syntactic head: its head features must be passed up to the entire coordination.

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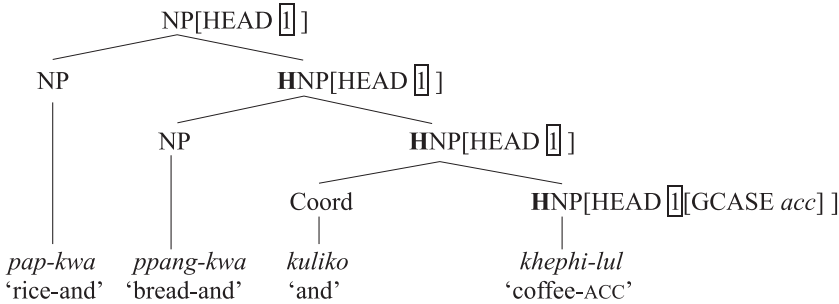
(54) Jane: *Mary-ka sakwa-lul sa-ss-e.*
Mary-NOM apple-ACC buy-PST-DECL
'Mary bought apples.'
Tom: *talunken?*
others?
'Others?'
Jane: (*pap-kwa*) (*ppang-kwa*) (*kuliko*) *khephi.*
rice-and bread-and and coffee
'Rice and bread and coffee.'

Jane's fragment answers suggest a right-branching binary structure.[30] Hence, coordinations in Korean would resemble the following (cf. Borsley 2005; Abeillé & Chaves 2021).

(55)



In (55), we can observe two basic types of syntactic combinations. First, the lexical coordinator *kuliko* combines with the following NP, and second, an NP combines with another NP. Then, we can posit the following two coordination rules (see similar, but headless, analyses of coordination in Abeillé & Chaves 2021: 730–732):

(56) (a) Lexical Coordinator Coordination Rule:

$$\mathrm{XP}\begin{bmatrix} \textit{lcdn-coord-ph} \\ \mathrm{COORD}\ \boxed{1} \end{bmatrix} \rightarrow \begin{bmatrix} \mathrm{POS}\ \textit{cdn} \\ \mathrm{COORD}\ \boxed{1}\textit{crd} \end{bmatrix}\ \mathbf{H}\mathrm{XP}\begin{bmatrix}\mathrm{COORD}\ \textit{none}\end{bmatrix}$$

(b) Morphological Coordinator Coordination Rule:[31]

$$\begin{bmatrix} \textit{mcdn-coord-ph} \\ \mathrm{COORD}\ \textit{none} \\ \\ \mathrm{CONT}\left[\lambda y_a.\ [\lambda P_a.\ P(x)](y)\ ...\right] \end{bmatrix}, \rightarrow \begin{bmatrix} \mathrm{POS}\ \boxed{1} \\ \mathrm{VAL}\ \boxed{2} \\ \mathrm{COORD}\ \textit{crd} \end{bmatrix}\ \mathbf{H}\begin{bmatrix} \mathrm{GCASE}\ \textit{vcase} \\ \mathrm{POS}\ \boxed{1} \\ \mathrm{VAL}\ \boxed{2} \\ \mathrm{COORD}\ \textit{coord} \end{bmatrix}$$

where if y(x) is undefined, then y(x) is replaced by z(x),

where z is a direct hypernym of y (i.e., z $\in$ *D-hypernym*(y)).

In (56a), the POS value of the first conjunct is *coordinator* (*cdn*), the supertype of *conjunctive-coordinator* (*conj-cdn*) and *disjunctive-coordinator* (*dis-cdn*); *lcdn-coord-ph* has the feature

[30] Verbal coordinations show a similar pattern: e.g. the expression *kuliko na-nun cip-ey ka-ss-e* 'And I went home' can be a fragment answer to a question.

[31] Following J.-B. Kim (2016: 48), *vcase* is assumed to be the supertype of *nom(inative) and acc(usative)*.

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[COORD *crd*], preventing expressions like *kuliko khephi-lul* 'and coffee-ACC' from being objects of a verb, and also prohibiting expressions like **kuliko kuliko khephi-lul* 'and and coffee-ACC'. According to (56b), two expressions (with the same part-of-speech and valance) are coordinated. It licenses expressions like *ppang-kwa khephi-lul* 'bread-and coffee-ACC' and *ppang-kwa kuliko khephi-lul* 'bread-and and coffee-ACC', both of which can serve as objects of a verb. The hypernym condition, reflecting the DCC, is incorporated into the coordination phrase in (56b): if y (e.g. a verb) cannot apply to x (e.g. the meaning of N of N-*kwa*), then a direct hypernym of y is applied to x as a last resort. Note that the coordination rules in (56) are not specific for SUNCs but can be generally used for nominal coordinations in Korean.

In addition to the coordination rules in (56), I assume the following Head-Subject Rule and Head-Complement Rule (based on Pollard & Sag 1994; Sag et al. 2003):

(57) (a) Head-Subject Rule:

$$\begin{bmatrix} \textit{hd-sub-ph} \\ \text{SUBJ} \langle\ \rangle \end{bmatrix} \rightarrow \boxed{1}\ \mathbf{H}\left[\text{SUBJ}\left\langle \boxed{1} \right\rangle\right]$$

(b) Head-Complement Rule:

$$\begin{bmatrix} \textit{hd-comp-ph} \\ \text{COMPS} \langle\ \rangle \end{bmatrix} \rightarrow \boxed{1}\ \mathbf{H}\left[\text{COMPS}\left\langle \boxed{1} \right\rangle\right]$$

Some details of these rules vary across languages or proposals by scholars, but those in (57) appear to suffice for illustrating a basic analysis of sentences with a SUNC.

