This paper is concerned with the relationship between the periphrastic causative construction and the complex construction with a subordinate purposive clause in Korean. It also attempts to account for the fact that there is a tighter syntactic linkage in the former than in the latter. The investigation draws on the Clause Linkage Theory, part of Role and Reference Grammar. It is argued that the theory does not fare well with respect to the causative in Korean. In order to solve the problem, a diachronic scenario is suggested.

1. Introduction

This paper deals with the following issues: (a) what is the relationship between P(ERIPHRASTIC) C(AUSATIVE) C(ONSTRUCTION) and C(OMPLEX) C(ONSTRUCTION) with a subordinate P(UROPUSIVE) C(ONSTRUCTION) in Korean? and (b) why is there a tighter clause linkage in the former than in the latter?

These questions are motivated by the fact that the same morpheme —ke is used in both PCC and CCP, a fact that may be trivial, but requires a serious investigation.

I will adopt the Clause Linkage Theory proposed by Foley and Van Valin (1984) to answer these questions. I will also discuss a couple of problems that Korean PCC and CCP pose to the theory.

*I am indebted to Barry Blake, Graham Mallinson and Keith Allan for their comments on earlier versions of this paper. I am also grateful to the Korean students and their spouses who acted as informants. I alone am responsible for the contents of the paper.
2. PCC and CCP in Korean

A few linguists have noted in their studies on Korean PCC that the so-called complementizer used in PCC is the same as the one used in CCP. Example (1) is PCC, while example (2) is CCP, a non-causative sentence with a subordinate purposive clause.¹

(1) chælsu-ka yøghi-eke kwail cip-.il masi-ke ha-øss-ta
   -NM -DM fruit juice-AM drink-COMP do-PST-IND²
   'Chelsu caused Yonghi to drink the fruit juice.'
(2) chælsu-ka yøghi-ka pathi-e o-ke kinya-ii cip-e
   -NM -NM party-LOC come-COMP she GEN home-LOC
   phone-AM dial-PST-IND
   'Chelsu called Yonghi at home so that she could come to the party.'

Although linguists like Sohn (1973) and Patterson (1974) among others note that the complementizer ke has a meaning of ‘in a way that’ or ‘so that’, and that it is also used in PCC, the fact that the same complementizer ke is used in both PCC and CCP has never received any serious attention at all.

¹ There is a construction similar to the CCP, the so-called tokok construction. I am not concerned with this construction in this paper.
² The following abbreviations are used in this paper.

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Meaning</th>
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<tbody>
<tr>
<td>ABS</td>
<td>Absolutive</td>
</tr>
<tr>
<td>AM</td>
<td>Accusative Marker</td>
</tr>
<tr>
<td>C</td>
<td>Causative verb</td>
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<tr>
<td>CCC</td>
<td>Complement Causative Construction</td>
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<tr>
<td>CCP</td>
<td>Complex Construction with a subordinate Purposive Clause</td>
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<tr>
<td>CL</td>
<td>Classifier</td>
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<tr>
<td>COMP</td>
<td>Complementizer</td>
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<td>DM</td>
<td>Dative Marker</td>
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<td>ERG</td>
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<td>INF</td>
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<tr>
<td>IRH</td>
<td>Interclausal Relations Hierarchy</td>
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<td>ISRH</td>
<td>Interclausal Semantic Relations Hierarchy</td>
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<tr>
<td>LOC</td>
<td>Locative</td>
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<td>NEG</td>
<td>Negative</td>
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<td>NM</td>
<td>Nominative Marker</td>
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<td>NP</td>
<td>Noun Phrase</td>
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<td>NPST</td>
<td>Non-Past</td>
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<td>PASS</td>
<td>Passive</td>
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<tr>
<td>PCC</td>
<td>Periphrastic Causative Construction</td>
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<tr>
<td>PF</td>
<td>Phonological Filler</td>
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<tr>
<td>PRES</td>
<td>Present</td>
</tr>
<tr>
<td>PST</td>
<td>Past</td>
</tr>
<tr>
<td>Q</td>
<td>Question</td>
</tr>
<tr>
<td>REL</td>
<td>Relativizer</td>
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<tr>
<td>RRG</td>
<td>Role and Reference Grammar</td>
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<tr>
<td>TG</td>
<td>Transformational Grammar</td>
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Perhaps, it is not surprising in the light of the tendency of the generative framework to ignore such low level grammatical morphemes as the complementizer \( ke \) for purposes of grammatical analysis (Langacker 1983:23-24).

Note that the causee NP marked by \( eke \) (Dative) in (1) can appear as the subject NP (that is marked by Nominative \( ka \)) of the complement on the analogy of (2), although it is far less preferable to (1).

