

Between triviality and redundancy: evidence from Korean for the ban on CP conjunction

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Abstract In this paper, I argue that true intersective conjunction of embedded CPs is impossible in natural languages. With data from Korean, I show that ‘CP and CP’ strings are grammatical only if the conjunction involved in them is the one used in the Conjunction Reduction (CR) configurations, which leads to the obligatory wide scope readings of conjunction (Bassi and Bondarenko 2021; Bjorkman 2013; Szabolcsi 1997, 2016).

I propose that the ban on CP conjunction is due to the meanings of the functional elements at the left periphery of embedded clauses which encode *displacement* (von Stechow 1997-2020; Hockett 1960), and *exemplification* (Kratzer 1998, 2002, 2020): they make intersective conjunction of embedded CPs always either logically trivial or redundant, leading to ungrammaticality.

Keywords clausal embedding · Korean · conjunction · triviality · redundancy

1 Introduction

It has been observed that cross-linguistically, embedded CP conjunction (sentences containing strings ‘CP and CP’ embedded under a predicate) does not have the same meaning as embedded TP conjunction (sentences containing strings ‘Comp TP and TP’ embedded under a predicate), (Bassi and Bondarenko 2021; Bjorkman 2013; Szabolcsi 1997, 2016).¹ For example, we natu-

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rally understand a sentence like (1a), which has two complementizers, as saying that the speaker both doubts that Masha sang and doubts that Dina danced—that is, the conjunction seems to take wide scope over the predicate.² TP conjunction on the other hand takes narrow scope: the speaker in (1b) doubts the truth of the conjunctive proposition.

- (1) a. *CP conjunction*: ‘CP and CP’ *and > doubt*
 I doubt [[*that* Masha sang] and [*that* Dina danced]].
 b. *TP conjunction*: ‘Comp TP and TP’ *doubt > and*
 I doubt [*that* [Masha sang] and [Dina danced]].

This contrast becomes evident if we consider a context like (2). If the speaker finds it likely that Masha sang, and it’s only the combination of Masha singing and Dina dancing that they find unlikely, then the sentence with the CP conjunction in (1a) is judged by most speakers as infelicitous. The sentence with the TP conjunction in (1b) is on the other hand fine in this context.

- (2) *Narrow Scope Context (Bassi and Bondarenko 2021:588)*
 Masha’s singing is quite likely, but Dina’s dancing is very unlikely.
 Thus, the combination of these two events is also very unlikely.
 #‘CP and CP’, ✓‘Comp TP and TP’

The contrast between embedded CP conjunction and TP conjunction seems to be cross-linguistically stable: in addition to English (Bjorkman 2013; Szabolcsi 1997), the same facts hold at least for Hungarian (Szabolcsi 1997, 2016), Hebrew, Italian and Russian (Bassi and Bondarenko 2021).

This raises the question of what underlies this restriction: why does embedded CP conjunction always take wide scope? Note that this constraint is not expected if we make a common assumption that complementizers are semantically vacuous, (3): if both CPs and TPs denote sets of possible worlds or situations, then both CP conjunction and TP conjunction will result in the embedding predicate combining with a conjunctive proposition, and thus in both cases the narrow scope of conjunction is predicted.

- (3) $\llbracket [\text{CP that Masha sang}] \text{ and } [\text{CP that Dina danced}] \rrbracket =$
 $\{w: \text{Masha sang in } w\} \cap \{w: \text{Dina danced in } w\} =$
 $\{w: \text{Masha sang and Dina danced in } w\} =$
 $\llbracket \text{that } [\text{TP Masha sang}] \text{ and } [\text{TP Dina danced}] \rrbracket$

There are two proposals in the literature that try to derive the obligatory wide scope of embedded CP conjunction. Szabolcsi (1997, 2016) proposed that complementizers have meanings of “lifting” type-shifters, which reverse

² As Bassi and Bondarenko (2021) note, there is some interspeaker variation in whether the narrow scope of conjunction in sentences with strings ‘CP and CP’ is allowed: it seems that with stress on *and*, some people find such readings acceptable. They suggest that such speakers employ a non-Boolean conjunction to get such readings (Bassi and Bondarenko 2021:597–599). I adopt their idea, though the concrete solution of this issue will not be crucial for us: Korean conjunctions we will consider do not seem to have such non-Boolean readings.

argument-predicate relations and thus ensure the wide scope of embedded conjunction with respect to the verb. I will call this view *Comp-As-Lift Theory*:

$$(4) \quad \llbracket \text{that} \rrbracket^s = \lambda p_{st}. \lambda V_{st,t}. V(p)$$

Bassi and Bondarenko (2021) proposed a different account, which relies on the idea that complementizers map the proposition p , which is the meaning of the embedded TP, to a predicate of individuals whose Content is *identical* to p (Elliott 2020; Moulton 2009, 2015), (5), which is a particular implementation of the Kratzer’s approach to clausal embedding (Kratzer 2006, 2016) according to which clauses are predicates of contentful individuals.

$$(5) \quad \llbracket \text{that} \rrbracket^s = \lambda p_{st}. \lambda x. \text{CONT}(x) = p$$

In what follows, I’ll talk about elements that have meanings like in (5) as introducing *displacement* (von Stechow 1997-2020; Hockett 1960): they shift evaluation of the embedded proposition to a set of situations determined by the noun or verb that the clause combines with (see also Bondarenko 2025). Unlike in approaches like (Kratzer 2006), where complementizers contribute universal modal meanings, (5) involves what I will call *equality* semantics: the content of an individual is *equated* with the embedded proposition.

Bassi and Bondarenko (2021) propose that meanings like (5) make conjunctions of CPs have pathological meanings, as they require equating two propositions with the content of the same individual, and that this leads to ungrammaticality of true CP conjunction. Strings ‘CP and CP’ on their view arise from coordination of higher constituents followed by Conjunction Reduction, which explains the wide scope interpretations of conjunction in such sentences. I will call this proposal *Conjunction Reduction Theory* or *CR Theory*.

Both approaches make correct predictions for the languages that have been considered in the literature: both predict that in sentences with strings like (6a) we should see the wide scope of conjunction, whereas in sentences with strings like (6b) narrow scope of conjunction is expected. Thus, it is difficult to differentiate between the two approaches on empirical grounds.

(6) *Predictions*

- | | |
|---------------------------------|--|
| a. V COMP TP <i>and</i> COMP TP | $\times \text{verb} > \text{and}, \checkmark \text{and} > \text{verb}$ |
| b. V COMP TP <i>and</i> TP | $\checkmark \text{verb} > \text{and}, \times \text{and} > \text{verb}$ |

In this paper I investigate embedded conjunction in Korean, focusing on embedded clauses that combine with content nouns like *cwucang* ‘claim’ and nouns like *sanghwang* ‘situation’. I argue that data from Korean can help us adjudicate between the two proposals in favor of the *Conjunction Reduction Theory*: ‘CP and CP’ strings always involve conjunction of higher constituents followed by ellipsis. However, we will also see that Korean data necessitates refinements to the explanation for why true CP conjunction is impossible. While I will maintain the insight that semantics of the left-periphery elements results in deviant meanings for CP conjunction, I’ll suggest that equality semantics of displacement is not the only source of ill-formedness.

Here is a brief preview of the argument. Korean morphologically distinguishes conjunctions that occur in Conjunction Reduction structures (*kuliko*) from the ones that do not (*ko*). CR Theory predicts that we will see ungrammaticality of ‘CP and CP’ strings with the conjunction that cannot occur in CR structures, and wide scope of the conjunction that is compatible with CR. Comp-as-Lift Theory does not expect the type of conjunction to matter for the grammaticality of ‘CP and CP’ strings: all sentences should be grammatical and receive wide scope readings. I show that the data is in line with the predictions of the CR Theory, thus providing support for this approach.

While Korean data generally supports the CR approach, it requires revisions to the proposal in (Bassi and Bondarenko 2021). The need for revision comes from the fact that not all CPs in Korean introduce displacement—elements with meanings like in (5) are absent in clauses that combine with nouns like *sanghwang* ‘situation’. And yet CP conjunction under such nouns is ungrammatical too. Following (Bondarenko 2025), I suggest there are two functional elements in the periphery of Korean clauses: a displacement-introducing head (Cont), and a complementizer head (Comp) that introduces *exemplification* relation (Kratzer 1998, 2002, 2020). I propose that the semantics of both elements lead to deviant meanings and ungrammaticality of CP conjunctions.

One implication of my proposal is that true conjunction of constituents above TP is never possible: meanings of sentences involving such structures are always deviant—either trivially false, or redundant. And thus the ban on CP conjunction is a direct consequence of the semantics of clausal embedding.

This paper is structured as follows. Section 2 discusses two explanations for the wide scope of CP conjunction proposed in the literature: the Comp-as-Lift Theory (Szabolcsi 1997, 2016), and the Conjunction Reduction Theory (Bassi and Bondarenko 2021). Section 3 makes a proposal about the syntax and semantics of two kinds of clauses in Korean, building on the ideas suggested in (Bondarenko 2025): clauses that combine with nouns like *cwucang* ‘claim’ and clauses that combine with nouns like *sanghwang* ‘situation’. Section 4 discusses the predictions for embedded conjunction under this proposal, as well as under an alternative proposal of the Comp-as-Lift Theory. Section 5 shows the results and argues that the data from Korean embedded CP conjunction provides an argument for the CR Theory. Section 6 observes that appealing to logical triviality is not enough in order to account for the ungrammaticality of CP conjunction, and suggests that a ban on redundancy is needed to supplement the current proposal. Section 7 discusses some predictions that my proposal makes about CP conjunction of clauses that combine with verbs and CP disjunction.

2 Two explanations for the wide scope of CP conjunction

2.1 Comp-as-Lift Theory

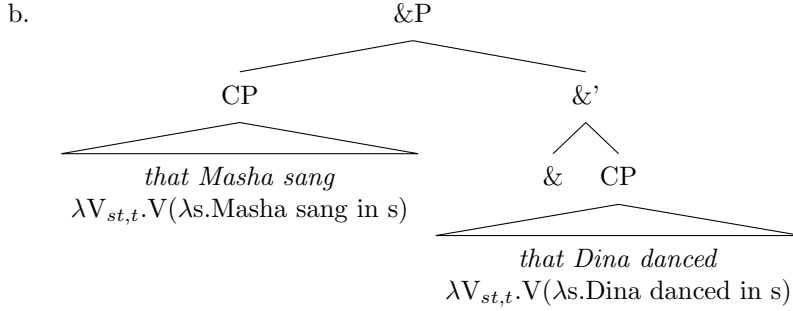
Comp-as-Lift Theory (Szabolcsi 1997, 2016) proposes that the complementizers have meanings equivalent to the type-shifter LIFT, (7): they take a proposition (p) and a set of propositions ($V = \text{verbal meaning}$), and return 1 iff the proposition is in that set.³

$$(7) \quad \llbracket \text{that} \rrbracket^s = \lambda p_{st}. \lambda V_{st,t}. V(p)$$

On this account, ‘CP and CP’ strings are instances of true conjunction: the two clauses have the same type and thus can be conjoined by Generalized Conjunction (Partee and Rooth 1983). Thus, CP conjunctions like in (8a) will have the structure in (8b) and the interpretation in (8c).

(8) ‘CP and CP’ on the *Comp-as-Lift Theory*

a. $[\text{CP that Masha sang}]$ and $[\text{CP that Dina danced}]$



c. $\llbracket [\text{CP that Masha sang}] \text{ and } [\text{CP that Dina danced}] \rrbracket^s =$
 $\lambda V_{st,t}. V(\lambda s'. \text{Masha sang in } s') \wedge V(\lambda s'. \text{Dina danced in } s')$

CP conjunction takes the verbal meaning as its argument, and applies it twice: both to the proposition *Masha sang*, and to the proposition *Dina danced*. This will derive the wide scope of conjunction in the sentence, (9).

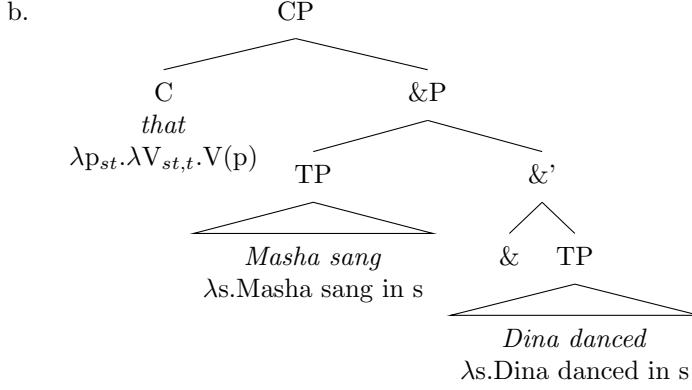
(9) $\llbracket \text{I doubt } [\text{that Masha sang}] \text{ and } [\text{that Dina danced}] \rrbracket^s =$
 $\text{doubt}(\text{Speaker})(\lambda s'. \text{Masha sang in } s')$
 $\wedge \text{doubt}(\text{Speaker})(\lambda s'. \text{Dina danced in } s')$
 $\rightsquigarrow \text{The speaker must both doubt that Masha sang and doubt that Dina danced.}$

³ I reformulate the lexical entries to be in line with the framework of situation semantics that I will adopt in this paper (Kratzer 1989, 2020). This should not affect any predictions of the proposal as far as I can tell.

When we conjoin two TPs under a single complementizer, the resulting CP will denote a function that takes the verbal meaning, and applies it once to the conjunctive proposition, (10).

(10) ‘Comp TP and TP’ on the Comp-as-Lift Theory

a. $[[_{CP} \text{ that } [_{TP} \text{ Masha sang}] \text{ and } [_{TP} \text{ Dina danced}]]$



c. $[[[[_{CP} \text{ that } [_{TP} \text{ Masha sang}] \text{ and } [_{TP} \text{ Dina danced}]]]]^s = \lambda V_{st,t}. V(\lambda s'. \text{Masha sang in } s' \wedge \text{Dina danced in } s')$

This correctly derives the narrow scope of embedded conjunction, (11).

(11) $[[[[_{CP} \text{ that } [_{TP} \text{ Masha sang}] \text{ and } [_{TP} \text{ Dina danced}]]]]^s = \text{doubt}(\text{Speaker})(\lambda s'. \text{Masha sang in } s' \wedge \text{Dina danced in } s')$
 $\rightsquigarrow$ *It's sufficient that the Speaker doubts that the combination of Masha singing and Dina dancing took place.*

To sum up, according to the Comp-as-Lift Theory, complementizers are “lifting” type-shifters that reverse argument-predicate relations, and this is what ensures the wide scope of embedded CP conjunction. Since the wide scope arises as a direct consequence of COMP’s semantics, we do not expect the syntax of conjunction to matter: e.g., whether conjunction at hand is sensitive to the presence of ellipsis or not should not make a difference.