5.4. Sample derivation

Using the lexical items and syntactic rules, we can derive sentences containing a SUNC. The sentence analyzed here is *Minho-ka pap-kwa kuliko khephi-lul masi-ess-ta* (lit.) 'Minho drank the coffee and the rice'. In (58), *kuliko* (52) combines with *khephi-lul* 'coffee-ACC' from (51) through the Lexical Coordinator Coordination Rule (56a) (some feature paths are abbreviated).

(58) [NP *kuliko khephi-lul*] =

$$\begin{bmatrix} \textit{lcdn-coord-ph} \\ \text{PHON} < \textit{kuliko khephi-lul} > \\ \text{HEAD } \boxed{1} \\ \text{COORD } \textit{and} \\ \text{CONT } \left[\lambda P_{<e,<e,t>>}.\ \text{P(the-liquid-coffee')}\right] \end{bmatrix}$$

$$\begin{bmatrix} \textit{word} \\ \text{PHON} < \textit{kuliko} > \\ \text{HEAD } \left[\text{POS } \textit{conj-cdn}\right] \\ \text{COORD } \textit{and} \\ \text{CONT } \left[\lambda Q_{<a,b>}.\ Q_{<a,b>}\right] \end{bmatrix}$$

kuliko
'and'

$$\mathbf{H}\begin{bmatrix} \textit{word} \\ \text{PHON} < \textit{khephi-lul} > \\ \text{HEAD } \boxed{1}\begin{bmatrix} \text{POS } \textit{noun} \\ \text{GCASE } \textit{acc} \end{bmatrix} \\ \text{COORD } \textit{none} \\ \text{CONT } \left[\lambda P_{<e,<e,t>>}.\ \text{P(the-liquid-coffee')}\right] \end{bmatrix}$$

khephi-lul
'coffee-ACC'

Since *kuliko* is the identity function, the phrase in (58) retains the same meaning as its head.

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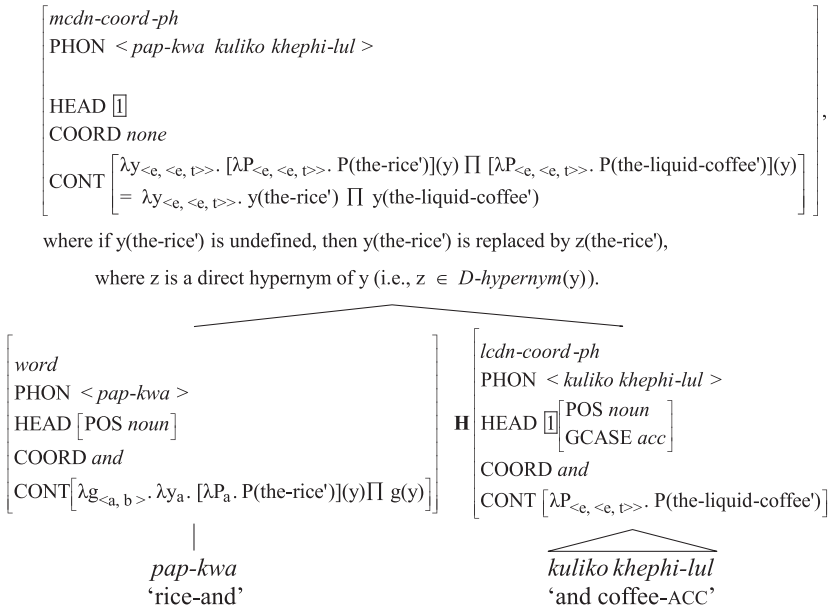
Next, *kuliko khephi-lul* in (58) combines with *pap-kwa* 'rice-and' from (49) via the Morphological Coordinator Coordination Rule (56b):

(59) [NP *pap-kwa* [NP *kuliko khephi-lul*]] =



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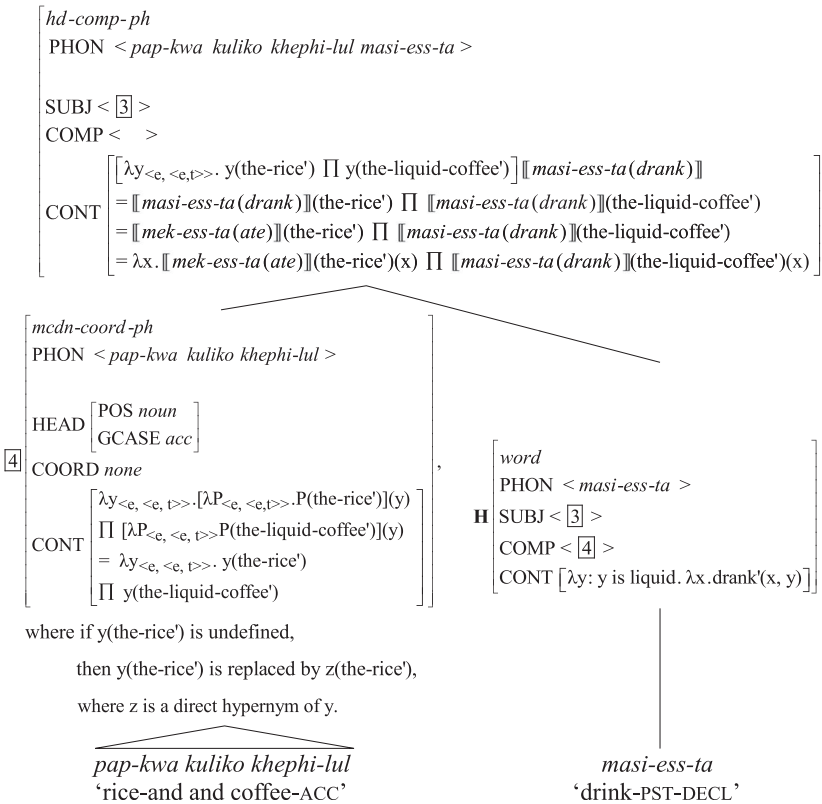
This nominal coordination combines with the verb *masi-ess-ta* 'drank' (53) via the Head-Complement Rule (57b):