(3) \( \text{ch\-}\text{sul-ka y\-}\text{phi-ka kwail cip-\-il masi-ke ha\-}\text{\-ass-ta} \)
\( \text{-NM -NM fruit juice -AM drink -COMP do-PST-IND} \)
‘Chelsu caused Yonghi to drink the fruit juice.’

Following Aissen (1979), I will call (3) a complement causative; the syntactic difference between (2) and (3) is that the complement in (3) can be optionally marked by Accusative \( \text{lil} \). In other words, the complement is a logical argument of the higher verb \( ha- \) in (3). The same does not apply to CCP in (2), in which the subordinate purposive clause functions only as an adverbial in relation to the main verb. This is why (4) is ungrammatical: it is (1) with the complement deleted. (5) is perfectly grammatical: it is (2) with the purposive clause deleted.³

(4) \( ^*\text{ch\-}\text{sul-ka ha\-}\text{\-ass-ta} \)
\( \text{-NM do-PST-IND} \)

(5) \( \text{ch\-}\text{sul-ka kiny\-a-ii cip-e c\-}\text{\-nhwa-\-lil k\-al-\-ass-ta} \)
\( \text{-NM she-GEN home-LOC phone-AM dial-PST-IND} \)
‘Chelsu called her at home.’

The causee NP in (1) can be also marked by Accusative \( \text{lil} \) as in (6).

(6) \( \text{ch\-}\text{sul-ka y\-}\text{\-phi-\-lil kwail cip-\-il masi-ke ha\-}\text{\-ass-ta} \)
\( \text{-NM -AM fruit juice-AM drink-COMP do-PST-IND} \)
‘Chelsu caused Yonghi to drink the fruit juice.’

On the other hand, the subject NP of the subordinate purposive clause in (2) cannot appear in either Accusative or Dative.

(7) \( ^*\text{ch\-}\text{sul-ka y\-}\text{\-phi-\-ke/lil pathi-\-e o-ke kiny\-a-ii cip-e c\-}\text{\-nhwa-\-lil k\-al-\-ass-ta} \)

³ Example (4) can be used as an answer to a sentence questioning the identity of the subject NP.
Despite the differences that I have noted above between PCC and CCP, there are a few reasons why I see an affinity between these two constructions.

First, the same morpheme *ke* is used in both constructions, although it is too obvious a point.

Secondly, if a separate NP is inserted between the lower and higher verbs in PCC, and if the causee NP is marked by Nominative *ka*, the PC is no longer interpreted as a causative, but it is interpreted as a non-causative CCP. Compare (8) with (1) for this change of interpretation.

(8) ч’ельсу-ка я’’ги-ка квайл сип-ил маши-ке касисмал-ил ха-а’’сс-та
-НМ -НМ сяяр спряж-АМ дргнг-АМ дп-ПСТ-ИНД
‘Чельсу told a lie so that Yonghi could drink the fruit juice.’

Thirdly, the PCC can be alternatively interpreted in a non-causative way. That is no causation proper on the part of the causer or the subject NP in the higher clause may be involved. Instead, it may be interpreted in such a way as mere directing, advising etc. is performed by the causer. This is what Yang (1984:42-43) calls the secondary function of the PCC. I do not take this ‘secondary function’ as belonging to the causative construction, since no causation is involved. Instead it is the case that the subordinate clause is interpreted as a purposive clause. Hence the alternative interpretation of (9) as Чельсу did (advised, directed) so that Yonghi could drink the fruit juice. It has been pointed out (Patterson 1974, Shibatani 1973b, 1975a and b, 1976c) that the PCC does not imply the truth of the complement, that is non-implicative in the sense of Karttunen (1971) and Givön (1980). Therefore the reason why (9) is not regarded as anomalous is that the first conjunct is interpreted as containing a purposive clause, that is the first conjunct of (9) is a CCP, rather than a PCC.

(9) ки-ка нэ-е’’ги кимчи-и’’л мах-ке ха-а’’сс-ина нэ-’’ка’’ ани
-НМ 1-ДМ кимчи-АМ еат-СПМ дп-ПСТ-БТ 1-НМ НЕГ
мах-а’’сс-та
eат-ПСТ-ИНД
‘He told me to eat kimchi, but I did not eat it.’ (Patterson 1974:17)

Note that the causee NP in (9) does not have to be marked by Nominative *ka* as in (8), since in (9) no explicit NP is inserted before the main verb
ha- to specify the type of action that the subject NP of the higher clause performed.4

Having established the affinity between PCC and CCP, I will show which is basic, PCC or CCP, that is which is functionally or diachronically derived from which.