2.2 Conjunction Reduction (CR) Theory

Conjunction Reduction (CR) theory (Bassi and Bondarenko 2021) proposes that true CP conjunction is impossible, and ‘CP and CP’ strings always involve ellipsis. Bassi and Bondarenko (2021) argue that impossibility of true CP conjunction is a consequence of the semantics of clausal embedding. They assume that clauses are predicates of individuals with propositional content (Kratzer 2006), and, following (Elliott 2020; Moulton 2009), that complementizers have meanings like in (12). Here CONT is a partial function, (13), which is defined

for particulars with propositional content (e.g., ideas, thoughts, beliefs, saying events, etc.), and returns the proposition associated with such a particular. The embedded CPs then will have denotations as in (14). Note that according to this proposal, the source of *displacement*—shift to other situations—is within the embedded clause. It is contributed by the complementizer, which establishes *equality* relationship between the content of an individual and the embedded proposition.

$$(12) \quad \llbracket \text{that} \rrbracket^s = \lambda p_{st}. \lambda x. \text{CONT}(x) = p$$

$$(13) \quad \text{CONT}(\text{ENT}) \text{ is a partial function: } D_e \rightarrow D_{st},$$

where D_e is the domain of individuals; D_s is the domain of situations;
 $D_s \subset D_e$ (all situations are individuals).

$$(14) \quad \llbracket \text{that Masha sang} \rrbracket^s = \lambda x. \text{CONT}(x) = \{s': \text{Masha sang in } s'\}$$

One piece of evidence in favor of the equality semantics comes from the *Maximize Presupposition!* effect with the noun *fact* (Elliott 2020): when this noun combines with an embedded clause, the use of the definite article is required, (15). Elliott (2020) shows that this effect is unexpected if semantics of clausal embedding involves establishing a subset relation between propositional content of entities and embedded propositions: there can never exist a unique fact such that in all situations *compatible with its content* it is raining.⁴ There however can be a unique fact whose content *equals* the embedded proposition, under the assumption that every true proposition is the content of a unique fact, and every fact has as its content a unique true proposition.

- (15) a. Darcy mentioned a fact (*that it's raining).
 b. Darcy mentioned the fact (that it's raining).
 c. Darcy mentioned two facts (*that it's raining).
 (Elliott 2020:146)

The equality semantics predicts that two embedded CPs should never be able to conjoin via Generalized Conjunction. Consider (16):

$$(16) \quad \llbracket [\text{CP that Masha sang}] \text{ and } [\text{CP that Dina danced}] \rrbracket^s =$$

$$\lambda x. \text{CONT}(x) = \{s': \text{Masha sang in } s'\}$$

$$\wedge \text{CONT}(x) = \{s': \text{Dina danced in } s'\} = \emptyset$$

Because CONT is a function, it cannot take the same entity as its argument and return two distinct propositions. This means that sentences which contain true CP conjunction, (16), will always be false. Bassi and Bondarenko (2021) propose that this semantic deviance that we observe leads to ungrammaticality. Note that on their account CONT is contributed by a functional (= “logical”)

⁴ For example, if it is true in the world that it is raining, and it is also true that it is Tuesday, then there is a fact whose content is *It is raining and it is Tuesday*, and it is a fact such that in all situations *compatible with its content* it is raining. Thus, in any world there will always be numerous facts that satisfy the description *fact that it's raining* on the subset semantics. This makes an incorrect prediction that the indefinite article should be used.

element—the complementizer. Thus, sentences with constituents like in (16) are *L-analytic*, (17): trivially false in the virtue of their logical structure. It has been proposed that L-analyticity leads to ungrammaticality (Barwise and Cooper 1981; Chierchia 2013; von Stechow 1993; Gajewski 2002, a.m.o.), and hence we expect sentences with true CP conjunction to be impossible.

(17) *L(logical)-analyticity* (Gajewski 2002)

- a. L-analytic sentences are those that are true or false in virtue of their logical structure.
- b. L-analytic sentences are ungrammatical.

This of course raises the question of how sentences containing strings like ‘CP and CP’ are derived. Bassi and Bondarenko (2021) argue that such strings arise from structures in which higher constituents (at least matrix verbal phrases) are conjoined, followed by Conjunction Reduction: non-pronunciation of some of the repeated material in one of the conjuncts.⁵ For example, *doubt that Masha sang and that Dina danced* can correspond to the structure in (18b) in which two matrix VoicePs are conjoined. I assume that the subject here ATB-moves from within conjoined VoicePs into the matrix Spec,TP position.

(18) ‘CP and CP’ on the Conjunction Reduction Theory

- a. $[\text{VoiceP } I \text{ doubt } [\text{that Masha sang}]] \text{ and } [\text{VoiceP } I \text{ ~~doubt~~ } [\text{that Dina danced}]]$
- b.


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      graph TD
        &P --> VoiceP1[VoiceP]
        &P --> amp["&"]
        VoiceP1 --> DP1[DP  
I]
        VoiceP1 --> VoiceP1p[Voice']
        VoiceP1p --> Voice1[Voice]
        VoiceP1p --> VP1[VP]
        Voice1 --> V1[V  
doubt]
        VP1 --> CP1[CP  
that Masha sang]
        amp --> amp2["&"]
        amp --> VoiceP2[VoiceP]
        VoiceP2 --> DP2[DP  
I]
        VoiceP2 --> VoiceP2p[Voice']
        VoiceP2p --> Voice2[Voice]
        VoiceP2p --> VP2[VP]
        Voice2 --> V2[V  
doubt]
        VP2 --> CP2[CP  
that Dina danced]
      