(60) [VP [NP *pap-kwa* [NP *kuliko khephi-lul*]] *masi-ess-ta*] =



In (60), *pap* 'rice' in the distant conjunct *pap-kwa* 'rice-and' is semantically incompatible with *masi-ess-ta* 'drank'. Thus, the direct hypernym (*mek-ss-ta* 'ate') of the verb is applied to *pap* 'rice', while *khephi* 'coffee' in the closest conjunct *khephi-lul* 'coffee-ACC' remains syntactically and semantically compatible with the verb.[32]

Finally, the predicate in (60) combines with the nominative subject *Minho-ka* 'Minho-NOM' through the Head-Subject Rule (57a), resulting in the sentence in (61).

[32] *D-hypernym* includes both < [[*masi* (*drink*)]], [[*mek* (*eat*)]] > and < [[*masi-ess-ta* (*drank*)]], [[*mek-ess-ta* (*ate*)]] >.

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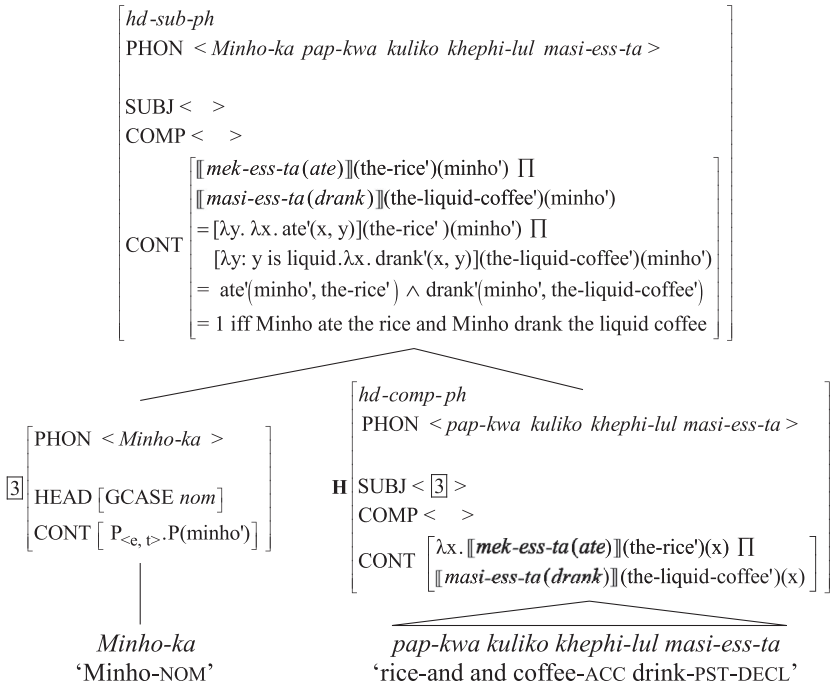
(61) [S *Minho-ka* [VP [NP *pap-kwa* [NP *kuliko khephi-lul*]] *masi-ess-ta*]] =



The nominative noun *Minho-ka* 'Minho-NOM' can be licensed by the lexical rule (66a) in Appendix A. The sentence in (61) conveys the intended meaning that Minho ate the rice and drank the coffee. An analysis of a SUNC containing three conjuncts, as well as a SUNC functioning as the subject of a verb, can be found in Appendices B and C, respectively.

6. Other related constructions

The semantic taxonomy-based analysis can be useful in explaining other related constructions in Korean. First, SUNCs can appear in relation to relative clauses, as exemplified in (62).

(62) *...masi-n khephi-wa ppang*
drink-REL coffee-and bread
(lit.) 'The bread and coffee that I drank…'
(https://mkgoouk.tistory.com/3134)

One could argue that the relative clause solely modifies the closest conjunct, *khephi-wa* 'coffee-and'. This is indeed syntactically possible. However, given the context of describing a photo of the bread and coffee consumed by the poster, it is more plausible to interpret the relative clause as modifying the entire coordination, *khephi-wa ppang* 'coffee-and bread'. Second, positive or negative stripping constructions may involve semantic incompatibility, as illustrated in (63) (see Korean negative stripping in J. Kim 2019).