I do not have any diachronic evidence that the PCC has developed from the CCP, or vice versa. There are reasons why I think that the PCC has originated from the CCP, not the other way round.

First, in an interpersonal situation between two participants X and Y, X's desire or wish that something is done or affected through the intermediary, i.e. Y is realized through the following stages: (a) X's perception of his own desire or wish, (b) X's deliberate attempt to realize his desire or wish and (c) X's accomplishment of his desire or wish. In order to formally express each stage, various constructions will be used. Stage (a) will be expressed via what Foley and Van Valin call 'psych-action' constructions. Stage (b) will be expressed via something like CCP as in (2). Stage (c) will be etically realized via a causative construction. Given this sequence of stages with regard to causation, it is more plausible to think that the PCC has developed from the CCP as it is impossible for stage (c) to precede stage (b). At stage (b) X's desire or wish is yet to be fulfilled. This is why the CCP in (9) does not imply the truth of the subordinate clause, unlike the implicative PCC.

Secondly, only a limited number of verbs and adjectives can host the causative suffix -I to produce lexical (i.e. morphological) causative verbs, whereas the PCC is productive. For instance, loan words from other languages can be causativized only via the PCC, while on the other hand, some lexical causative verbs like ssi-I- 'cause to write' are falling into disuse. This suggests that the PCC is rather a new, but very productive way of expressing causation. As stage (c) presupposes stage (b), and the PCC seems to be a new innovation in Korean, it seems safe to argue that the structure of the CCP is pressed into service to express causation.

Thirdly, the interpretation possibilities of the PCC and the CCP indicate that the purposive interpretation is more fundamental in accordance with the two arguments above. In the following four surface structures, the CCP interpretation is always possible, whereas this is not true of the PCC interpretation.

4 I have used the terms the causer and the causee in case of (8) and (9) for the sake of convenience only. That is the causer refers to the subject NP of the higher clause in (8), while the causee refers to the subject NP of the lower clause in (9).
This suggests that the CCP reading is basic, not the PCC reading. To put it in another way, it seems that the PCC has developed from the CCP, since it is more plausible to assume that the interpretation which is compatible to all the possible syntactic alternatives is basic, rather than the interpretation which is not so compatible.

3. Clause Linkage in the PCC

I have argued in the previous section for the same origin of the PCC and the CCP. I will now show how differently the PCC and the CCP behave in syntactic terms. I will propose a functional account for the syntax of the PCC, heavily relying on the framework proposed by Foley and Van Valin (1984) (also Van Valin 1984, Foley and Olson 1985, Olson 1981). By doing so, I will test the Clause Linkage Theory, as it is the most comprehensive theory of clause-to-clause linkage. I will also discuss some problems that Korean PCC and CCP generate. I will attempt to solve these problems by speculating on the diachronic development of the PCC.

3.1. The Clause Linkage Theory

As a preliminary to the functional account of PCC, I will briefly outline the clause linkage theory of Foley and Van Valin (1984). In this theory, a clause is presented in terms of a layered structure of grammatical units, smaller units within larger ones. The layers of the grammatical units can be diagrammatically represented in (11).

Contrary to arguments/NPs, which are constituents of the layers, there is a set of operators which have the corresponding layer as their scope. The nucleus consists of the verb of the clause, being the innermost layer of the layers.
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(11) \[ \text{[(NP)...(NP) (NP) (NP) [Predicate]]} \]

\[ \text{NUCLEUS} \]

\[ \text{CORE} \]

\[ \text{PERIPHERY} \]

\[ \text{CLAUSE} \]

clause. The operators which have scope over the nucleus are generally aspect (cf. Klaiman 1986) as well as directionals which express a directional orientation of the nucleus. The core consists of one or two arguments, depending upon the valence of the verb or predicate. The operators which have their scope over the core layer are called 'modality' by Foley and Van Valin (1984:214) as modality 'characterizes the speaker's estimate of the relationship of the actor of the event to its accomplishment, whether he has the obligation, the intention, or the ability to perform it.' The outermost layer, the periphery, consists of setting NPs and secondary participants, e.g. beneficiary. Operators pertinent to this layer are status (referring to the variable of actuality of the event), tense, evidentials and illocutionary force.