```
- c. $\llbracket [\text{VoiceP } I \text{ doubt } [\text{CP that Masha sang}]] \rrbracket^s = \lambda s'. \text{doubt}(s')_s \wedge \text{CONT}(s') = \{s: \text{Masha sang in } s\} \wedge \text{Exp}(s') = \text{Speaker}$

⁵ Here I remain uncommitted to how this non-pronunciation comes about. See section 4 for discussion of the different accounts of CR in the context of Korean conjunction *kuliko*.

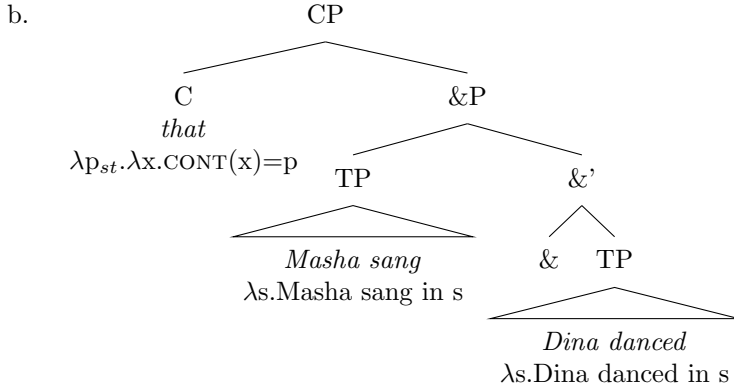
- d. $\llbracket [\text{VoiceP I doubt [that Masha sang]] \text{ and } [\text{VoiceP I doubt [that Dina danced]}]] \rrbracket^s =$
 $\exists s' [\text{doubt}(s')_s \wedge \text{Exp}(s') = \text{Speaker} \wedge \text{CONT}(s') = \{s: \text{Masha sang in } s\}] \wedge \exists s'' [\text{doubt}(s'')_s \wedge \text{Exp}(s'') = \text{Speaker} \wedge \text{CONT}(s'') = \{s: \text{Dina danced in } s\}]$
 $\leadsto$ *The speaker must both doubt that Masha sang and doubt that Dina danced.*

Assuming that *doubt* denotes a predicate of doubting situations,⁶ we can combine it with the embedded clause by Predicate Modification (Elliott 2020), and the VP will thus denote a set of doubting situations such that the propositional content associated with them equals the embedded proposition. After Voice introduces the Experiencer of the situation, we will get the denotation in (18c). Because the sentence with a string ‘CP and CP’ in fact involves VoiceP conjunction, *and* will take wide scope with respect to the verb: (18d), in which and conjoins VoicePs with existentially closed situation arguments, asserts that there are two distinct doubting situations, one of doubting that Masha sang, and another one of doubting that Dina danced. Thus, the sentence will be false if the speaker only finds the combination of the two propositions unlikely.

In sentences with TP conjunction, the complementizer equates the conjunctive proposition with the content of the individual argument, (19).

- (19) ‘Comp TP and TP’ on the Conjunction Reduction Theory

- a. $\llbracket [\text{CP that } [\text{TP Masha sang}] \text{ and } [\text{TP Dina danced}]] \rrbracket$



- c. $\llbracket \llbracket [\text{CP that } [\text{TP Masha sang}] \text{ and } [\text{TP Dina danced}]] \rrbracket \rrbracket^s =$
 $\lambda x. \text{CONT}(x) = \{s': \text{Masha sang in } s' \text{ and Dina danced in } s'\}$

This correctly derives the narrow scope of embedded conjunction, (20).

⁶ One might wonder what it means to be a doubting situation. It seems that the following simplifying assumption can be made: a situation *s* is a doubting situation with propositional content *p* if *s* is a mental state with propositional content *p* such that the attitude holder of *s* considers *p* (= the content of *s*) unlikely to be true in the situation of evaluation.

- (20) $\llbracket \text{I doubt [that [Masha sang] and [Dina danced]]} \rrbracket^s =$
 $\exists s' [\text{doubt}(s')_s \wedge \text{Exp}(s') = \text{Speaker} \wedge \text{CONT}(s') = \{s: \text{Masha sang in } s$
 $\text{and Dina danced in } s\}]$
 $\rightsquigarrow$ *It's sufficient that the speaker finds the combination of Masha*
singing and Dina dancing unlikely to have occurred.

To sum up, according to this explanation conjunction of CPs is banned due to the meanings of complementizers: they equate the embedded proposition with the propositional content of some entity (situation or proper individual). The equality semantics of displacement makes true intersective CP conjunction L-analytic, and thus ungrammatical. On this view, the wide scope in sentences with ‘CP and CP’ strings arises because they involve conjunction of higher constituents (e.g., VP conjunction) followed by Conjunction Reduction. Thus, this approach expects the availability of ellipsis to matter: in cases when Conjunction Reduction is unavailable, we expect to see ungrammaticality of sentences with ‘CP and CP’ strings.

3 Proposal: structure & meaning of Korean embedded CPs

We have seen that both Comp-as-Lift Theory and CR Theory successfully account for the wide scope of embedded CP conjunction. However, they make different cross-linguistic predictions: Only the CR Theory expects the grammaticality of ‘CP and CP’ strings to depend on availability of CR in a given configuration. With the data from Korean, I would like to argue that we do in fact find such dependence (sections 4–5). However, we need to make certain modifications to the CR proposal (section 3.2) in order to account for the patterns of clausal embedding that we see in Korean (section 3.1).

3.1 Two kinds of embedded CPs: Cont-CPs and Sit-CPs

Both Comp-as-Lift Theory and CR Theory assumed that embedded clauses are uniform in their structure and meaning, and that sentences containing them always involve displacement (von Stechow 1997-2020; Hockett 1960): shift from the situation of evaluation to the set of situations determined by the clause-embedding verb. Moreover, CR Theory relied on a particular proposal about how displacement is achieved (*equality semantics*, (12)) in order to account for the wide scope of embedded CP conjunction. These assumptions however cannot be maintained: not all sentences involving embedded clauses introduce displacement. Let us illustrate this with data from Korean.

Korean has several ways of combining clauses with verbs and nouns. (21) illustrates three common complementation strategies with verbs, (Shim and Ihsane 2015), and (22) shows two kinds of clauses that we see with nouns. First, note that the endings of clauses which modify verbs and nouns differ: verbs combine with clauses with the complementizer *ko*, (21a), nouns combine with clauses that bear the so-called “adnominal marker” *-nun*, (22). In addition,

verbs can combine with nominalized clauses, which consist of a bleached noun *kes* ‘thing’ modified by a clause with the adnominal marker, (21b)–(21c).

(21) *Three complementation patterns with verbs in Korean*

- a. Kibo-nun [Dana-ka i chayk-ul ilk-ess-ta-ko]
 Kibo-TOP Dana-NOM this book-ACC read-PST-DECL-COMP
 yukamsulewehay-ss-ta /mit-ess-ta.
 regret-PST-DECL /believe-PST-DECL
 ‘Kibo regretted/believed that Dana read this book.’
- b. Kibo-nun [Dana-ka i chayk-ul ilk-ess-ta-nun
 Kibo-TOP Dana-NOM this book-ACC read-PST-DECL-ADN
 kes-ul] yukamsulewehay-ss-ta /mit-ess-ta.
 thing-ACC regret-PST-DECL /believe-PST-DECL
 ‘Kibo regretted/believed that Dana read this book.’
- c. Kibo-nun [Dana-ka i chayk-ul ilk-un kes-ul]
 Kibo-TOP Dana-NOM this book-ACC read-ADN thing-ACC
 yukamsulewehay-ss-ta /mit-ess-ta.
 regret-PST-DECL /believe-PST-DECL
 ‘Kibo regretted/believed that Dana read this book.’
 (Shim and Ihsane 2015:131, ex. (4))

Shim and Ihsane (2015) claim that clauses like (21a) and (21b) are full CPs, but clauses like (21c) are reduced. Indeed, we see that the past tense morpheme and the so-called “declarative marker” *-ta* are absent from these clauses: the adnominal marker combines directly with the verbal root. The same distinction can be observed with clauses that combine with nouns, (22a)–(22b).⁷ In this paper I focus on clauses that combine with nouns, although my proposal will extend to the clauses that combine with verbs as well (section 7).

(22) *Complementation with nouns in Korean: Cont-CPs vs. Sit-CPs*

- a. [Swuna-ka mwuncey-lul phwul-ess-ta-nun] cwucang-i
 Swuna-NOM problem-ACC solve-PST-DECL-ADN claim-NOM
 /somwun-i sasil-i-ta.
 /rumor-NOM fact-COP-DECL
 ‘The claim/rumor that Swuna solved the problem is a fact.’
- b. [Swuna-ka mwuncey-lul phwul-un] sanghwang-i
 Swuna-NOM problem-ACC solve-ADN situation-NOM
 /kyengwu-ka hungmilop-ta
 /case-NOM interesting-DECL
 ‘The situation/case that Swuna solved the problem is interesting.’

⁷ Unless noted otherwise, the Korean data presented in this paper comes from elicitations with 4 native speakers of Korean that the author conducted in 2020–2025. All of the speakers have been graduate students in linguistics in US, but lived in Korea most of their lives.

The distinction in the size of the clauses in (22) goes hand in hand with a difference in what kinds of nouns the clauses combine with (Bondarenko 2025). Clauses that contain overt tense and the declarative marker combine with nouns that describe entities with propositional content, like rumors, claims, beliefs, etc. Following (Bondarenko 2025), I will call such nouns content nouns (Cont-NPs), and clauses that combine with them Cont(ent)-CPs. Clauses that lack these morphemes combine with nouns that describe situations or circumstances of some kind: situation, case, event, etc. I will call such nouns situation nouns (Sit-NPs), and clauses that combine with them Sit(uation)-CPs.

Cont-CPs in Korean obligatorily contain overt tense and declarative morphemes in their structure, (23). Sit-CPs lack these markers, (24).

- (23) a. [Swuna-ka nolayha-yess-ta-nun] cwucang-i
 Swuna-NOM sing-PST-DECL-ADN claim-NOM
 ‘the claim that Swuna sang’
 b. *[Swuna-ka nolayha-ta-nun] cwucang-i
 c. *[Swuna-ka nolayha-yess-(n)un] cwucang-i
 d. *[Swuna-ka nolayha-(nu)n] cwucang-i
- (24) a. [Swuna-ka nolayha-n] sanghwang-i
 Swuna-NOM sing-ADN situation-NOM
 ‘the situation that Swuna sang’
 b. *[Swuna-ka nolayha-yess-ta-nun] sanghwang-i
 c. *[Swuna-ka nolayha-yess-(n)un] sanghwang-i
 d. *[Swuna-ka nolayha-ta-nun] sanghwang-i

While Sit-CPs cannot contain morphemes like *-ess* (PST), temporal distinctions are nevertheless expressed in these clauses. The adnominal marker in Sit-CPs shows allomorphic variation conditioned by the tense of the embedded eventuality: *-(u)n* for past tense, *-nun* for present tense, *-(u)l* for future tense.⁸ For example, in (25)–(26) we see that if the embedded eventuality is in the past, *-(u)n* must be used, but if it is in the future, *-(u)l* must be used.

- (25) Mina-ka [Swuna-ka mwuncey-lul phwul-un] sanghwang-ul
 Mina-NOM Swuna-NOM problem-ACC solve-PST.ADN situation-ACC
 kiekha-n-ta
 remember-PRS-DECL
 ‘Mina remembers the situation that Swuna solved the problem.’
 (*solve* < *remember*, **solve* ~ *remember*, **remember* < *solve*)

⁸ In Cont-CPs, only two of the allomorphs can be used, *-(u)n* and *-nun*, and they show free variation: both options are usually judged as acceptable, but they do not express any temporal information about the embedded event—tense in Cont-CPs is always expressed by morphemes preceding the declarative marker. It seems that the insertion of the head hosting the declarative marker blocks allomorphy between T and the adnominal marker.

- (26) Mina-ka [Swuna-ka mwuncey-lul phwul-ul] sanghwang-ul
 Mina-NOM Swuna-NOM problem-ACC solve-FUT.ADN situation-ACC
 kiekha-n-ta
 remember-PRS-DECL
 ‘Mina remembers the situation that Swuna will solve the problem.’
 (**solve* < *remember*, **solve* ~ *remember*, *remember* < *solve*)

Moreover, morphemes like *-ess* can occur in Sit-CPs when they are not adjacent to the adnominal marker. We can see this for example in (27), where an evidential marker intervenes between the two morphemes.⁹ Thus, both Cont-CPs and Sit-CPs contain a TP in their structures.

- (27) Swuna-ka nolayhay-ss-te-n sanghwang-i
 Swuna-NOM sing-PST-EVID-ADN situation-NOM
 ‘the situation that Swuna sang’

The main morphosyntactic difference between Cont-CPs and Sit-CPs then is that only the former contain the declarative marker *-ta*. This difference goes hand-in-hand with a semantic distinction (Bondarenko 2025): whereas Cont-CPs are *referentially opaque*, Sit-CPs are *referentially transparent* (see Barwise 1981; Higginbotham 1983; Perry and Barwise 1983, a.o.). For example, compare the sentences in (28) and (29).

- (28) *Opacity with Cont-CPs*: {(a), (b)} $\nRightarrow$ (c)
- a. Swuna-ka [hoysa-ka hyepsang-ul ha-l
 Swuna-NOM company-NOM negotiation-ACC do-FUT.ADN
 cwunpi-ka toy-ess-ta-nun kes-ul]
 preparation-NOM become-PST-DECL-ADN thing-ACC
 kuncengcek-ulo haysekha-yess-ta.
 positive-as interpret-PST-DECL
 ‘Swuna interpreted that the company is ready for negotiations as a good thing.’
- b. I hoysa-ka kacang khun sekyuhoysa-i-ta.
 this company-NOM most large oil.company-COP-DECL
 ‘This company is the biggest oil company.’
- c. Swuna-ka [kacang khun sekyuhoysa-ka hyepsang-ul
 Swuna-NOM most large oil.company-NOM negotiation-ACC
 ha-l cwunpi-ka toy-ess-ta-nun
 do-FUT.ADN preparation-NOM become-PST-DECL-ADN
 kes-ul] kuncengcek-ulo haysekha-yess-ta.
 thing-ACC positive-as interpret-PST-DECL
 ‘Swuna interpreted that the biggest oil company is ready for negotiations as a good thing.’

⁹ I thank an anonymous reviewer for this example. See also discussion of TP conjunction within Sit-CPs in section 5.

- (29) *Transparency with Sit-CPs: $\{(a), (b)\} \Rightarrow (c)$*
- a. Mina-ka [Swuna-ka mwuncey-lul phwul-un] sanghwang-ul
 Mina-NOM Swuna-NOM problem-ACC solve-ADN situation-ACC
 kiekhay-ss-ta.
 remember-PST-DECL
 ‘Mina remembers (the situation) that Swuna solved the problem.’
 - b. Swuna-ka pan-eyse kacang khi-ga khu-ta.
 Swuna-NOM class-LOC most height-NOM large-DECL
 ‘Swuna is the tallest girl in the class.’
 - c. Mina-ka [pan-eyse kacang khi-ga khun sonye-ka
 Mina-NOM class-LOC most height-NOM large girl-NOM
 mwuncey-lul phwul-un] sanghwang-ul kiekhay-ss-ta.
 problem-ACC solve-ADN situation-ACC remember-PST-DECL
 ‘Mina remembers (the situation) that the tallest girl in the class
 solved the problem.’

(28) has a reading under which (28a) and (28b) can be true, but (28c) is false. The company under consideration might be the biggest oil company in the actual world, but Swuna interpreting some statement, according to which the company is ready for negotiations does not imply that she interpreted a statement according to which the biggest oil company is ready for negotiations: in situations according to the statement that she interpreted, the company might not be the biggest oil company. In (29) the premises, (29a)–(29b), necessitate the truth of (29c): as soon as Swuna is the tallest girl in the class in the actual world, Mina remembering Swuna solving the problem implies Mina remembering the tallest girl in the class solving the problem, even if she is not aware that Swuna is the tallest girl.

The availability of referentially opaque readings tracks the presence of *displacement* (von Stechow and Heim 1997–2020; Hockett 1960): shift to other situations distinct from the situation of evaluation. Sentences with Cont-CPs involve displacement: e.g., in (28a) we evaluate *The company is ready for negotiations* in the situations compatible with the claim that Swuna interpreted, not with respect to the situation of evaluation. Sentences with Sit-CPs lack displacement: e.g., in (29a) *Swuna solved the problem* is evaluated with respect to the situation of evaluation, as the situation that Mina remembers is part of it. This distinction underlies the differences with respect to entailment. The entailment does not go through in (28) because it is possible to understand predicates of the embedded CP being evaluated with respect to the content of the statement/claim that Swuna interpreted. Even if in the situation of evaluation this company is the biggest oil company, that’s not necessarily the case in situations according to the statement/claim. The entailment does go through in (29) because in the absence of displacement, all predicates of the embedded clause are evaluated with respect to the situation of evaluation, and thus Swuna being the tallest girl in the class in that situation implies that (29a) will entail (29c).

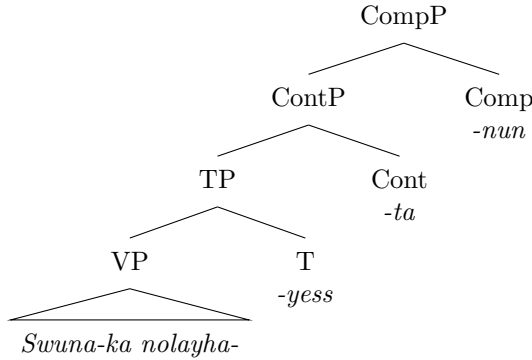
3.2 Two heads at the left periphery: Cont and Comp

I adopt the proposal in (Bondarenko 2025) for the syntax and semantics of Cont-CPs and Sit-CPs. According to it, there are two functional projections at the left periphery that are responsible for the semantics of clausal embedding: Cont(ent), which is a head responsible for introduction of displacement, and Comp(lementizer), which is a head responsible for introducing the *exemplification* relation (Kratzer 1998, 2002, 2020) into the meanings of embedded clauses.¹⁰ Sit-CPs lack Cont, and so lack displacement. While in some languages some of these heads might be null, in Korean both receive overt expression: the declarative marker *-ta* is the exponent of Cont (see also Moulton, Bogal-Allbritten, and Shimoyama 2020), and the adnominal marker *-(u)n / -nun / -(u)l* is the exponent of Comp. Thus, the clauses modifying nouns in (30)–(31) will have the structures in (32)–(33) respectively.

- (30) [Swuna-ka nolayha-yess-ta-nun] cwucang-i