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(63) (a) *Mina-ka kakey-eyse sinpal-ul sin-e po-ass-e*
Mina-NOM shop-at shoe-ACC wear-COMP see-PST-DECL
kuliko moca-to(*-ya*).
and hat-also-DECL
'Mina tried on a pair of shoes at the shop, and also a hat.'

(b) *Mina-ka khaphey-eyse khephi-lul masi-ess-e*
Mina-NOM café-at coffee-ACC drink-PST-DECL
haciman kheyik-un ani-ya.
but cake-TOP not-DECL
(lit.) 'Mina drank coffee at the café, but not cake.'

Third, constructions involving *pota* 'rather than', *taysin* 'instead of', *malko* 'not' or *ppwun-man anila* 'besides' can indicate semantic incompatibility:

(64) (a) *...talkkalpi-pota khephi-lul masi-le...*
spicy.grilled.chicken-rather.than coffee-ACC drink-to
(lit.) '…to drink coffee rather than spicy grilled chicken.'
(https://news.cpbc.co.kr/article/831975)

(b) *...yangmal taysin moca-lul ssu-la...*
sock instead.of hat-ACC wear-IMP
'…wear a hat instead of socks.'
(https://www.outdoornews.co.kr/news/articleView.html?idxno=7809)

(c) *suthakhing malko leykingsu ip-ko...*
stocking not leggings wear-and
'…wear leggings, not stockings, and…'
(https://www.clien.net/service/board/park/6840442)

(d) *...kamca thwikim-ppwunman anila khephi-to masi-le...*
potato fry-only not coffee-also drink-to
(lit.) '…to drink coffee besides fried potato…'
(https://www.joongang.co.kr/article/2656062#home)

The sentences in (64) are not a coordination construction, but the semantic incompatibilities they exhibit suggest the usefulness of the semantic taxonomy-based analysis. Fourth, the following verbal coordination also seems to require the notion of semantic taxonomy:

(65) *...umsik-ul mek-ko masi-mye...*
food-ACC eat-and drink-while
(lit.) '…while people drank and ate foods…'
(https://www.newswell.co.kr/news/articleView.html?idxno=3274)

The accusative NP *umsik-ul* 'food-ACC' can function as the object of the verb *mek-* 'eat', but not *masi-* 'drink'. The distant conjunct *masi-mye* 'drank-while' appears to be associated with a direct hyponym (*umlyo* 'beverage') of the object. Note that in this case, the closest conjunct is the first one in the verbal coordination, unlike in nominal coordinations. While a detailed analysis of examples like (65) awaits further research, the semantic taxonomy-based approach could be useful for such cases.

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7. Conclusion

This paper has presented empirical evidence regarding SUNCs in Korean, a phenomenon in which distant conjuncts are semantically incompatible with subcategorizing verbs that take these coordinate structures as their objects. The existence of SUNCs is supported by both corpus and experimental data. SUNCs are similar to unlike coordinations in other languages (e.g. Portuguese and French), where distant conjuncts do not match the verb's syntactic requirements. However, they differ in that, in SUNCs, distant conjuncts do not satisfy the verb's semantic requirements. SUNCs cannot be explained by previous approaches in the literature, and certain potential alternatives fail to license these coordinations. Specifically, any theory directly linking subcategorizing verbs with such distant conjuncts encounters the problem of semantic incompatibility, as well as issues regarding case mismatch and ambiguity. To address these challenges, this study proposed two constraints on conjuncts in nominal coordinations in Korean: (i) The closest conjunct must be syntactically and semantically compatible with the subcategorizing verb, and (ii) if and only if the subcategorizing verb is semantically incompatible with a distant conjunct, the conjunct is semantically associated with a direct hypernym of the verb (as a last resort). This semantic taxonomy-based account was formalized within the framework of HPSG and receives further validation from various related constructions in Korean. Considering that most research has focused on syntactic unlike coordinations, this paper's exploration of semantic unlike coordinations can contribute to an appropriate linguistic theory of coordination in natural language.

Now, a more fundamental question is why SUNC is used in Korean. One possible hypothesis is that it provides an efficient means to express combinations of multiple events. If an appropriate verb is used in each conjunct, the resulting sentence can become relatively lengthy, and verb repetition may occur. Constructions with SUNC offer brevity compared to those without it. However, not all semantic incompatibilities are permitted; rather, a direct hypernym of the main verb sets the limit for possible predicates with SUNC. Thus, SUNC can be regarded as an efficient yet constrained structure for expressing multiple events in natural language. Lastly, the generalizations in (31), particularly the DCC, could provide a foundation for cross-linguistic research into whether other languages also allow SUNC and why it is permitted in languages like Korean but not in others (English appears not to allow SUNC). This remains a topic for future research.