Various constructions are built up by means of what Foley and Van Valin call juncture, the joining of elements from different clauses at the three layers. That is, a nuclear juncture is a construction with a complex nucleus. A core-level juncture results from the joining of two cores, each with its own nucleus and core arguments; it involves sharing of core arguments. Finally, peripheral junctures involve the joining of two clauses with independent peripheries. Any individual member of each juncture is called 'a junct.' It is to be noted that differences within the juncts are permitted at the level of juncture and below, but everything above it must be shared by both juncts. If a given juncture is at the level, the juncts must share the same periphery, i.e. the same peripheral arguments and the same peripheral operators, but they do have different nuclear operators.

Foley and Van Valin recognize three types of syntactic linkage: (a) coordination (b) subordination and (c) cosubordination. They correctly point out that dependence and embeddedness are not equivalent. Using these two independent parameters, they propose the three nexus types above. Coordination is characterized as -embedded, -dependent; subordination as + embedded, +dependent; cosubordination as -embedded, +dependent.
Based on the above premises, Foley and Van Valin develop their theory in terms of relationship between form and function. They list the levels of the clause in terms of sententiality; PERIPHERY > CORE > NUCLEUS. They also order the nexus types in terms of independence and scope of the operators on the three levels of the clause; COORDINATE > SUBORDINATE > COSUBORDINATE. Then they propose the syntactic bondedness hierarchy as in (12).

(12) Nuclear cosubordination
   Nuclear coordination
   Core cosubordination
   Core subordination
   Core coordination
   Peripheral cosubordination
   Peripheral subordination
   Peripheral coordination

Foley and Van Valin further propose an interclausal semantic relations hierarchy in terms of semantic relations of the clause linked. Following is their Interclausal Semantic Relations Hierarchy (ISRH).

(13) Causative
   Modality
   Psych-action
   Jussive
   Direct perception complements
   Indirect perception complements
   Temporal adverbial clause
   Conditionals
   Simultaneous actions
   Sequential actions: overlapping
   Sequential actions: non-overlapping
   Action-action: unspecified

Foley and Van Valin then combine the syntactic and semantic hierarchies into the Interclausal Relations Hierarchy as in (14).

5 According to Foley and Van Valin (1984:256), nuclear subordination is only a logical possibility that is non-existent.
They argue that there is no one-to-one correspondence between syntactic and semantic relations. Specifically, they claim (1984:271) 'if a language has only core and peripheral junctures, causative, modality and psych-action relations will be realized in the most tightly linked core junctures the language has.' As I am concerned in this paper primarily with Korean PCCs, I will test this specific claim below.

3.2. PCC and CCP in the Clause Linkage Theory

Having provided the theoretical apparatus, I will now examine the PCC in contrast to the CCP.

Both of the PCC and the CCP are not nuclear junctures, since the contiguity of the lower and the higher verbs is not watertight. For instance, a negative particle can intervene between the verbs in both cases.

(15) ômôni-ka ai-eke yak-il mok-ke ani ha-øss-ta
mother-NM child-DM medicine-AM eat-COMP NEG do-PST-IND
'The mother did not cause the child to take the medicine.'

As to the CCP, I have already noted that a separate NO can come between the lower and higher verbs, as in (2). Hence as expected, a negative particle can break up the contiguity of the lower and higher verbs in the CCP without any difficulty.

This is then a clear piece of evidence that the PCC and CCP are not instances of a nuclear juncture, where two (or more in other languages)
verbs form a single nucleus. Hence the negative particle has its scope only over the main clause in (15), not the lower clause or the lower clause and the higher clause together. Indeed nuclear juncture constructions in Korean do not allow anything between the two composite verbs. Compare (16.a) and (16.b).

\[(16)\ a. \ o\m\tilni-ka \ atil-eke \ caca\ka-lil \ puli-\o-cu-\ass-ta \]  
\[
\text{mother-NM} \ \text{son-DM} \ \text{lullaby-AM} \ \text{sing-PF-give-PST-IND} \\
\text{The mother sang a lullaby for the son.} \\
b. *o\m\tilni-ka \ atil-eke \ caca\ka-lil \ puli-\o-ani-cu-\ass-ta \\
\text{mother-NM} \ \text{son-DM} \ \text{lullaby-AM} \ \text{sing-PF-NEG-give-PST-IND} \\
\text{The mother did not sing a lullaby for the son.} \\
\]

Instead the negative particle should precede the composite nucleus as in (17).

\[(17) \ o\m\tilni-ka \ atil-eke \ caca\ka-lil \ ani \ puli-\o-cu-\ass-ta \\
\text{mother-NM} \ \text{son-DM} \ \text{lullaby-AM} \ \text{NEG} \ \text{sing-PF-give-PST-IND} \\
\text{The mother did not sing a lullaby for the son.} \\
\]