 Swuna-NOM sing-PST-DECL-ADN claim-NOM
 ‘the claim that Swuna sang’

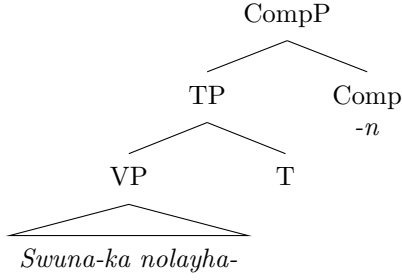
- (31) [Swuna-ka nolayha-n] sanghwang-i
 Swuna-NOM sing-ADN situation-NOM
 ‘the situation that Swuna sang’

- (32) *Structure of Cont-CPs*



¹⁰ Kratzer (2006) proposes that *factive complementizers* encode the exemplification relation, (i), whereas *logophoric complementizers* turn propositions into predicates of contentful individuals. The proposal in (Bondarenko 2025), driven by morphological considerations from the Korean data, associates the two meanings with two distinct heads in the clausal structure (Cont and Comp), which can co-occur with each other.

(i) $\llbracket \text{that}_F \rrbracket = \lambda p. \lambda e. \text{exemplifies}(p)(e) \text{ or } \lambda p. \iota e \text{ exemplifies } (p)(e)$ (Kratzer 2006)

(33) *Structure of Sit-CPs*

Now let us turn to the semantics of the Cont and Comp heads, and the resulting embedded clauses. I will adopt the framework of situation semantics (Kratzer 1989, 2020), in which propositions are viewed as sets of (potentially non-minimal) situations. I will also assume that the domain of situations is a proper subset of the domain of individuals ($D_s \subset D_e$). The heads Cont and Comp have the denotations in (34) and (35) respectively, and the exemplification relation introduced in (35) is defined in (36).¹¹

$$(34) \quad \llbracket \text{Cont} \rrbracket^s = \lambda p. \lambda x. \text{CONT}(x) = p$$

$$(35) \quad \llbracket \text{Comp} \rrbracket^s = \lambda p. \lambda x. x \Vdash_e p$$

(36) *Exemplification*

(based on Deigan 2020; Kratzer 1989, 2002, 2020)

For any individual $x \in D_e$ and predicate $p \in D_{et}$:

x exemplifies $p =_{abbr} x \Vdash_e p =_{def}$

$x \in p \wedge (\forall x'[x' \sqsubset x \Rightarrow x' \in p] \vee \forall x'[x' \sqsubset x \Rightarrow x' \notin p])$

The definition in (36) comes from Kratzer's work (1990; 2002; 2020) and aims to capture the idea that certain entities are *minimal* entities of the relevant sort—the ones which contain everything needed to make the predicate true, but nothing 'extra' (cf. also *truthmaker semantics*, Fine 2017a,b,c). In Kratzer's work, exemplification is defined as a relation that holds between situations and propositions. In (36) it is generalized to hold between any individual (situation or not) and a set of individuals (a proposition or a set of non-situational individuals). An x exemplifies p if that x is a member of p , and *the homogeneity condition* holds: either no proper part of x is a member of p (and then x is the minimal entity of which p holds), or p is true of all proper parts of x .¹² The two ways to satisfy the homogeneity condition seem to corre-

¹¹ The declarative marker *-ta* also occurs on unembedded verbs, raising the question of whether it has the same semantics there. I'd like to suggest that the meaning in (34) can be maintained for matrix uses too: the matrix ContP would link the speech event of the utterance (which the speaker is the Agent of) to the matrix proposition. This analysis would imply that speech events receive a representation in syntax.

¹² In (Kratzer 1990, 2002, 2020) what I here call *the homogeneity condition* is stated in a slightly different (but logically equivalent) form (see Deigan 2020): *A situation s exemplifies a proposition p if whenever there is a part of s in which p is not true, then s is a minimal situation in which p is true* (Kratzer 2020).

spond to *telic* vs. *atelic* predicates (Krifka 1998, a.o.): a situation exemplifying *Swuna sang the song* will not contain any proper parts that can be described as *Swuna sang the song*, whereas a situation exemplifying *Swuna was singing* are made up of proper parts in all of which *Swuna was singing* is true.

Note that according to this definition, the same situation cannot exemplify two distinct propositions that describe what happens *in* the situation.¹³ To see that this is the case, imagine that a situation *s* was to exemplify both $\{s': \text{Swuna sang the song in } s'\}$ and $\{s': \text{Hani danced the dance in } s'\}$ at the same time. If $s \Vdash_e \{s': \text{Swuna sang the song in } s'\}$, then it means that *s* is a situation in which Swuna sang the song. For this to be true, there has to be some part of *s*, let's call it *s'*, that contains just the Swuna singing of the song, and nothing else—no irrelevant things. Let us hypothesize that *s'* is a proper part of *s*. Since $s' \in \{s': \text{Swuna sang the song in } s'\}$, and *s* exemplifies this proposition, this proposition must be true in all proper parts of *s*. But if we take the complement of *s'*—the part of *s* that contains everything but *s'*, then $\{s': \text{Swuna sang the song in } s'\}$ will not be true in it. Existence of a part of *s* in which the proposition is false is at odds with our previous conclusion that the proposition is true in all proper parts of *s*. Since the assumption that *s'* is a proper part of *s* gave rise to a contradiction, it must be false, and $s = s'$. But this means that *s* does not contain anything irrelevant to the truth of the proposition $\{s': \text{Swuna sang the song in } s'\}$, and so it cannot contain Hani and her dancing the dance. Thus, $s \notin \{s': \text{Hani danced the dance in } s'\}$, which contradicts our initial assumption that *s* exemplifies $\{s': \text{Hani danced the dance in } s'\}$. The same logic applies to any other two propositions describing the internal make-up of a situation.

Now let us turn to the semantics of CPs. Consider first the semantics of Sit-CPs, which lack the ContP. The complementizer combines with the proposition (= the set of potentially non-minimal situations), and returns the set of situations which exemplify the embedded proposition. So for example, the meaning of the Sit-CP in (31) will be as in (37): it will be a set of situations exemplifying the proposition *Swuna sang*. This set can then combine with the noun 'situation' by Predicate Modification, resulting in (38): a set of minimal situations of Swuna singing.

$$(37) \quad \llbracket \text{Swuna-ka nolayha-n} \rrbracket^s = \lambda x. x \Vdash_e \{s: \text{Swuna sang in } s\}$$

$$(38) \quad \llbracket \text{Swuna-ka nolayha-n sanghwang} \rrbracket^s = \\ \lambda x. \text{situation}_s(x) \wedge x \Vdash_e \{s: \text{Swuna sang in } s\}$$

Note that if we didn't introduce exemplification, the meaning of the Sit-CP would be identical to the meaning of the TP: a set of all possible situations

¹³ The definition of exemplification allows the same situation to exemplify two distinct properties of situations if one of them does not describe the internal make-up of the situation. For example, a situation *s* can exemplify both $\{s: \text{there is thinking by Mina in } s\}$ and $\{s: \text{CONT}(s) = \{s': \text{Swuna sang in } s'\}\}$: it can be a situation of Mina thinking whose propositional content is *Swuna sang*, such that all of its proper parts are also situations of Mina thinking the proposition *Swuna sang*. No contradiction arises in this case, because the second proposition describes *the content* of *s*, not what happens *in* *s*.

$$(42) \quad \llbracket \text{Swuna-ka nolayha-yess-ta-nun cwucang} \rrbracket^s = \\ \lambda x. \text{claim}_s(x) \wedge x \Vdash_e \{y: \text{CONT}(y) = \{s: \text{Swuna sang in } s\}\}$$

The Cont-CP in (41) denotes a set of entities that exemplify the set of entities whose propositional Content is *Swuna sang*. The Cont-NP, (42), then denotes a set of claims exemplifying things with content *Swuna sang*. The restriction that the exemplification relation imposes on Cont-CPs is as follows. It requires that either all proper parts of the contentful individual at hand have the same propositional content as this individual, or none of them do. This seems to be a plausible constraint on mereology of entities with propositional content, but I leave its detailed investigation for future work.¹⁴

To sum up, investigation of the left periphery of embedded clauses in Korean reveals that there are two distinct functional elements that contribute to the meaning (Bondarenko 2025): the Cont head (declarative marker *-ta*), which introduces *displacement*, and the Comp head (the adnominal marker), which introduces *exemplification*. Both of these elements will play an important role in our analysis of CP conjunction.

4 Predictions for Conjunction

Let us now assess predictions for conjunction given what we’ve learned about the morphosyntax and semantics of Korean CPs. The Conjunction Reduction Theory can be quite easily modified in line with the results of the previous section: the only difference between the proposal in section 3 and the proposal in (Bassi and Bondarenko 2021) is that we have introduced a new functional element to the left periphery of the clause which introduces exemplification. With Cont introducing displacement, and Comp introducing exemplification, the predictions of the modified CR Theory will be as in table 1.

¹⁴ Entities that instantiate both disjuncts of this condition seem to be attested. If someone made a *claim that Swuna danced beautifully*, no part of that claim is *the claim that Swuna danced beautifully*—the proper parts of the claim should probably be attributed contents distinct from the content of the claim, e.g. there might be a part with the content *Swuna danced*, a part with the content *There is dancing*, etc. But there also might be particulars all of whose proper parts have the same content: e.g., if Mina is thinking over and over the same thought *Swuna danced beautifully*, we might suggest that she is engaged in a dynamic thinking event all of whose proper parts have the same content, *Swuna danced beautifully*. What exemplification bans is contentful individuals whose proper parts are not homogeneous: e.g., an individual whose content is *Swuna danced beautifully*, and which has one proper part with content *Swuna danced beautifully*, but another part with a different content, e.g. *Swuna danced*. Or an individual a proper part of which does not have any propositional content (e.g., a claim part of which is a chair). These in general seem to be plausible restrictions, but more research is needed on whether exemplification makes the right generalization about how contents of particulars can be related to contents of their proper parts.

	VP	TP	ContP	CompP
non-CR structure	narrow scope	narrow scope	*	*
CR structure	wide scope when syntactically well-formed			

Table 1: Predictions of the modified Conjunction Reduction Theory

The amended Conjunction Reduction Theory predicts that the availability of conjunction of C-layer projections, ContP and CompP, depends on the availability of Conjunction Reduction. If the possibility of CR is excluded, such conjunctions should be ungrammatical, as their meanings are L-analytic. The impossibility of intersective ContP conjunction is derived in the same way as in (Bassi and Bondarenko 2021): the fact that CONT is a function makes ContP conjunction semantically deviant—it denotes an empty set, (43). Adding exemplification—conjoining CompPs instead of ContPs—will not eliminate this deviance, (44). If x exemplifies a predicate, the predicate must be true of it, (36), and so (44) also asserts that two distinct propositions (*Swuna sang* and *Hani danced*) are the propositional content of a single individual (x), leading to a trivial meaning, and thus ungrammaticality.

- (43) *ContP conjunction is trivial*
 $\llbracket [\text{ContP } [\text{Swuna-ka nolayha-yess-ta}]\text{-ko}$
 $\quad [\text{ContP Hani-ka chwumchwu-ess-ta}]]^s =$
 $\lambda x. \text{CONT}(x) = \{s': \text{Swuna sang in } s'\}$
 $\quad \wedge \text{CONT}(x) = \{s': \text{Hani danced in } s'\} = \emptyset$
- (44) *CompP conjunction in Cont-CPs is trivial*
 $\llbracket [\text{CompP } [\text{Swuna-ka nolayha-yess-ta-nun}]\text{-ko}$
 $\quad [\text{CompP Hani-ka chwumchwu-ess-ta-nun}]]^s =$
 $\lambda x. x \Vdash_e \{y: \text{CONT}(y) = \{s': \text{Swuna sang in } s'\}\}$
 $\quad \wedge x \Vdash_e \{y: \text{CONT}(y) = \{s': \text{Hani danced in } s'\}\} = \emptyset$

Now let us consider conjunction of Sit-CPs. Since complementizers introduce the exemplification relation, Sit-CP conjunction will have the meaning in (45): a situation that exemplifies Swuna singing, and exemplifies Hani dancing.

- (45) *CompP conjunction in Sit-CPs is trivial*
 $\llbracket [\text{CompP Swuna-ka nolayha-n(un)}]\text{-ko}$
 $\quad [\text{CompP Hani-ka chwumchwu-n(un)}]]^s =$
 $\lambda x. x \Vdash_e \{s: \text{Swuna sang in } s\} \wedge x \Vdash_e \{s: \text{Hani danced in } s\} = \emptyset$

The predicate in (45) cannot be true of any situation, as a single situation cannot exemplify two distinct propositions (see section 3.2): if x is a minimal situation of Swuna singing, it won't contain any *Hani-dancing* parts inside of it. Conversely, if x is a minimal situation of Hani dancing, it won't contain any *Swuna-singing* parts. Thus, the predicate in (45) will always be an empty set, making the Sit-CP conjunction trivial and sentences containing it ungrammatical. Thus, unlike in (Bassi and Bondarenko 2021), the explanation for the ban of CP conjunction under my proposal has two ingredients. First, the fact

that Content is a function predicts that ContP conjunction should be impossible. Second, exemplification semantics of Comp makes CompP conjunction impossible either, predicting the impossibility of conjoining two Sit-CPs.

When a structure involves Conjunction Reduction, with matrix VoicePs or higher projections being conjoined, we are likely to encounter syntactic or phonological constraints on which elements in one of the conjuncts could remain unpronounced. But whenever a structure allows CR, we expect the conjunction to take wide scope with respect to the embedding predicate.

Now let us turn to the predictions of the Comp-as-Lift Theory. Note that according to this theory, relations like *displacement* or *exemplification* would need to be introduced by the embedding predicate (verb or noun), not by the embedded clause, in order to maintain the proposal that clauses denote lifted propositions. If presence of these components of the meaning correlates with overt morphemes in the embedded clause, as it does in Korean, Comp-as-Lift Theory could postulate agreement of the elements of the clausal periphery with a nominal or verbal predicate in the relevant semantic features to explain this correlation. The important question for the Comp-as-Lift Theory with respect to the Korean data is: which element of the left periphery contributes the Lift type-shifter? Is it Cont (the declarative marker) or Comp (the adnominal marker)? Both are in principle feasible options, and the corresponding predictions are illustrated in tables 2 and 3.¹⁵

	VP	TP	ContP	CompP
non-CR	narrow scope	narrow scope	narrow scope	wide scope
CR	wide scope when syntactically well-formed			

Table 2: Predictions of the Comp-as-Lift Theory: Comp as Lift

	VP	TP	ContP	CompP
non-CR	narrow scope	narrow scope	wide scope	wide with Cont-CPs, narrow with Sit-CPs
CR	wide scope when syntactically well-formed			

Table 3: Predictions of the Comp-as-Lift Theory: Cont as Lift

If Comp has the semantics of Lift, (46), and the declarative marker *-ta* has no semantic contribution, then the Comp-as-Lift Theory predicts that conjunctions of embedded VPs, TPs and ContPs should have narrow scope, CompP conjunctions should have wide scope, and structures involving Conjunction Reduction should have wide scope when they are syntactically well-formed (table 2). If however Cont has the semantics of Lift, and Comp is semantically vacuous, then the Comp-as-Lift Theory predicts VP and TP conjunctions to have narrow scope, and ContP conjunctions and CR structures to have wide scope (table 3). This approach also predicts that Cont-CPs and Sit-CPs should

¹⁵ I thank an anonymous reviewer for pointing out that proponents of the Comp-as-Lift Theory don't have to assume that Comp is the element responsible for the Lift type-shifter.