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Appendix A: Lexical rules and items

(66) (a) Nominative Lexical Rule:

$$\begin{bmatrix} \text{PHON} & \langle \boxed{1} \rangle \\ \text{SS} \begin{bmatrix} \text{LOC} \begin{bmatrix} \text{CAT} \begin{bmatrix} \text{HEAD} \begin{bmatrix} \text{POS} & \boxed{4}\textit{noun} \end{bmatrix} \\ \text{COORD} & \boxed{3}\textit{none} \end{bmatrix} \\ \text{CONT} \begin{bmatrix} \boxed{2}_{\text{e}} \end{bmatrix} \end{bmatrix} \end{bmatrix} \end{bmatrix} \end{bmatrix} \mapsto$$

$$\begin{bmatrix} \text{PHON} & \langle \text{F}_{\textit{-i/ka}}(\boxed{1}) \rangle \\ \text{SS} \begin{bmatrix} \text{LOC} \begin{bmatrix} \text{CAT} \begin{bmatrix} \text{HEAD} \begin{bmatrix} \text{POS} & \boxed{4} \\ \text{GCASE} & \textit{nom} \end{bmatrix} \\ \text{COORD} & \boxed{3} \end{bmatrix} \\ \text{CONT} \begin{bmatrix} \lambda \text{P}_{\langle \text{e, t} \rangle}. \text{P}(\boxed{2}) \end{bmatrix} \end{bmatrix} \end{bmatrix} \end{bmatrix}$$

(b) *Minho-ka* 'Minho-NOM':

$$\begin{bmatrix} \text{PHON} & \langle \textit{Minho-ka} \rangle \\ \text{HEAD} \begin{bmatrix} \text{POS} & \textit{noun} \\ \text{GCASE} & \textit{nom} \end{bmatrix} \\ \text{COORD} & \textit{none} \\ \text{CONT} \begin{bmatrix} \text{P}_{\langle \text{e, t} \rangle}.\text{P(minho')} \end{bmatrix} \end{bmatrix}$$

(67) (a) Accusative Lexical Rule:

$$\begin{bmatrix} \text{PHON} & \langle \boxed{1} \rangle \\ \text{SS} \begin{bmatrix} \text{LOC} \begin{bmatrix} \text{CAT} \begin{bmatrix} \text{HEAD} \begin{bmatrix} \text{POS} & \boxed{4}\textit{noun} \end{bmatrix} \\ \text{COORD} & \boxed{3}\textit{none} \end{bmatrix} \\ \text{CONT} \begin{bmatrix} \boxed{2}_{\text{e}} \end{bmatrix} \end{bmatrix} \end{bmatrix} \end{bmatrix} \end{bmatrix} \mapsto$$

$$\begin{bmatrix} \text{PHON} & \langle \text{F}_{\textit{-(l)ul}}(\boxed{1}) \rangle \\ \text{SS} \begin{bmatrix} \text{LOC} \begin{bmatrix} \text{CAT} \begin{bmatrix} \text{HEAD} \begin{bmatrix} \text{POS} & \boxed{4} \\ \text{GCASE} & \textit{acc} \end{bmatrix} \\ \text{COORD} & \boxed{3} \end{bmatrix} \\ \text{CONT} \begin{bmatrix} \lambda \text{P}_{\langle \text{e, } \langle \text{e, t} \rangle \rangle}. \text{P}(\boxed{2}) \end{bmatrix} \end{bmatrix} \end{bmatrix} \end{bmatrix}$$

(b) *khephi-lul* 'coffee-ACC' (= (51)):

$$\begin{bmatrix} \text{PHON} & \langle \textit{khephi-lul} \rangle \\ \text{SS} \begin{bmatrix} \text{LOC} \begin{bmatrix} \text{CAT} \begin{bmatrix} \text{HEAD} \begin{bmatrix} \text{POS} & \textit{noun} \\ \text{GCASE} & \textit{acc} \end{bmatrix} \\ \text{COORD} & \textit{none} \end{bmatrix} \\ \text{CONT} \begin{bmatrix} \lambda \text{P}_{\langle \text{e, } \langle \text{e, t} \rangle \rangle}. \text{P(the-liquid-coffee')} \end{bmatrix} \end{bmatrix} \end{bmatrix} \end{bmatrix}$$

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(68) (a) Conjunctive Morphological Coordinator Rule:

$$\begin{bmatrix} \text{PHON} < \boxed{1} > \\ \text{SS} \begin{bmatrix} \text{LOC} \begin{bmatrix} \text{CAT} \begin{bmatrix} \boxed{3}\text{HEAD} \begin{bmatrix} \text{POS } \textit{noun} \end{bmatrix} \\ \text{COORD } \textit{none} \end{bmatrix} \\ \text{CONT} \begin{bmatrix} \boxed{2}_{\text{e}} \end{bmatrix} \end{bmatrix} \end{bmatrix} \end{bmatrix} \end{bmatrix} \mapsto$$

$$\begin{bmatrix} \text{PHON} < \text{F}_{\textit{-(k)wa}}(\boxed{1}) > \\ \text{SS} \begin{bmatrix} \text{LOC} \begin{bmatrix} \text{CAT} \begin{bmatrix} \boxed{3} \\ \text{COORD } \textit{and} \end{bmatrix} \\ \text{CONT} \begin{bmatrix} \lambda g_{<a,\,b>}.\ \lambda y_{a}.\ [\lambda P_{a}.\ P(\boxed{2})](y) \prod g(y) \end{bmatrix} \end{bmatrix} \end{bmatrix} \end{bmatrix}$$

(b) *ppang-kwa* ‘bread-and’:

$$\begin{bmatrix} \text{PHON} < \textit{ppang-kwa} > \\ \text{SS} \begin{bmatrix} \text{LOC} \begin{bmatrix} \text{CAT} \begin{bmatrix} \text{HEAD} \begin{bmatrix} \text{POS } \textit{noun} \end{bmatrix} \\ \text{COORD } \textit{and} \end{bmatrix} \\ \text{CONT} \begin{bmatrix} \lambda g_{<a,\,b>}.\ \lambda y_{a}.\ [\lambda P_{a}.\ \text{P(the-bread')}](y) \prod g(y) \end{bmatrix} \end{bmatrix} \end{bmatrix} \end{bmatrix}$$

Appendix B: An analysis of a SUNC with three conjuncts

(69) *Minho-ka* [*ppang-kwa* [*pap-pause* [*kuliko khephi-lul*]]] *masi-ess-ta.*
Minho-NOM bread-and rice-pause and coffee-ACC drink-PST-DECL
(lit.) ‘Minho drank the coffee and the rice and the bread.’
= ‘Minho drank the coffee, ate the rice, and ate the bread.’

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(70) [NP *pap-pause* [NP *kuliko khephi-lul*]] =

$$\begin{bmatrix} \textit{mcdn-coord-ph} \\ \text{PHON} \ \langle \textit{pap-pause kuliko khephi-lul} \rangle \\ \\ \text{HEAD} \ \boxed{1} \\ \text{COORD} \ \textit{none} \\ \text{CONT} \left[\lambda y_{\langle e \langle e, t \rangle \rangle} . \ y(\text{the-rice}') \prod y(\text{the-liquid-coffee}') \right] \end{bmatrix},$$

where if y(the-rice') is undefined,
then y(the-rice') is replaced by z(the-rice'),
where z is a direct hypernym of y.

$$\begin{bmatrix} \textit{word} \\ \text{PHON} \ \langle \textit{pap-pause} \rangle \\ \\ \text{HEAD} \left[\text{POS} \ \textit{noun} \right] \\ \text{COORD} \ \textit{and} \\ \text{CONT} \left[\lambda g_{\langle a, b \rangle} . \ \lambda y_a . \ [\lambda P_a . \ P(\text{the-rice}')](y) \prod g(y) \right] \end{bmatrix} \quad \mathbf{H} \quad \begin{bmatrix} \textit{lcdn-coord-ph} \\ \text{PHON} \ \langle \textit{kuliko khephi-lul} \rangle \\ \\ \text{HEAD} \ \boxed{1} \begin{bmatrix} \text{POS} \ \textit{noun} \\ \text{GCASE} \ \textit{acc} \end{bmatrix} \\ \text{COORD} \ \textit{and} \\ \text{CONT} \left[\lambda P_{\langle e, \langle e, t \rangle \rangle} . \text{P(the-liquid-coffee}') \right] \end{bmatrix}$$

pap-pause
'rice-pause'

kuliko khephi-lul
'and coffee-ACC'

(71) [NP *ppang-kwa* [NP *pap-pause* [NP *kuliko khephi-lul*]]] =

$$\begin{bmatrix} \textit{mcdn-coord-ph} \\ \text{PHON} \ \langle \textit{ppang-kwa pap-pause kuliko khephi-lul} \rangle \\ \\ \text{HEAD} \ \boxed{1} \\ \text{COORD} \ \textit{none} \\ \text{CONT} \left[\lambda y_{\langle e \langle e, t \rangle \rangle} . \ y(\text{the-bread}') \prod y(\text{the-rice}') \prod y(\text{the-liquid-coffee}') \right] \end{bmatrix},$$

where if y(the-bread') is undefined, then y(the-bread') is replaced by z(the-bread');
if y(the-rice') is undefined, then y(the-rice') is replaced by z(the-rice'),
where z is a direct hypernym of y.

$$\begin{bmatrix} \textit{word} \\ \text{PHON} \ \langle \textit{ppang-kwa} \rangle \\ \\ \text{HEAD} \left[\text{POS} \ \textit{noun} \right] \\ \text{COORD} \ \textit{and} \\ \text{CONT} \begin{bmatrix} \lambda g_{\langle a, b \rangle} . \ \lambda y_a . \ [\lambda P_a . \ P(\text{the-bread}')](y) \\ \prod g(y) \end{bmatrix} \end{bmatrix} \quad \mathbf{H} \quad \begin{bmatrix} \textit{mcdn-coord-ph} \\ \text{PHON} \ \langle \textit{pap-pause kuliko khephi-lul} \rangle \\ \\ \text{HEAD} \ \boxed{1} \begin{bmatrix} \text{POS} \ \textit{noun} \\ \text{GCASE} \ \textit{acc} \end{bmatrix} \\ \text{COORD} \ \textit{none} \\ \text{CONT} \begin{bmatrix} \lambda y_{\langle e \langle e, t \rangle \rangle} . \ y(\text{the-rice}') \\ \prod y(\text{the-liquid-coffee}') \end{bmatrix} \end{bmatrix},$$

where if y(the-rice') is undefined,
then y(the-rice') is replaced by z(the-rice'),
where z is a direct hypernym of y.

ppang-kwa
'bread-and'

pap-pause kuliko khephi-lul
'rice-pause and coffee-ACC'