differ in the scope of conjunction when two Comp projections containing the adnominal marker are conjoined. Conjunction of CompPs in Cont-CPs is predicted to take wide scope, as both constituents that are being conjoined have ContP in them, and thus denote lifted propositions. Conjunction of CompPs in Sit-CPs is however predicted to be equivalent to TP conjunction due to the fact that there's no ContP in these clauses, and Comp is semantically vacuous. Crucially, the Comp-as-Lift Theory never predicts conjunction of the functional projections at the left periphery of the clause (ContPs, CompPs) to be ungrammatical: there is nothing in the meaning of (46) which would result in a deviant meaning of CP conjunction for either Cont-CPs or Sit-CPs.

$$(46) \quad \lambda p_{st}.\lambda V_{st,t}.V(p)$$

Korean provides a good testing ground for the predictions outlined above, as it uses two different conjunctions, *ko* and *kuliko*, depending on whether the structure involves Conjunction Reduction or not. Let us illustrate this with conjunction in sentences without embedded clauses. When two VPs are coordinated and no material is elided in them, conjunction *ko* must be used, (47), using *kuliko* results in ungrammaticality.

- (47) *Non-CR conjunction -ko*
 [Mary-ka sakwa-lul mek]-*ko*/**kuliko*
 Mary-NOM apple-ACC eat- CONJ
 [Swuna-ka panana-lul mek]-ess-ta.
 Swuna-NOM banana-ACC eat-PST-DECL
 ‘Mary ate an apple and Swuna ate a banana.’

If however there is some material missing in one of the conjuncts, conjunction *kuliko* must be used, (48a)–(48b).

- (48) *CR conjunction kuliko*
 a. *Mary-ka [motun sakwa-lul ~~mek-ess-ta~~]-*ko*
 Mary-NOM every apple-ACC eat-PST-DECL-CONJ
 [motun panana-lul] mek-ess-ta.
 every banana-ACC eat-PST-DECL
 ‘Mary ate every apple and every banana.’
 b. Mary-ka [motun sakwa-lul ~~mek-ess-ta~~] *kuliko*
 Mary-NOM every apple-ACC eat-PST-DECL CONJ
 [motun panana-lul mek-ess-ta].
 every banana-ACC eat-PST-DECL
 ‘Mary ate every apple and every banana.’

Note that *kuliko* can have as its “conjuncts” strings that do not form constituents, like for example the subject and the indirect object in (49). This suggests that we are not just dealing with a cross-categorical coordinator, but looking at a structure which involves some kind of ellipsis in one of the conjuncts.

- (49) [Swuni-ka Mary-eykey ~~kulim-ul cwu~~], kuliko
 Swuni-NOM Mary-DAT CONJ
 [Mini-ka Juni-eykey kulim-ul cwu]-ess-ta.
 Mini-NOM Juni-DAT picture-ACC give-PST-DECL
 ‘Swuni gave Mary a picture (*some other object $\neq$ picture), and Mini
 gave Juni a picture.’

Verbless coordination like the one with *kuliko* has received a variety of analyses in the literature: an ATB movement analysis (Kuno 1978; Saito 1987), analysis with movement of certain constituents followed by ellipsis (Abe and Hoshi 1997; Kim 1997; K.-W. Sohn 2001), in situ string deletion analysis (Mukai 2003), multiple dominance analysis (D. Chung 2004), an analysis combining several of the approaches above (Ahn and Cho 2006). While one could hypothesize that *ko* and *kuliko* are two allomorphs of the Conj head, with the later being used when some material in the first conjunct is marked for non-pronunciation, there is another possible hypothesis. As an anonymous reviewer points out, *kuliko* might be analyzed as consisting of two morphemes: a proform *kuli*, likely a form of *kuleh* ‘so’, and the conjunction *ko*. Under such an account, sentences like (49) would involve *kuli* substituting for a VP in a sentence with *-ko* conjunction of two *vPs*.¹⁶ For our purposes, the exact mechanism that leads to non-pronunciation of constituents in sentences with *kuliko* is not important: all approaches assume that sentences with *kuliko* signal conjunction of higher constituents (at least, VPs) with some material remaining unpronounced (a configuration we’re calling ‘Conjunction Reduction’), whereas sentences with *ko* are incompatible with such a configuration, and that is all we need for testing the two theories.

Let us update the predictions of the two theories with the information about the two conjunctions in Korean, tables 4–6.

¹⁶ An anonymous reviewer provides the following example where *-ko* and *kuliko* co-occur:

- (i) Mina-ka [[Swuna-ka nolayha]-ko [kuli]]-ko [Hani-ka chwumchwu]-n
 Mina-NOM Swuna-NOM sing-CONJ so-CONJ Hani-NOM dance-ADN
 sanghwang-ul kiekha-n-ta.
 situation-ACC remember-PRS-DECL
 ‘Mina remembers the situation that Swuna sang and Hani danced.’

This example suggests that at least in some uses, *kuliko* indeed does not function as a simple conjunction morpheme, but behaves as proform + conjunction: the first instance of *-ko* in (i) conjoins VPs ‘Swuna sing’ and ‘(do) so’, whereas the second *-ko* conjoins the resulting VP with the VP ‘Hani dance’. According to my consultants, the resulting sentence has exclusively narrow scope readings, unlike the sentence where *kuliko* conjoins two adnominal phrases. This is expected if in the former case *kuli* stands for some contextually salient eventuality, whereas in the latter case *kuli* substitutes for ‘remember situation’. I leave the question of whether *kuliko* is always decomposable in the suggested way for further research.

	VP Verb	TP tense (e.g. <i>-ess</i>)	ContP <i>-ta</i>	CompP <i>-nun/- (u)n/- (u)l</i>
<i>ko</i>	narrow scope	narrow scope	*	*
<i>kuliko</i>	wide scope when syntactically well-formed			

Table 4: Predictions of the modified Conjunction Reduction Theory

	VP Verb	TP tense (e.g. <i>-ess</i>)	ContP <i>-ta</i>	CompP <i>-nun/- (u)n/- (u)l</i>
<i>ko</i>	narrow scope	narrow scope	narrow scope	wide scope
<i>kuliko</i>	wide scope when syntactically well-formed			

Table 5: Predictions of the Comp-as-Lift Theory: Comp as Lift

	VP Verb	TP tense (e.g. <i>-ess</i>)	ContP <i>-ta</i>	CompP <i>-nun/- (u)n/- (u)l</i>
<i>ko</i>	narrow scope	narrow scope	wide scope	wide with Cont-CPs, narrow with Sit-CPs
<i>kuliko</i>	wide scope when syntactically well-formed			

Table 6: Predictions of the Comp-as-Lift Theory: Cont as Lift

In sentences with the CR conjunction *kuliko*, both theories expect to see wide scope readings when the sentence is grammatical, just like in other languages discussed in the literature (English, Hebrew, Hungarian, Italian, Russian). But in sentences with the non-CR conjunction *ko*, predictions of the two theories diverge: the CR Theory expects ContP and CompP conjunctions to be ungrammatical, whereas Comp-as-Lift Theory expects both to be grammatical. If the Comp-as-Lift Theory puts the semantics of Lift into Comp, then ContP conjunction is predicted to have narrow scope, whereas CompP conjunctions to have wide scope (table 5). If it puts Lift’s semantics into Cont instead, ContP conjunction and CompP conjunction of Cont-CPs should have wide scope, and CompP conjunction of Sit-CPs should have narrow scope.

5 Results: an argument in favor of the CR Theory

The results of testing embedded *ko* and *kuliko* conjunctions are summarized in table 7. As we see, they match the predictions of the modified CR Theory.

	VP Verb	TP tense (e.g. <i>-ess</i>)	ContP <i>-ta</i>	CompP <i>-nun/- (u)n/- (u)l</i>
<i>ko</i>	narrow scope	narrow scope	*	*
<i>kuliko</i>	*	*	*	wide scope

Table 7: Results: *ko* and *kuliko* as embedded conjunctions

In section 5.1, I discuss the key data that argues in favor of the CR Theory; data from ContP and CompP conjunction in sentences without Conjunction Reduction. In section 5.2, I show that embedded VP and TP conjunctions have narrow scope, as is expected on both accounts. In section 5.3, I discuss what happens in Conjunction Reduction structures with *kuliko*: only CompPs can be conjoined, and only wide scope readings are available, as is expected.

5.1 Impossibility of CP conjunction

The crucial pieces of Korean data are presented in (50)–(52): they show us the impossibility of true embedded CP conjunction.

- (50) *ContP conjunction with Cont-CP*
 *Mina-ka [Swuna-ka nolayha-yess-ta]-ko [Hani-ka
 Mina-NOM Swuna-NOM sing-PST-DECL-CONJ Hani-NOM
 chwumchwu-ess-ta]-nun cwucang-ul kiekha-n-ta
 dance-PST-DECL-ADN claim-ACC remember-PRS-DECL
 ‘Mina remembers the claim that Swuna sang and that Hani danced.’
- (51) *CompP conjunction with Sit-CP*
 *Mina-ka [Swuna-ka nolayha-nun]-ko [Hani-ka
 Mina-NOM Swuna-NOM sing-ADN-CONJ Hani-NOM
 chwumchwu-n(un)] sanghwang-ul kiekha-ss-ta
 dance-ADN situation-ACC remember-PST-DECL
 ‘Mina remembered the situation that Swuna sang and that Hani danced.’
- (52) *CompP conjunction with Cont-CP*
 *Mina-ka [Swuna-ka nolayha-yess-ta-nun]-ko [Hani-ka
 Mina-NOM Swuna-NOM sing-PST-DECL-ADN-CONJ Hani-NOM
 chwumchwu-ess-ta-nun] cwucang-ul kiekha-n-ta
 dance-PST-DECL-ADN claim-ACC remember-PRS-DECL
 ‘Mina remembers the claim that Swuna sang and that Hani danced.’

In (50) we see an attempt to conjoin two ContPs inside of the Cont-CP. On the CR Theory, this is predicted to be impossible, because the equality semantics of displacement, introduced by the declarative marker *-ta*, makes the resulted conjunction L-analytic. (51) illustrates the impossibility of CompP conjunction with Sit-CPs. Note that the ungrammaticality of (51) does not follow from the account proposed in (Bassi and Bondarenko 2021): since the semantics of Sit-CPs involves no displacement, it can’t be the equality semantics of displacement that makes (51) bad. However, if complementizers introduce the exemplification relation, as I proposed in section 3, impossibility of Sit-CP conjunction is expected. Finally, (52) is correctly predicted to be ungrammatical by the CR Theory, for the same reason as the ill-formedness of (50): since in order for an entity to exemplify a predicate the predicate must be true of it, equality semantics introduced by the CONT function predicts (52) to be L-analytic too. Thus, the two ingredients of clausal embedding—the equality semantics contributed by the CONT function (the declarative marker), and the exemplification semantics contributed by the complementizer (the adnominal marker)—together correctly predict the ungrammaticality of (50)–(52).

The Comp-as-Lift Theory makes wrong predictions: it expects (50)–(52) to be well-formed. If Comp carries the semantics of Lift, then (50) should have narrow scope of conjunction, and (51)–(52) should have wide scope. If Cont carries the semantics of Lift, then (50) and (52) should have wide scope of

conjunction, and (51) should have narrow scope. Either way, these predictions are not borne out: conjoining CP-level constituents is ungrammatical.

Let us consider a potential concern about my explanation of the ungrammaticality in the sentences above: what if this ungrammaticality has nothing to do with meaning? Could it be that (50)–(52) are ungrammatical for purely morphological or syntactic reasons? Let us first consider an alternative morphological explanation raised by an anonymous reviewer: examples like (50)–(52) are impossible because *ko* is a bound suffix that requires a bound stem. First, note that this hypothesis cannot be maintained if the coordinator *ko* and the complementizer *ko* are treated as two meanings associated with the same morpheme (e.g., this is assumed in H.-M. Sohn 1999, and also in Ceong 2019), as the complementizer *ko* can occur with the forms ending in the declarative marker *-ta*, which are free stems, (21a), repeated below as (53).

- (53) Kibo-nun [Dana-ka i chayk-ul ilk-ess-ta-ko]
 Kibo-TOP Dana-NOM this book-ACC read-PST-DECL-COMP
 yukamsulewehay-ss-ta /mit-ess-ta.
 regret-PST-DECL /believe-PST-DECL
 ‘Kibo regretted/believed that Dana read this book.’

So if this is a single morpheme, the ungrammaticality of (50)–(52) cannot be explained on morphological terms. If coordinator *ko* and complementizer *ko* are to be treated as distinct morphemes, we still need an explanation for why stems ending in *-ta*, which can appear on their own or be followed by bound morphemes, cannot be followed by the coordinator *ko*. In other words, what is it that makes this particular *sentence ender* in the terminology of H.-M. Sohn (1999), different from the rest? This restriction would need to be stipulated.

Another alternative is to explain the ungrammaticality of (50)–(52) by appealing to some syntactic restrictions. An anonymous reviewer suggests that this might be a case of some violation of c-selectional requirements. For example, if we assume that *-ko* is the spell-out of the Conj head, we could postulate that it c-selects for VPs and TPs, but cannot select for ContPs and CompPs. First, note that this approach is mutually exclusive with the Comp-as-Lift explanation of the wide scope of conjunction. If true CP conjunction is automatically excluded on selectional grounds, assigning the semantics of LIFT to a complementizer won’t contribute anything to the explanation of why conjunction always gets wide scope in ‘CP and CP’ structures—it does so because such strings involve Conjunction Reduction, as Conj cannot c-select for CPs (neither ContPs nor CompPs). The big issue with the c-selection account is that it misses a cross-linguistic generalization: ‘CP and CP’ strings are cross-linguistically either impossible, or have wide scope of conjunction. This is true of unrelated languages (Bassi and Bondarenko 2021; Szabolcsi 1997, 2016): English, Hebrew, Hungarian, Italian, Russian. Here is another example of a case where ‘CP and CP’ strings are impossible from Kazakh:¹⁷

¹⁷ I am grateful to Makpal Kadyrbayeva for her judgements.

- (54) a. *_[CP fatima keʃe sajlaʊ bol-də djep]
 Fatima yesterday election happen-PST COMP
 ʒæne/sosən/aɭ/mʲen _[CP kɔter(ə)lis bol-də djep] ajt-tə
 CONJ protest happen-PST COMP say-PST
 Intended: ‘Fatima said that an election happened yesterday and that a protest happened.’
- b. _[TP fatima keʃe sajlaʊ bol-də] ʒæne/sosən
 Fatima yesterday election happen-PST CONJ
_[TP kɔter(ə)lis bol-də] djep ajt-tə
 protest happen-PST COMP say-PST
 ‘Fatima said that an election happened yesterday and a protest happened.’

The example in (54a) shows an attempt to coordinate two CPs by a variety of conjunctions that the language has, and the result is ungrammatical; TPs on the other hand can be coordinated, (54b). An account in terms of c-selection would then need to postulate the same c-selectional requirements for Conj heads language after language, banning true coordinations of CPs. The question then would be: why do Conj heads always have these c-selectional restrictions, and not some others? The current proposal provides an answer to this question, explaining the co-occurrence restrictions by deviance of the meanings that ‘CP and CP’ strings would give rise to.

5.2 VP and TP conjunction within embedded CPs

When it comes to VP and TP conjunction by *ko*, both theories account well for the data: such conjunction is indeed possible, and gives rise exclusively to narrow scope readings. To illustrate this, I will be using the emotive verb *sih* ‘dislike’. I chose this verb because it is not distributive: it is possible to dislike a combination of things without disliking all the parts that make them up individually. (55) presents a narrow scope context for Sit-CP conjunction: in the described scenario, the speaker likes Swuna solving the problem, but not the teacher’s concealing of this fact. We see that in such case it’s possible for the speaker to utter (55), followed by both VP conjunction, (56), and TP conjunction, (57), within a clause under the noun *sanghwang* ‘situation’.^{18,19}

(55) *Narrow scope context for Sit-CPs*

There is a competition: the first student in class to solve the problem wins. Swuna was the first student to solve the problem, but the teacher didn’t tell the students right away that there already was a winner,

¹⁸ Note that (57) shows us that it is possible to have overt past tense *-ess* in Sit-CPs, as long as tense is not adjacent to the adnominal marker, as is the case in the first conjunct.

¹⁹ I leave distinctions between VP conjunction and TP conjunction for future research. The expectation is that the eventualities of the conjoined VP-level propositions should be co-temporaneous, but the eventualities of the conjoined TP-level propositions need not.

and they kept trying to solve it for a while. The speaker likes it that Swuna was the first to solve the problem, but doesn't like that the teacher concealed the fact that there was a winner.

Na-nun Swuna-ka mwuncey-lul phul-un sanghwang-i
I-TOP Swuna-NOM problem-ACC solve-ADN situation-NOM
silh-ci.anh-ta...
dislike-NEG-DECL

'I don't dislike the situation that Swuna solved the problem...'

(56) *VP conjunction with Sit-CPs, narrow scope context in (55)*

...Na-nun [Swuna-ka mwuncey-lul phul]-ko
I-TOP Swuna-NOM problem-ACC solve-CONJ
[sensayngnim-kkeyse sungca-ka iss-ta-ko
teacher-HON.NOM winner-NOM exist-DECL-COMP
malssumha-si-ci.anh]-un sanghwang-i silh-ta.
say.HON-HON-NEG-ADN situation-NOM dislike-DECL

'...I dislike the situation that Swuna solved the problem and the teacher didn't tell us that there is a winner.'

(57) *TP conjunction with Sit-CPs, narrow scope context in (55)*

...Na-nun [Swuna-ka mwuncey-lul phul-ess]-ko
I-TOP Swuna-NOM problem-ACC solve-PST-CONJ
[sensayngnim-kkeyse sungca-ka iss-ta-ko
teacher-HON.NOM winner-NOM exist-DECL-COMP
malssumha-si-ci.anh-Ø_{PST}]-un sanghwang-i silh-ta.
say.HON-HON-NEG-PST-ADN situation-NOM dislike-DECL

'...I dislike the situation that Swuna solved the problem and the teacher didn't tell us that there is a winner.'

The context for the narrow reading of conjunction in Cont-CPs is in (58). Again, in (59) and (60) we see that embedded VP and TP conjunctions are possible in this context: it could be that the speaker dislikes the claim *The candidate owned a big company and did money laundering* without disliking part of this claim with content *The candidate owned a big company*.

(58) *Narrow scope context for Cont-CPs*

There are elections held between two parties. The party that is opposing ours made some statements about our candidate in attempt to draw voters away from her. The speaker thinks that having experience owning a big company would be considered a virtue for a candidate, but laundering money wouldn't be.

Na-nun wuli-uy hwupo-ka khun hoysa-lul
I-TOP we-GEN candidate-NOM big company-ACC
soyuha-yess-ta-nun cwucang-i silh-ci.anh-ta...
own-PST-DECL-ADN claim-NOM dislike-NEG-DECL

'I don't dislike the claim that our candidate owned a big company...'

- (59) *VP conjunction with Cont-CPs, narrow scope context in (58)*
 ...Na-nun [wuli-uy hwupo-ka khun hoysa-lul soyuha]-ko
 I-TOP we-GEN candidate-NOM big company-ACC own-CONJ
 [ton.seythak-ul ha]-yess-ta-nun cwucang-i silh-ta..
 money.laundring-ACC do-PST-DECL-ADN claim-NOM dislike-DECL
 ‘...I dislike the claim that our candidate owned a big company and she
 did money laundering.’
- (60) *TP conjunction with Cont-CPs, narrow scope context in (58)*
 ...Na-nun [wuli-uy hwupo-ka khun hoysa-lul
 I-TOP we-GEN candidate-NOM big company-ACC
 soyuha-yess]-ko [ton.seythak-ul ha-yess]-ta-nun cwucang-i
 own-PST-CONJ money.laundring-ACC do-PST-DECL-ADN claim-NOM
 silh-ta..
 dislike-DECL
 ‘...I dislike the claim that our candidate owned a big company and she
 did money laundering.’

Now let us show that the wide scope of the VP and TP conjunction is impossible. Here we will have a context where for some x and y , the speaker claims that they not only dislike x (and thus the conjunction $dislike(x \sqcup y)$), but that they also dislike y ($dislike(y)$). For Sit-CPs this is the context in (61).

- (61) *Wide scope context for Sit-CPs*
 There is a competition: the first student in class to solve the problem wins. Swuna was the first student to solve the problem, but the teacher didn’t tell the students right away that there already was a winner, and they kept trying to solve it for a while. In addition to that, Mina and Swuna don’t get along well, and really didn’t want each other to win. Mina is annoyed:
 Na-nun [sensayngnim-kkeyse sungca-ka iss-ta-ko
 I-TOP teacher-NOM winner-NOM be.exist-DECL-COMP
 malssumha-si-ci.anh-un] sanghwang-man silh-un kes-i
 say.hon-HON-NEG-ADN situation-ONLY dislike-ADN thing-NOM
 ani-ta...
 be.NEG-DECL
 ‘I don’t only dislike that the teacher didn’t say that there is a winner...’
 (lit. ‘It’s not the case that I dislike only the situation of the teacher
 not saying that there’s a winner’.)

A natural continuation of (61) suggested by my consultants involves conjunction with *kuliko* and two NPs:

(62) *Natural continuation of (61): ‘NP kuliko NP’*

...Na-nun [sengsayngnim-kkeyse sungca-ka iss-ta-ko
 I-TOP teacher-HON winner-NOM be.exist-DECL-COMP
 malssumha-si-ci.anh-un] sanghwang kuliko [Swuna-ka mwuncey-lul
 say.HON-HON-NEG-ADN situation CONJ swuna-NOM problem-ACC
 phwul-un sanghwang]-i motwu silh-ta.
 solve-ADN situation-NOM both dislike-DECL
 ‘...I dislike both the situation that the teacher didn’t say that there is
 a winner and the situation that Swuna solved the problem.’

Using in this context a Sit-CP with VP conjunction or TP conjunction within the embedded clause is infelicitous, (63)–(64).²⁰ The modifier *motwu* ‘both’, which we see in (62) is ungrammatical with VP and TP conjunctions.

(63) *VP conjunction with Sit-CPs, wide scope context in (61)*

#...Na-nun [sengsayngnim-kkeyse sungca-ka iss-ta-ko
 I-TOP teacher-HON winner-NOM be.exist-DECL-COMP
 malssumha-si-ci.anh]-ko [Swuna-ka mwuncey-lul phwul]-un
 say.HON-HON-NEG-CONJ Swuna-NOM problem-ACC solve-ADN
 sanghwang-i (*motwu) silh-ta.
 situation-NOM (both) dislike-DECL
 ‘...I dislike the situation that the teacher didn’t say that there is a
 winner and that Swuna solved the problem.’

(64) *TP conjunction with Sit-CPs, wide scope context in (61)*

#...Na-nun [sengsayngnim-kkeyse sungca-ka iss-ta-ko
 I-TOP teacher-HON winner-NOM be.exist-DECL-COMP
 malssumha-si-ci.anh-ess]-ko [Swuna-ka mwuncey-lul
 say.HON-HON-NEG-PST-CONJ Swuna-NOM problem-ACC
 phwul-Ø_{PST}]-un sanghwang-i (*motwu) silh-ta.
 solve-PST-ADN situation-NOM (both) dislike-DECL
 ‘...I dislike the situation that the teacher didn’t say that there is a
 winner and that Swuna solved the problem.’

In the wide scope context for Cont-CPs, (65), using *kuliko* between two NPs is again the most natural way to express that the speaker disliked both claims about the candidate that were made (66). Using embedded VP or TP conjunction inside an embedded CP modifying a noun is again degraded, (67)–(68).

(65) *Wide scope context for Cont-CPs*

There are elections held between two parties. The party that is oppos-
 ing our party made some statements about our candidate in attempt

²⁰ My consultants gave ratings between 2 and 3 on a 5-point scale to the sentences with embedded VPs and TPs inside Sit-CPs and Cont-CPs in wide scope contexts. I attribute the fact that *-ko* conjunction is not judged as completely infelicitous to the fact that these sentences are actually true in the provided contexts, they are just pragmatically odd, as they convey the information that is part of the common ground when these sentences are uttered.

to draw voters away from her. The speaker thinks that both owning a big company and laundering money are things that, if believed about our candidate, would disadvantage them.

Na-nun [wuli-uy hwupo-ka ton.seythak-ul
I-TOP we-GEN candidate-NOM money.laundry-ACC
ha-yess-ta-nun] cwucang-man silh-un kes-i ani-ta...
do-PST-DECL-ADN claim-ONLY dislike-ADN kes-NOM be.neg-DECL
'I don't only dislike the claim that our candidate did money laundering...' (lit. 'It's not the case that I dislike only the claim that our candidate did money laundering')

(66) *Natural continuation of (65): 'NP kuliko NP'*

...Na-nun [wuli-uy hwupo-ka ton.seythak-ul
I-TOP we-GEN candidate-NOM money.laundry-ACC
ha-yess-ta-nun] cwucang-(i) kuliko [khun hoysa-lul
do-PST-DECL-ADN claim-(NOM) CONJ big company-ACC
soyuha-yess-ta-nun] cwucang-i motwu silh-ta.
own-PST-DECL-ADN claim-NOM both dislike-DECL
'...I dislike both the claim that our candidate did money laundering and the claim that she owned a big company.'

(67) *VP conjunction with Cont-CPs, wide scope context in (65)*

#...Na-nun [wuli-uy hwupo-ka ton.seythak-ul ha]-ko
I-TOP we-GEN candidate-NOM money.laundry-ACC do-CONJ
[khun hoysa-lul soyuha]-yess-ta-nun cwucang-i silh-ta.
big company-ACC own-PST-DECL-ADN claim-NOM dislike-DECL
'...I dislike the claim that our candidate did money laundering and she owned a big company.'

(68) *TP conjunction with Cont-CPs, wide scope context in (65)*

#...Na-nun [wuli-uy hwupo-ka ton.seythak-ul
I-TOP we-GEN candidate-NOM money.laundry-ACC
ha-yess]-ko [khun hoysa-lul soyuha-yess]-ta-nun cwucang-i
do-PST-CONJ big company-ACC own-PST-DECL-ADN claim-NOM
silh-ta.
dislike-DECL
'...I dislike the claim that our candidate did money laundering and she owned a big company.'

5.3 Conjunction Reduction with *kuliko*

Kuliko is the conjunction that occurs in sentences with Conjunction Reduction. It can't be used to coordinate VPs, TPs and ContPs, as is shown in (69)–(70), (71)–(72), and (73) respectively.²¹ This is true for both Sit-CPs and Cont-CPs.

(69) *VP conjunction with Sit-CP*

*Mina-ka [Swuna-ka nolayha] kuliko [Hani-ka chwumchwu]-n
 Mina-NOM Swuna-NOM sing CONJ Hani-NOM dance-ADN
 sanghwang-ul kiekha-n-ta
 situation-ACC remember-PRS-DECL
 'Mina remembers the situation that Swuna sang and Hani danced.'

(70) *VP conjunction with Cont-CP*

*[Swuna-ka nolayha] kuliko [Mina-ka chwumchwu]-ess-ta-nun
 Swuna-NOM sing CONJ Mina-NOM dance-PST-DECL-ADN
 cwucang-i iss-ess-ta
 claim-NOM exist-PST-DECL
 'There was a claim that Swuna sang and Mina danced.'

(71) *TP conjunction with Sit-CP*

*Na-nun [Swuna-ka mwuncey-lul phul-ess] kuliko
 I-TOP Swuna-NOM problem-ACC solve-PST CONJ
 [sensayngnim-kkeyse sungca-ka iss-ta-ko
 teacher-HON.NOM winner-NOM exist-DECL-COMP
 malssumha-si-ci.anh-Ø_{PST}]-un sanghwang-i silh-ta.
 say.HON-HON-NEG-PST-ADN situation-NOM dislike-DECL
 'I dislike the situation that Swuna solved the problem and the teacher
 didn't tell us that there is a winner.'

²¹ An anonymous reviewer points out that examples like (73) improve if a pause is added before *kuliko*. My consultants agree, but it never becomes a fully well-formed sentence for them (judged at best as “?” or 3 out of 5, unlike other sentences with *kuliko*). I hypothesize that to the extent that it is possible, the structure involves decomposition of *kuliko* into the proform *kuli* ‘so’ and conjunction *-ko* (see section 4 and ft. 16), with *kuli* substituting for some verb that can combine with *-ta* complements directly, such as e.g. the verb ‘say’ in (i).

(i) Mina-nun [kunye-ka na-uy sayngil.pathi-ey o-n-ta] malha-yess-ta.
 Mina-TOP 3SG.F-NOM I-GEN birthday.party-DAT come-PRS-DECL say-PST-DECL
 'Mina₁ said that she₁ will come to my (speaker's) birthday party.'

Thus, in such sentences *kuli* would not stand for the VP ‘claim exist’, but for some contextually salient phrase that could have *-ta* constituent as a complement. The conjunction *-ko* would then conjoin the *kuli*-VP with the VP ‘Mina dance’ below the content noun ‘claim’.

(72) *TP conjunction with Cont-CP*

*[Swuna-ka nolayha-yess] kuliko [Mina-ka
 Swuna-NOM sing-PST CONJ Mina-NOM
 chwumchwu-ess]-ta-nun cwucang-i iss-ess-ta
 dance-PST-DECL-ADN claim-NOM exist-PST-DECL
 ‘There was a claim that Swuna sang and Mina danced.’

(73) *ContP conjunction with Cont-CP*

*[Swuna-ka nolayha-yess-ta] kuliko [Mina-ka
 Swuna-NOM sing-PST-DECL CONJ Mina-NOM
 chwumchwu-ess-ta]-nun cwucang-i iss-ess-ta.
 dance-PST-DECL-ADN claim-NOM exist-PST-DECL
 ‘There was a claim that Swuna sang and Mina danced.’

This is not a surprising restriction if the sentences above involve matrix VoiceP conjunction with an elided verb and a noun, as all of the sentences above would require the ellipsis to target material across a clausal boundary. For example, in (73) would require us to keep unpronounced the verb and the noun in one of the conjuncts but then also the complementizer, (74).

- (74) [_{&P} [[[NP V-T-Cont-Comp] N] V] Voice]
 [& [[[NP V-T-Cont-Comp] N] V] Voice]]

This kind of Conjunction Reduction seems impossible in other languages as well: e.g., consider the example in (75) from Russian.²²

- (75) Mina [uslyšala [slux, [čto Svuna budet pet’]] včera], i
 Mina heard rumor COMP Swuna FUT sing yesterday CONJ
 [uslyšala [slux, [* (čto) Xani *(budet) tanzevat’]] pozavčera].
 (COMP) Hani (FUT) dance before.yesterday
 ‘Mina heard a rumor that Swuna will dance yesterday, and ~~heard a rumor~~ that Hani will dance the day before yesterday.’

In (75) we know that we are conjoining two VoicePs (or even higher constituents) because we have two different temporal adverbs modifying the two hearing events. In this configuration, the verb and the noun can be elided, but the material inside of the embedded clause cannot be deleted: e.g., the complementizer and the tense marker cannot remain unpronounced. It’s likely that we observe in Korean the same syntactic restriction on Conjunction Reduction.²³

²² This is the judgment of the author, who is a native Russian speaker.

²³ An anonymous reviewer raises the possibility that some of the constraints on *kuliko* conjunctions are due to morphological restrictions. While it might be possible to understand the ban on VP and TP conjunction as a result of such stems being bound, I don’t think this explanation naturally extends to examples like (73). The reviewer suggests that (73) is ungrammatical because *the second conjunct seems to be a morphological unit, and hence cannot be analyzable*. It’s not obvious to me that this is the case. *-Ta* forms can be free forms, and *kuliko* is a free morpheme too, and Korean has been argued to have suspended affixation (Park 1994; J. H. S. Yoon 1997; J.-M. Yoon 1990)—some inflectional morphemes

It is possible however to have *kuliko* occur between two CompPs. In such cases, we get obligatory wide scope of conjunction in both Sit-CPs and Cont-CPs. Let us consider Sit-CPs first. In a wide-scope context, (76), the sentence with the string ‘CompP *kuliko* CompP’ is felicitous, (77), and we get exactly the same reading as with conjunction of two matrix verbal phrases, (78).

(76) *Wide scope context*

There is a competition: the first student in class to solve the problem wins. Swuna was the first student to solve the problem, but the teacher didn’t tell the students right away that there already was a winner, and they kept trying to solve it for a while. In addition to that, Mina and Swuna don’t get along well, and really didn’t want each other to win. Now Mina says:

Na-nun [sensayngnim-kkeyse sungca-ka iss-ta-ko
I-TOP teacher-HON winner-NOM exist-DECL-COMP
malssumha-si-ci.anh-un] sanghwang-man silh-un kes-i
say.HON-HON-NEG-ADN situation-ONLY dislike-ADN thing-NOM
ani-ta...
be.NEG-DECL

‘I don’t only dislike the situation that the teacher didn’t tell us there was a winner...’ (lit. ‘It’s not the case that I dislike only the situation that the teacher didn’t tell us there was a winner...’)

(77) *CompP and CompP: ✓ in the context in (76)*

Na-nun [sengsayngnim-kkeyse sungca-ka iss-ta-ko
I-TOP teacher-HON winner-NOM exist-DECL-COMP
malssumha-si-ci.anh-un] kuliko [swuna-ka mwuncey-lul
say.HON-HON-NEG-ADN CONJ Swuna-NOM problem-ACC
phwul-un] sanghwang-i (motwu) silh-ta.
solve-ADN situation-NOM (both) dislike-DECL

‘I dislike (both) the situation that the teacher didn’t tell us there was a winner and ~~dislike the situation~~ that Swuna solved the problem.’

(78) *V(oice)_{matrix} and V(oice)_{matrix}: ✓ in the context in (76)*

na-nun [sengsayngnim-kkeyse sungca-ka iss-ta-ko
I-TOP teacher-HON winner-NOM exist-DECL-COMP
malssumha-si-ci.anh-un sanghwang-i silh]-ko [swuna-ka
say.HON-HON-NEG-ADN situation-NOM dislike-CONJ Swuna-NOM
mwuncey-lul phwul-un sanghwang-i silh]-ta.
problem-ACC solve-ADN situation-NOM dislike-DECL

can be ‘shared’ in sentences involving conjunction. So the question that arises is why can’t *-nun* be ‘shared’ in sentences like (73), similar to how past tense or declarative markers can be? What makes one type of unit morphologically unanalyzable, but other similar units analyzable? It seems to me that a purely morphological account, as opposed to an account appealing to syntactic constraints on gapping/Conjunction Reduction/proform substitution would miss the generalization that sentences with *kuliko* require the verbal predicate (and, optionally, other constituents too) to be missing in the coordinated structure.

‘I dislike the situation that the teacher didn’t tell us there was a winner and dislike the situation that Swuna solved the problem.’

Narrow scope is not available for *kuliko* with Sit-CPs: (80) is an infelicitous continuation of (79), just as coordination of matrix verbal phrases (81).

(79) *Narrow scope context*

There is a competition: the first student in class to solve the problem wins. Swuna was the first student to solve the problem, but the teacher didn’t tell the students right away that there already was a winner, and they kept trying to solve it for a while. The speaker has no negative feelings about Swuna solving the problem.

Na-nun Swuna-ka mwuncey-lul phul-un sanghwang-i
I-TOP Swuna-NOM problem-ACC solve-ADN situation-NOM
silh-un kes-i ani-ta...