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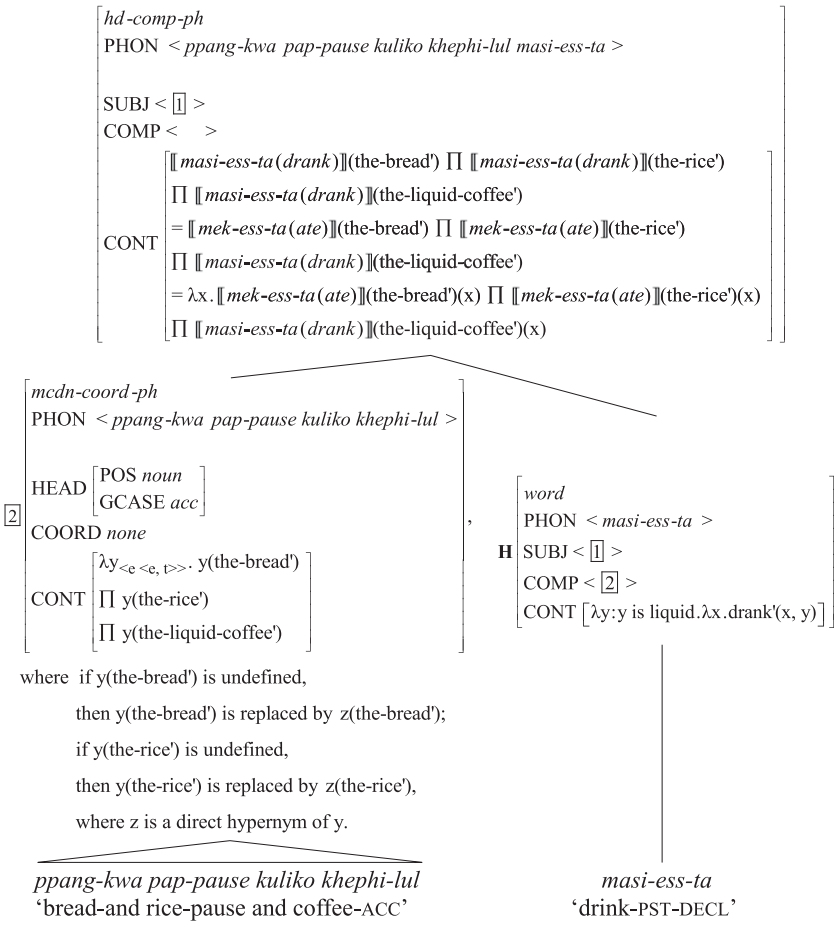
(72) [VP [NP *ppang-kwa* [NP *pap-pause* [NP *kuliko khephi-lul*]]] *masi-ess-ta*] =



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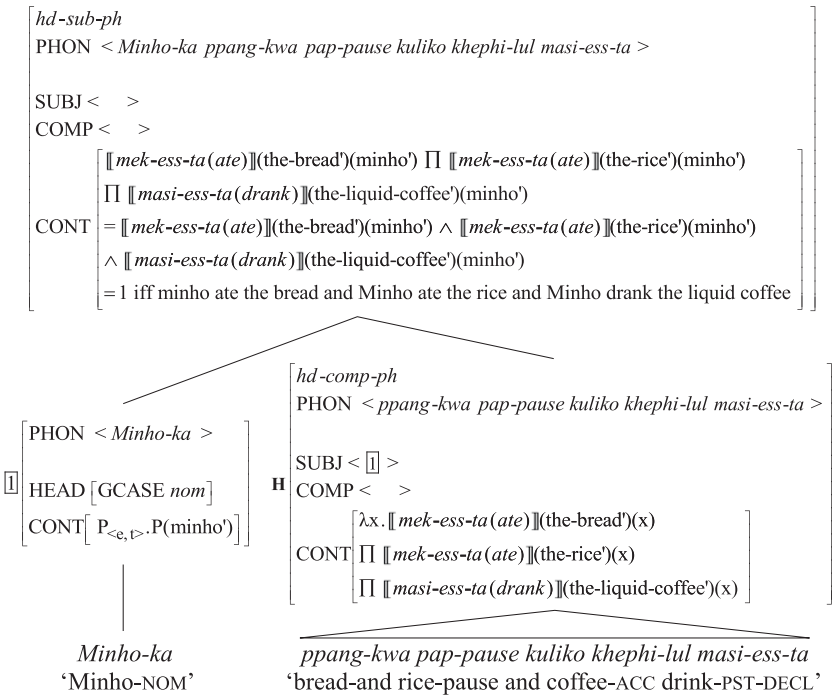
(73) [S *Minho-ka* [VP [NP *ppang-kwa* [NP *pap-pause* [NP *kuliko khephi-lul*]]] *masi-ess-ta*]] =



Appendix C: An analysis of a SUNC functioning as a subject

(74) [*khwukhi-wa kuliko umlyo-ka*] *masi-l manhay-ss-ta.*
cookie-and and beverage-NOM drink-REL worth-PST-DECL
(lit.) 'The cookie and beverage were drinkable.'
= 'The cookie was edible and the beverage was drinkable.'