dislike-ADN thing-NOM be.NEG-DECL

‘I don’t dislike the situation that Swuna solved the problem...’
(lit. ‘It’s not the case that I dislike the situation that Swuna solved the problem’)

(80) *CompP and CompP: κ in the context in (79)*

#Na-nun [Swuna-ka mwuncey-lul phul-un] kuliko
I-TOP Swuna-NOM problem-ACC solve-ADN CONJ
[sensayngnim-kkeyse sungca-ka iss-ta-ko
teacher-HON winner-NOM exist-DECL-COMP
malssumha-si-ci.anh-un] sanghwang-i silh-ta.
say.HON-HON-NEG-ADN situation-NOM dislike-DECL

‘I dislike the situation that Swuna solved the problem and the teacher didn’t say that there was a winner.’

(81) *V(oice)P_{matrix} and V(oice)P_{matrix}: κ in the context in (79)*

#Na-nun [Swuna-ka mwuncey-lul phul-un sanghwang-i
I-TOP Swuna-NOM problem-ACC solve-ADN situation-NOM
silh]-ko [sensayngnim-kkeyse sungca-ka iss-ta-ko
dislike-CONJ teacher-HON winner-NOM exist-DECL-COMP
malssumha-si-ci.anh-un sanghwang-i silh]-ta.
say.HON-HON-NEG-ADN situation-NOM dislike-DECL

‘I dislike the situation that Swuna solved the problem and dislike the situation that the teacher didn’t say that there was a winner.’

A felicitous follow-up to (79) would require conjunction of smaller constituents within the embedded clause (see section 5.2).

Kuliko conjunction with Cont-CPs also obligatorily takes wide scope. The possibility of the wide scope is illustrated in (82)–(84), and we see that ‘CompP *kuliko* CompP’ strings here again pattern with matrix *vP* conjunction, (84).

(82) *Wide scope context*

There are elections held between two parties. The party that is opposing to ours made some statements about our candidate in attempt to draw voters away from her. The speaker thinks that both owning a big company and laundering money are things that, if known about a candidate, would disadvantage them.

Na-nun [wuli-uy hwupo-ka ton.seythak-ul
I-TOP we-GEN candidate-NOM money.laundering-ACC
ha-yess-ta-nun] cwucang-man silh-un kes-i
do-PST-DECL-ADN claim-ONLY dislike-ADN thing-NOM
ani-ta...
be.NEG-DECL

‘I don’t only dislike the claim that our candidate did money laundering...’ (lit. ‘It’s not the case that I dislike only the claim that our candidate did money laundering...’)

(83) *CompP and CompP: ✓ in the context in (82)*

Na-nun [wuli-uy hwupo-ka ton.seythak-ul
I-TOP we-GEN candidate-NOM money.laundering-ACC
ha-yess-ta-nun] kuliko [khun hoysa-lul soyuha-yess-ta-nun]
do-PST-DECL-ADN CONJ big compamy-ACC own-PST-DECL-ADN
cwucang-i silh-ta.
claim-NOM dislike-DECL

‘I dislike the claim that our candidate did money laundering and ~~dislike the claim~~ that she owned a big company.’

(84) *VP_{matrix} and VP_{matrix}: ✓ in the context in (82)*

Na-nun [wuli-uy hwupo-ka ton.seythak-ul
I-TOP we-GEN candidate-NOM money.laundering-ACC
ha-yess-ta-nun cwucang-to silh]-ko [khun hoysa-lul
do-PST-DECL-ADN claim-ALSO dislike-CONJ big compamy-ACC
soyuha-yess-ta-nun cwucang-i silh]-ta.
own-PST-DECL-ADN claim-NOM dislike-DECL

‘I dislike the claim that our candidate did money laundering and dislike the claim that she owned a big company.’

The impossibility of the narrow scope is shown in (85)–(86), and we see that ‘CompP kuliko CompP’ strings here are infelicitous, as is conjunction of matrix verbal phrases, (87). The intuition that my consultants report is that the sentences in (86) and (87) in the provided context feel contradictory: the speaker has just told us they do not dislike the claim that the candidate owned a big company, but now says that they do dislike it.

(85) *Narrow scope context*

There are elections held between two parties. The party that is opposing ours made some statements about our candidate in attempt to draw voters away from her. The speaker thinks that owning a big

company would be considered a virtue for a candidate, but laundering money wouldn't be.

Na-nun [wuli-uy hwupo-ka khun hoysa-lul
I-TOP we-GEN candidate-NOM big company-ACC
soyuha-yess-ta-nun] cwucang-i silh-ci.anh-ta...
own-PST-DECL-ADN claim-NOM dislike-NEG-DECL

'I don't dislike the claim that our candidate owned a big company...'

(86) *CompP and CompP: x in the context in (85)*

#Na-nun [wuli-uy hwupo-ka khun hoysa-lul
I-TOP we-GEN candidate-NOM big company-ACC
soyuha-yess-ta-nun] kuliko [ton.seythak-ul
own-PST-DECL-ADN CONJ money.laundering-ACC
ha-yess-ta-nun] cwucang-i silh-ta.
do-PST-DECL-ADN claim-NOM dislike-DECL

'I dislike the claim that our candidate owned a big company and did money laundering.'

(87) *V(oice)P_{matrix} and V(oice)P_{matrix}: x in the context in (85)*

#Na-nun [wuli-uy hwupo-ka khun hoysa-lul
I-TOP we-GEN candidate-NOM big company-ACC
soyuha-yess-ta-nun cwucang-i silh]-ko [ton.seythak-ul
own-PST-DECL-ADN claim-NOM dislike-CONJ money.laundering-ACC
ha-yess-ta-nun cwucang-i silh]-ta.
do-PST-DECL-ADN claim-NOM dislike-DECL

'I dislike the claim that our candidate owned a big company and dislike the claim that she did money laundering.'

As with Sit-CPs, a felicitous follow-up to (85) with a Cont-CP would also require embedded VP or TP conjunction.

To sum up, we have seen that in structures with *kuliko*, which involve Conjunction Reduction, the strings 'CompP AND CompP' are grammatical. In resulting sentences the conjunction always takes wide scope with respect to the matrix verb. In other words, in sentences with *kuliko* we see in Korean the exact same pattern that is reported in the literature for other languages — English, Hungarian, Hebrew, Italian, Russian (Bassi and Bondarenko 2021; Bjorkman 2013; Szabolcsi 1997, 2016). While the wide scope of *kuliko* would be predicted on both Comp-as-Lift Theory and CR Theory, only CR Theory expects the contrast between *ko* and *kuliko* that we observe in Korean. According to CR Theory, there is no true conjunction of embedded CPs, and thus whether a conjunction can occur in Conjunction Reduction configurations or not is predicted to correlate with whether strings like 'CP and CP' would be attested. In Korean we see that this is borne out.

6 The Ban on Redundancy

According to my proposal, the impossibility of CP conjunction is due to L-analyticity (Barwise and Cooper 1981; Chierchia 2013; von Stechow 1993; Gajewski 2002). Recall that I argued that both ContP conjunctions and CompP conjunctions come out as *logically trivial*: due to the semantics of functional elements Cont and Comp, sentences containing such conjunctions are always false, as the same entity cannot have two distinct propositional contents, or exemplify two distinct propositions. The meanings we get for ContP conjunction and CompP conjunction in Sit-CPs are repeated in (88) and (89).

$$(88) \quad \text{ContP conjunction is trivial}$$

$$\begin{aligned} & [[\text{ContP [Swuna-ka nolayha-yess-ta]}]\text{-ko} \\ & \quad [\text{ContP Hani-ka chwumchwu-ess-ta}]]^s = \\ & \lambda x. \text{CONT}(x) = \{s': \text{Swuna sang in } s'\} \\ & \quad \wedge \text{CONT}(x) = \{s': \text{Hani danced in } s'\} = \emptyset \end{aligned}$$

$$(89) \quad \text{CompP conjunction in Sit-CPs is trivial}$$

$$\begin{aligned} & [[\text{CompP Swuna-ka nolayha-n(un)}]\text{-ko} \\ & \quad [\text{CompP Hani-ka chwumchwu-n(un)}]]^s = \\ & \lambda x. x \Vdash_e \{s': \text{Swuna sang in } s'\} \wedge x \Vdash_e \{s': \text{Hani danced in } s'\} = \emptyset \end{aligned}$$

As stated, this proposal faces a problem: it predicts that if the two propositions in the embedded clauses are identical, sentences containing conjoined embedded CPs should no longer be logically trivial and give rise to ungrammaticality. This is so because when the two conjoined CPs contain the same embedded proposition, the resulting meaning will be just equivalent to a single CP with that proposition, (90)–(91).

$$(90) \quad \text{ContP conjunction is not trivial with identical propositions}$$

$$\begin{aligned} & [[\text{ContP [Swuna-ka nolayha-yess-ta]}]\text{-ko} \\ & \quad [\text{ContP Swuna-ka nolayha-yess-ta}]]^s = \\ & \lambda x. \text{CONT}(x) = \{s': \text{Swuna sang in } s'\} \\ & \quad \wedge \text{CONT}(x) = \{s': \text{Swuna sang in } s'\} \\ & = \lambda x. \text{CONT}(x) = \{s': \text{Swuna sang in } s'\} \end{aligned}$$

$$(91) \quad \text{CompP conjunction in Sit-CPs is not trivial with identical propositions}$$

$$\begin{aligned} & [[\text{CompP Swuna-ka nolayha-n(un)}]\text{-ko} \\ & \quad [\text{CompP Swuna-ka nolayha-n(un)}]]^s = \\ & \lambda x. x \Vdash_e \{s': \text{Swuna sang in } s'\} \wedge x \Vdash_e \{s': \text{Swuna sang in } s'\} \\ & = \lambda x. x \Vdash_e \{s': \text{Swuna sang in } s'\} \end{aligned}$$

This is however not borne out: neither ContPs, (92), nor CompPs, (93)–(94), can be conjoined even when the two embedded propositions are the same.

$$(92) \quad \text{ContP conjunction with Cont-CP}$$

*Mina-ka [Swuna-ka nolayha-yess-ta]-ko [Swuna-ka
Mina-NOM Swuna-NOM sing-PST-DECL-CONJ Swuna-NOM
nolayha-yess-ta]-nun cwucang-ul kiekha-n-ta
sing-PST-DECL-ADN claim-ACC remember-PRS-DECL
'Mina remembers the claim that Swuna sang and that Swuna sang.'

- (93) *CompP conjunction with Sit-CP*
 *Mina-ka [Swuna-ka nolayha-nun]-ko [Swuna-ka
 Mina-NOM Swuna-NOM sing-ADN-CONJ Swuna-NOM
 nolayha-n(un)] sanghwang-ul kiekha-ss-ta
 sing-ADN situation-ACC remember-PST-DECL
 ‘M. remembered the situation that Swuna sang and that Swuna sang.’
- (94) *CompP conjunction with Cont-CP*
 *Mina-ka [Swuna-ka nolayha-yess-ta-nun]-ko [Swuna-ka
 Mina-NOM Swuna-NOM sing-PST-DECL-ADN-CONJ Swuna-NOM
 nolayha-yess-ta-nun] cwucang-ul kiekha-n-ta
 sing-PST-DECL-ADN claim-ACC remember-PRS-DECL
 ‘Mina remembers the claim that Swuna sang and that Swuna sang.’

Thus, the modified CR Theory argued for in this paper needs something additional to account for the ungrammaticality of sentences like (92)–(94). I would like to suggest that the reason that the sentences above are deviant is that they are *redundant*: the second conjunct does not contribute anything to the meaning of the embedded clause. Sentences that are redundant are not always ungrammatical. There are sentences like (95a)–(95b), which can be well-formed and felicitously used in certain contexts. And there are also sentences like (95c)–(95d), which sound like speech errors.

- (95) a. If [it’s raining], [it’s raining].
 b. [There’s pizza] and [there’s pizza].
 c. *This is the student [who came to the party]
 [who came to the party].
 d. *Mary told this story [after John left] [after John left].

The acceptable cases of redundant sentences never seem to involve truly trivial meanings. Examples like (95a) involve a consistent conversational implicature of the uncontrollability of the repeated proposition (Snider 2015). In (95b) we do not understand two instances of the word *pizza* as referencing the same set of individuals. We seem to be modulating the meaning of at least one of the instances in order to interpret the sentence (cf. the ‘Rescale’ operator in Del Pinal 2025): e.g., someone uttering (95b) might mean that there is *ordinary pizza*, and there is *super delicious pizza*. Thus, I hypothesize that truly redundant sentences are in fact always ungrammatical, and the difference between (95a)–(95b) and (95c)–(95d) lies in that certain structures can be rescued by some mechanisms (covert operators, generating implicatures, etc.) that render the meaning non-redundant. These mechanisms require further research.

The notion of redundancy that we will need has to be relativized to *the local context*: the idea about the sentences like (92)–(94) is that they are redundant because the second conjunct does not provide any new information once the first conjunct is taken to be true. I will adopt the ban on redundancy in (96), based on the previous literature that claims that parts of a sentence cannot contribute information that’s entailed by their local context (van der

Sandt 1992; Mandelkern and Romoli 2018; Mayr and Romoli 2016; Romoli and Mandelkern 2018; Schlenker 2009a, 2010; Singh 2008; Stalnaker 1974, 1978).²⁴

(96) *Ban on Redundancy*

A sentence p is redundant in a context c if part q of p is entailed by the local context of q in c .

There are different views in the literature on how the notion of a local context should be defined: some accounts propose parsing-based definitions (Schlenker 2009b, 2010), others argue for hierarchical definitions based on c-command (Ingason 2016; Romoli and Mandelkern 2018). W. Chung (2023) in recent work based on Korean and other head-final languages suggests a hybrid theory which takes into account both linear order and syntactic structure. All of these theories, as far as I can see, have definitions of a local context that are able to derive the redundancy of CP conjunction with identical propositions in (92)–(94). Parsing-based theories and W. Chung’s (2023) hybrid theory predict that in a structure with conjunction of CPs, the local context for the linearly right conjunct is the global context intersected with the denotation of the left conjunct (while the local context for the linearly left conjunct is just the global context). For c-command based theories, the predictions will depend on the hypothesized structure of the conjunctions as in (92)–(94) (e.g., do these structures have a head-final conjunction with a rightwards-linearized specifier?), but in any case, there should be an asymmetry, and one of the conjuncts should constitute the local context for the other, but not vice versa.

As long as one of the two ContPs/CompPs is a local context for the other, then the sentences in (92)–(94) will be redundant, because for any entity x , if it is a member of a set A , and set $A = B$, then it is a member of set B :

(97) For any x :

$$x \in \{y: \text{CONT}(y) = \{s: \text{Swuna sang in } s\}\}$$

$$\Rightarrow x \in \{y: \text{CONT}(y) = \{s: \text{Swuna sang in } s\}\}$$

(98) For any x :

$$x \in \{y: y \Vdash_e \{s: \text{Swuna sang in } s\}\}$$

$$\Rightarrow x \in \{y: y \Vdash_e \{s: \text{Swuna sang in } s\}\}$$

Thus, we can conclude that the sentences in (92)–(94) are redundant. They have a part—one of the conjuncts in the embedded conjunction—that is entailed by its local context: this is so because the other conjunct entails them.²⁵

²⁴ Mandelkern and Romoli (2018) call this ban *Triviality Condition*, but I opted to call it *Ban on redundancy*, as the resulting sentences are not trivially true or false.

²⁵ Note that the conjuncts in the cases under considerations are not propositions, but predicates of individuals. This raises a question of how their meanings would be intersected with the global context, and then how it would be evaluated whether the local context entails the predicate denoted by the other conjunct. I leave this question open, but we could imagine that we are not in fact doing such intersection in these cases: perhaps when two predicates are conjoined and one of them constitutes a local context for the other, we are just checking entailment between the two predicates (i.e., whether all individuals that the second predicate is true of are also individuals that the first (‘local context’) predicate is true of).

I propose that the reason that (92)–(94) are ungrammatical is that they can never be used felicitously: either these sentences are redundant (when the two embedded propositions are identical), or they are trivially false (when the two embedded propositions are different). Mechanisms that rescue redundant meanings to make them non-redundant don't seem to be available with CP conjunctions, just as they are not available with stacking of relative and adverbial clauses, (95c)–(95d). To capture the effect of redundancy, I propose the following modification to our definition of L-analyticity:

- (99) *L(logical)-analyticity (modified)*
- a. L-analytic sentences are those that can't be felicitously asserted: these sentences are either redundant, or trivial (always true or false) in virtue of their logical structure.
 - b. L-analytic sentences are ungrammatical.

An important aspect of this definition is that redundancy/triviality must be a consequence of the *logical structure* of the sentences under consideration (Del Pinal 2025; Gajewski 2002, a.o.). This is likely one of the factors that determines whether a redundant sentence can be rescued. In our case, (92)–(94), the elements that create redundant/trivial meanings are part of the logical vocabulary: they are the meanings of functional heads Cont and Comp, which introduce displacement and exemplification respectively. Thus, the sentences involving CP conjunctions come out as L-analytic.