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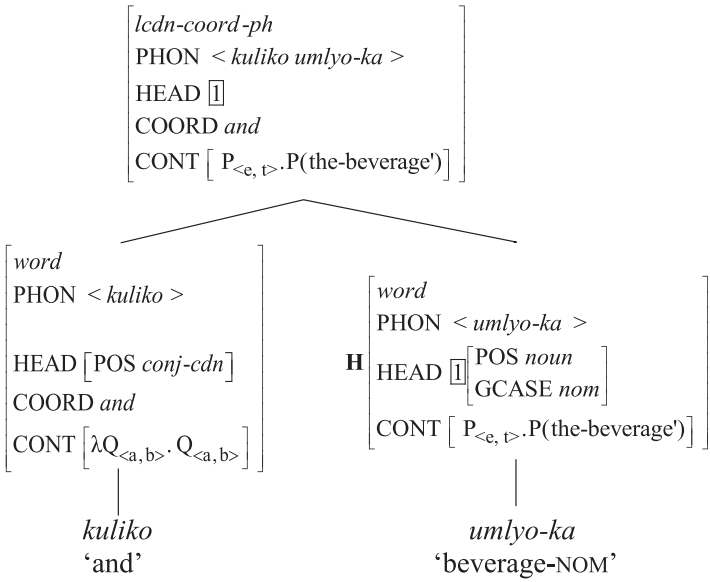
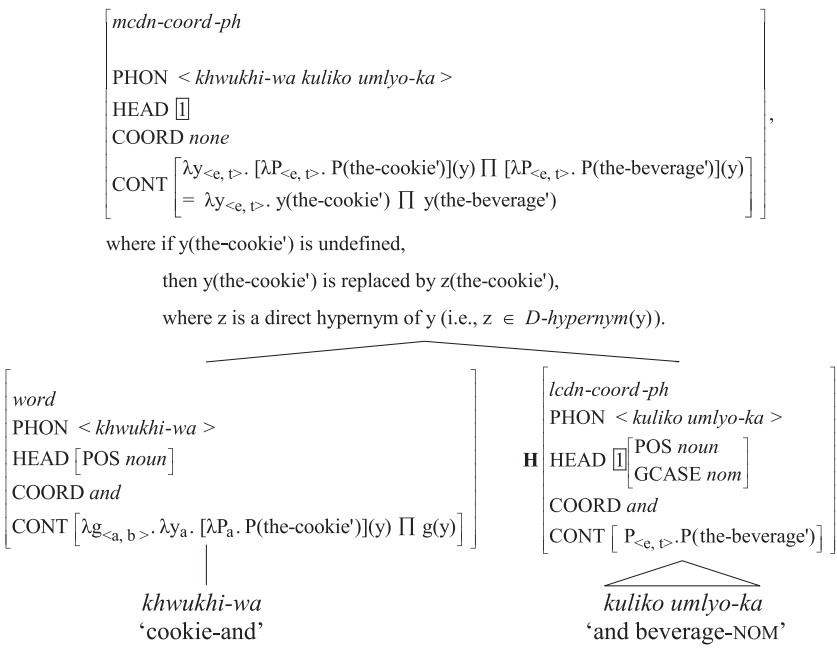
(75) [NP *kuliko umlyo-ka*] =



(76) [NP *khwukhi-wa* [NP *kuliko umlyo-ka*]] =



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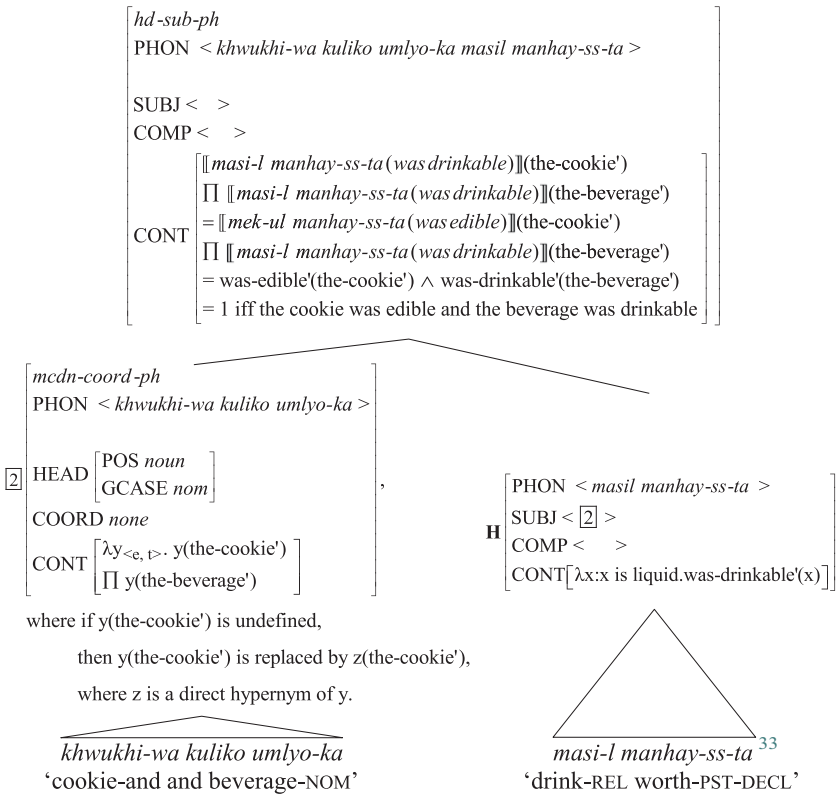
(77) [S [NP *khwukhi-wa* [NP *kuliko umlyo-ka*]] *masil manhay-ss-ta*] =



[33] The expression *masil manhay-ss-ta is* a phrase, but its feature structure has been simplified, and it is assumed to mean 'was drinkable'.

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