It is worth noting that addition of redundancy in the definition of a principle like (99) would be needed for other cases reported in the literature where a trivial meaning results in an ungrammatical sentence. I provide two such cases in (100): stacking of modifier PPs and stacking of *that*-clauses.

- (100) a. *I met a student [with blue eyes] [with green eyes].
(Schütze 1995:103)
- a' *I met a student [with blue eyes] [with blue eyes].
- b. *The rumor [that Fred was happy], [that he was in Paris], [that he could see ghosts]. (Moulton 2009:29)
- b' *The rumor [that Fred was happy] [that Fred was happy].

Schütze (1995) reports that (100a) is ungrammatical due to being uninformative: the iterated phrases are semantically incompatible with each other. Note that a version of this sentence with two identical PPs, (101a'), is just as ill-formed, despite the fact that there is no semantic incompatibility. Same is true for stacking of CPs, (100b)–(101b'). Moulton (2009) argues that the fact that CONT is a function (what I call *equality semantics*) is responsible for the restriction in (100b): we can't stack the two CPs because that would result in attributing two distinct propositions to the content of a single individual. The sentence in (101b') does not face the same issue, just as the cases of CP conjunction. Thus, both (Schütze 1995) and (Moulton 2009) in fact require reference to redundancy in their explanation of ungrammaticality of the sentences in (100a) and (100b). In (99) I make this reference explicit.

To sum up, I’ve argued that embedded CP conjunction is ungrammatical because sentences containing it are always either redundant or trivially false—and hence L-analytic, (99). Thus, my proposal contributes to the research program in formal semantics which argues that part of natural language capacity is a deductive-inferential system which *can automatically identify and filter out as strictly unacceptable expressions that, although well-formed, have trivial, uninformative interpretations* (Del Pinal 2025:990). This filtering results in the perceived ungrammaticality of the violating sentences.

7 Further predictions

7.1 CP conjunction with verbs

While this paper is concerned with embedded conjunction structures with clauses that combine with nouns, my proposal also makes predictions for clauses that combine with verbs. In this section I discuss these predictions.

Let us consider *bare* embedded clauses—clauses that have not undergone nominalization. Such clauses behave like verbal modifiers²⁶ and can for example co-occur with nominal complements, (101). Their structures contain tense (TP), the declarative marker (ContP), and also attach *-ko*: a marker that is homophonous with the conjunction *-ko*.

- (101) Swuna-ka [hoysa-ka hyepsang-ul ha-l
 Swuna-NOM company-NOM negotiation-ACC do-FUT.ADN
 cwunpi-ka toy-ess-*(ta)-ko] [ku palphyomwun-ul
 preparation-NOM become-PST-DECL-COMP DEM statement-ACC
 haysekha-yess-ta.
 interpret-PST-DECL
 ‘Swuna interpreted that statement, (and her interpretation was) that
 the company is ready for negotiations.’

It’s an open question whether the *ko* we see in (101) is the same morpheme as conjunction, or a distinct morpheme—a complementizer that has a homophonous form. Note that under my proposal, analysis of *ko* as a single morpheme with conjunctive semantics is readily available: in (101) *ko* would be taking two <e,t>-type predicates—the VP (set of situations of interpreting the statement) and the CP (set of situations with content “*The company is ready for negotiations*”), and returning their intersection. But there is also an alternative: *-ko* in (101) could be a true complementizer. We could think of *-ko* and the adnominal marker as being exponents of the same head Comp, conditioned by the environment: *-ko* is used when the CompP combines with the verb, and the adnominal marker is used when it combines with the noun.

²⁶ See (Bondarenko 2022) for discussion of how clauses integrate with verbs, and of the modifier vs. argument distinction.

Whichever of the hypotheses sketched above is correct, my analysis predicts that CP conjunction of clauses that combine with verbs should not be possible: this is because such clauses must contain the ContP projection (declarative marker *-ta*). This projection will introduce displacement, and the fact that Cont equates the content of a situation described by the verb with the embedded proposition would make CP conjunction L-analytic, and thus ungrammatical, (102). Stacking of CPs would be ruled out for the same reason.

$$(102) \quad \begin{aligned} &[[\text{ContP Swuna sang}] \text{ (and) } [\text{ContP Hani danced}] \text{ be surprised}]^s = \\ &\lambda s'. \text{be-surprised}_s(s') \wedge \text{Cont}(s') = \{s: \text{Swuna sang in } s\} \\ &\quad \wedge \text{Cont}(s') = \{s: \text{Hani danced in } s\} = \emptyset \end{aligned}$$

In (103)–(104) we see that this prediction is borne out: we can neither add the *ko* conjunction in between two *-ko*-clauses, nor have two *ko*-clauses with a single verb. Note that if *ko* is a single morpheme, (103) would be not possible due to combining the same morpheme twice, and (104) would be a structure with two conjunctions rather than stacking. If the two *kos* are distinct, (103) would involve clausal conjunction, and (104)—stacking.²⁷

- (103) *Mina-nun [Swuna-ka nolayha-yess-ta-ko]-ko [Hani-ka
Mina-TOP Swuna-NOM sing-PST-DECL-COMP-CONJ Hani-NOM
chwumchwu-ss-ta-ko] nollaweha-n-ta.
dance-PST-DECL-COMP be.surprised-PRS-DECL
'Mina is surprised that Swuna sang and that Hani danced.'
- (104) *Mina-nun [Swuna-ka nolayha-yess-ta-ko] [Hani-ka
Mina-TOP Swuna-NOM sing-PST-DECL-COMP Hani-NOM
chwumchwu-ss-ta-ko] nollaweha-n-ta.
dance-PST-DECL-COMP be.surprised-PRS-DECL
'Mina is surprised that Swuna sang and that Hani danced.'

Furthermore, it is possible to 'conjoin' two CPs that combine with verbs with the help of *kuliko*, and then we obligatorily get the wide scope reading, (105). This is also predicted by my proposal: since *kuliko* signals a structure with Conjunction Reduction, in (105) we are conjoining matrix VoicePs.

- (105) Mina-nun [Swuna-ka nolayha-yess-ta-ko] kuliko [Hani-ka
Mina-TOP Swuna-NOM sing-PST-DECL-COMP CONJ Hani-NOM
chwumchwu-ss-ta-ko] nollaweha-ss-ta.
dance-PST-DECL-COMP be.surprised-PST-DECL
'Mina was surprised that Swuna sang and that Hani danced.'
✓ *kuliko* > *surprise*: Mina was surprised by Swuna's singing, and
was surprised by Hani's dancing.
✗ *surprise* > *kuliko*: Mina was surprised by the combination of Swuna's

²⁷ One might worry that the sentence in (103) is ungrammatical due to the repetition of *-ko*. If that was so, we would probably expect haplology to occur, and one of the *-kos* be deleted, which would give us the string in (104). However, we see that that is ungrammatical as well.

singing and Hani’s dancing (but, for example, Swuna’s singing on its own is not surprising to her).

Thus, embedded conjunction in structures where clauses combine with verbs supports our previous findings: ‘CP and CP’ strings, when possible, give rise to wide scope readings because this is not true CP conjunction—we are in fact conjoining higher constituents followed by Conjunction Reduction.

7.2 Disjunction

Another question that arises is what predictions our theory makes for disjunction of CPs, as the original observations in (Szabolcsi 1997, 2016) were concerned with both conjunction and disjunction. Interestingly, our predictions for disjunction turn out to be different than those for conjunction: disjunction of ContPs and CompPs should not lead to L-analytic meanings, but should give rise to wide scope (106)–(108), just as in (Szabolcsi 1997, 2016).

- (106) *ContP disjunction*

$$\begin{aligned} & \llbracket [\text{ContP } [\text{Swuna-ka nolayha-yess-ta}]\text{-ko} \\ & \quad [\text{ContP } \text{Hani-ka chwumchwu-ess-ta}]] \rrbracket^s = \\ & \lambda x. \text{CONT}(x) = \{s': \text{Swuna sang in } s'\} \\ & \quad \vee \text{CONT}(x) = \{s': \text{Hani danced in } s'\} \end{aligned}$$
- (107) *CompP disjunction in Cont-CPs*

$$\begin{aligned} & \llbracket [\text{CompP } [\text{Swuna-ka nolayha-yess-ta-nun}]\text{-ko} \\ & \quad [\text{CompP } \text{Hani-ka chwumchwu-ess-ta-nun}]] \rrbracket^s = \\ & \lambda x. x \Vdash_e \{y: \text{CONT}(y) = \{s': \text{Swuna sang in } s'\}\} \\ & \quad \vee x \Vdash_e \{y: \text{CONT}(y) = \{s': \text{Hani danced in } s'\}\} \end{aligned}$$
- (108) *CompP disjunction in Sit-CPs*

$$\begin{aligned} & \llbracket [\text{CompP } \text{Swuna-ka nolayha-n(un)}]\text{-ko} \\ & \quad [\text{CompP } \text{Hani-ka chwumchwu-n(un)}] \rrbracket^s = \\ & \lambda x. x \Vdash_e \{s: \text{Swuna sang in } s\} \vee x \Vdash_e \{s: \text{Hani danced in } s\} = \emptyset \end{aligned}$$

ContP disjunction, (106), would give us a set of individuals whose propositional content is underdetermined: it is either *Swuna sang*, or *Hani danced*. There is nothing wrong with this meaning, and addition of exemplification in (107) does not change that either. Disjunction in Sit-CPs is also predicted to be well-formed, and give rise to wide scope, (108): we get a set of individuals which either exemplify the proposition *Swuna sang*, or exemplify the proposition *Hani danced*. Again, this is a non-trivial meaning.

While a detailed investigation of disjunction is beyond the scope of the paper, my preliminary findings suggest that conjunction and disjunction do indeed show different behavior in Korean. Recall that we could find no conjunction that could conjoin ContPs in Korean. This is not true for disjunction:

- (109) a. Mina-ka [[_{TP} Swuna-ka nolayha-yess]-kena [_{TP} Hani-ka
Mina-NOM Swuna-NOM sing-PST-DISJ Hani-NOM
chwumchwu-ess]-ta-nun] cwucang-ul kiekha-n-ta.
dance-PST-DECL-ADN claim-ACC remember-PRS-DECL
‘M. remembers a claim that either Swuna sang or Hani danced.’
remember > $\vee$: OK, $\vee$ > *remember*: *
- b. Mina-ka [[_{ContP} Swuna-ka nolayha-yess-ta]-kena
Mina-NOM Swuna-NOM sing-PST-DISJ
[_{ContP} Hani-ka chwumchwu-ess-ta]-nun] cwucang-ul
Hani-NOM dance-PST-DECL-ADN claim-ACC
kiekha-n-ta.
remember-PRS-DECL
‘Mina either remembers the claim that Swuna sang, or remembers the claim that Hani danced.’
remember > $\vee$: *, $\vee$ > *remember*: OK

In (109) we see that *-kena*, the same disjunction that can disjoin TPs, can also disjoin two ContPs. As is expected, the result is wide scope of disjunction: (109b), unlike (109a), is understood as saying that either Mina remembers the claim that Swuna sang, or she remembers the claim that Hani danced.

When it comes to CompP conjunctions, the scope of disjunction is also wide, as is expected, but CompPs cannot be disjoined with *-kena*: the disjunction *ttonun* must be used instead. This is illustrated in (110) for disjunction of Cont-CPs and in (111) for disjunction of Sit-CPs.

- (110) Mina-ka [Swuna-ka nolayha-yess-ta-nun] -(*kena)/ttonun
Mina-NOM Swuna-NOM sing-PST-DECL-ADN DISJ
[Hani-ka chwumchwu-ess-ta-nun] cwucang-ul
Hani-NOM dance-PST-DECL-ADN claim-ACC
kiekha-n-ta.
remember-PRS-DECL
‘Mina either remembers the claim that Swuna sang, or she remembers the claim that Hani danced.’
remember > $\vee$: *, $\vee$ > *remember*: OK
- (111) Mina-ka [Swuna-ka nolayha-n] -(*kena)/ttonun [Hani-ka
Mina-NOM Swuna-NOM sing-PST.ADN DISJ Hani-NOM
chwumchwu]-n sanghwang-ul kiekha-n-ta.
dance-PST.ADN situation-ACC remember-PRS-DECL
‘Mina either remembers the situation that Swuna sang, or she remembers the situation that Hani danced.’
remember > $\vee$: *, $\vee$ > *remember*: OK

The impossibility of *-kena* in (110)–(111) requires further investigation, as it does not immediately fall out from the current proposal. It could be that meanings of adnominal markers are in fact more complex than proposed in

this paper—perhaps, they contribute more than just an exemplification relation, creating illicit meanings that result in ungrammaticality with disjunction too. Alternatively, it could be that the Disj head just undergoes allomorphic variation depending on the constituents that it disjoints—with *kena* occurring if VPs, TPs or ContPs are disjointed, and *ttonun* appearing if CompPs are disjointed. I leave this issue for further investigation.

8 Conclusions

In this paper I argued that true CP conjunction—intersective conjunction of projections in the C-layer of the clause (ContP, CompP)—is impossible. The argument for this claim was based on investigation of embedded conjunction in Korean clauses that combine with nouns. We have seen that Korean morphologically distinguishes conjunctions that occur in structures with ellipsis (*kuliko*) from conjunctions in structures where no ellipsis took place (*-ko*). This allowed us to test conjunction of VPs, TPs, ContPs and CompPs with and without Conjunction Reduction. Our results revealed that without ellipsis, only embedded VPs and TPs can be conjoined, and such conjunction takes narrow scope with respect to the matrix predicate. In structures with Conjunction Reduction on the other hand, only ‘CompP and CompP’ strings are available, and conjunction obligatorily takes wide scope with respect to the verb, in line with the idea that such sentences involve coordination of (at least) matrix VoicePs. These observations favor theories that rule out true instances of CP conjunction by appealing to L-analyticity (e.g., Bassi and Bondarenko 2021) and regard all ‘CP and CP’ strings as always involving Conjunction Reduction. Theories that on the other hand assign semantics of Lift to elements in the left periphery (Szabolcsi 1997, 2016) fail to predict ungrammaticality of CP conjunction and explain why only conjunction that occurs in structures with ellipsis can occur in ‘CP and CP’ strings.

While our results generally support CR Theory proposed in (Bassi and Bondarenko 2021), they also reveal that equality semantics of clausal embedding cannot be the only reason for the impossibility of true CP conjunction. We have seen that clauses that combine with situation nouns like *sanghwang* ‘situation’ lack displacement, and thus lack the CONT function in their semantics. Nevertheless, CPs can’t be conjoined under situation nouns either. I proposed that the complementizer (“the adnominal marker” *-nun*) introduces the exemplification relation, and it makes conjunction of two Sit-CPs also L-analytic, and hence ungrammatical. Thus, the implication of the present proposal is that there are two ‘logical’ elements that we see at the clausal periphery, Cont and Comp, and both of them have meanings that make conjoining CP-level constituents trivial. And so it’s not only the nature of displacement that makes true CP conjunction impossible in natural languages.

My proposal made another modification to the CR Theory proposed in (Bassi and Bondarenko 2021): I argued that we need to add a ban on redundancy to rule out sentences in which two CPs with the same embedded propo-

sition undergo conjunction. This motivated a modification in the definition of L-analyticity: I suggested that it should make reference to redundancy, and that L-analytic sentences are those that always come out as either redundant or trivial—i.e., are sentences that can never be felicitously asserted.

While according to the proposal in this paper true CP conjunction is never possible, it does not rule out the possibility of cross-categorial conjunction. In contrast to proposals like (Hirsch 2017; Schein 2017), my account does not rule out that certain non-propositional constituents could be conjoined by a Generalized Conjunction (Gazdar 1980; Partee and Rooth 1983). It only proposes that a particular class of non-propositional meanings (denoted by ContPs and CompPs) cannot be conjoined. The impossibility of these conjunctions follows from the fact that they lead to deviant meanings, and not from natural language lacking ability to express conjunctive meanings of more complex types.

If this proposal is on the right track, it contributes to the growing pool of arguments for the equality semantics of displacement in sentences with embedded clauses (Bondarenko and Elliott 2025; Elliott 2020; Moulton 2009). This implies that the semantics of clausal embedding is at its core non-monotonic, and makes it highly important to investigate how one could model within this approach monotonicity inferences that some attitude predicates exhibit.

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