The above nuclear juncture construction has the function of what Foley and Van Valin (1984:197-208) call ‘a valence increaser’. In Korean the verb puli-sanctions only two arguments. Hence the secondary participant or the beneficiary argument is introduced via the nuclear juncture. Between puli- and cu-, nothing except the phonological filler -e- can appear. It has no syntactic or semantic significance. Furthermore, an aspect marker, iss- can appear only after the verb cu- and before the tense marker, thus maintaining the contiguity of the two verbs. And the aspect has its scope over the whole complex nucleus. Example (16) is then a case of a nuclear level cosubordination, since the verb puli- is not an argument of the verb cu- (indicating that the juncture is not a subordination), and the three NPs, o\m\tilni, atil, and caca\ka are arguments sanctioned by the complex nucleus. The verb puli- is dependent on the verb cu- for aspect (indicating that it is not a coordination).

On the other hand, the PCC and the CCP not only allow a negative particle between the two verbs, but it also allows separate aspect markers for the verbs, thus having one of the aspect markers between the two verbs. Clearly it is not a nuclear juncture.

\[(18) \ o\m\tilni-ka \ ai-eke \ yak-il \ mak-ko-iss-ke \\
\text{mother-NM} \ \text{child-DM} \ \text{medicine-AM} \ \text{eat-COMP-DUR-COMP} \]
HA-KO-ISS-TA
DO-COMP-DUR-IND
'The mother is causing the child to be taking the medicine.'

Traditionally, complements in the PCCs are regarded as subordinate. I claim here that the PCC is a case of a core juncture coordination. And the CCP is a peripheral subordination.

As a model PCC, consider:

(19) əməni-ka ətil-eke/-i il ənol-ke əha-əss-ta
mother-NM son-MM/-AM play-COMP do-PST-IND
'The mother caused the son to play.'

It is obvious that the causee NP ətil is a logical core argument of the lower verb, that is the actor of ənol-. There is also evidence that the same causee NP is a core argument of the higher verb əha-, too. It can appear as the subject NP if (19) is turned into a passive.6

(20) ətil-i əməni-eke ənol-ke əha-yə-ci-əss-ta
Son-NM mother-DM play-COMP do-PF-PASS-PST-IND
'The son was caused to play by the mother.'

This shows that the causee NP serves as the undergoer or a core argument of the higher verb. Both juncts share a core argument in (19), which is therefore a core juncture.

Traditional grammarians and transformational grammarians alike treat (19) as a sentence having a subordinate clause. However clefting of (19) shows that this is not the case.

(21) əməni-ka ənol-ke əha-əss-tən salam-in ətil i-ta
mother-NM play-COMP do-PST-REL person-TOP son is-IND
'It is the son whom the mother caused to play.'

Note that in Korean clefting involves a general head NP like salam 'person' or kes 'thing'. If on the other hand the so-called subordinate clause is clefted, the following ungrammatical sentence occurs.

6 Some Korean speakers may regard the sentence in (20) as ungrammatical, while others may accept it as grammatical. For instance, Kang (1986:60) presents a sentence similar to (20) as evidence for the direct object status of the causee NP in the PCC.
(22) *ammable-ka ha-oss-ton kas-in atil-eke/-il nol-ke i-ta
mother-NM do-PST-REL thing-TOP son-DM/-AM play-COMP is-IND
'It is the son to play that the mother caused.'

This shows that atil-eke/-il, not atil-eke/-il nol-ke is a syntactic argument of
the verb ha-. And atil-eke/-il nol-ke is not a single constituent (Foley and
Van Valin (1984:247) for an analogous phenomenon in English). Clefting,
along with passive supports the view that the causee NP is shared by both
juncts.

In Korean, object or what relational grammarians call ‘chômeur’ NPs can
be fronted for pragmatic reasons.

(23) a. ammable-ka atil-il cha-oss-ta
mother-NM son-AM kick-PST-IND
'The mother kicked the son.'
b. atil-il ammable-ka cha-oss-ta
son-AM mother-NM kick-PST-IND
'same as (23.a)'

(24) a. totuk-i kyeouchalkwan-eke cap-I-ass-ta
thief-NM policeman-DM arrest-PASS-PST-IND
'The thief was arrested by the policeman.'
b. kyeouchalkwan-eke totuk-i cap-I-ass-ta
policeman-OM thief-NM arrest-PASS-PST-IND
'same as (24.a)'

The causee NP in (19) can be also fronted.

(25) atil-eke/-il ammable-ka nol-ke ha-oss-ta
son-DM/-AM mother-NM play-COMP do-PST-IND
'The mother caused the son to play.'

If the causee NP were marked by Nominative ka, if (19) were a complement
causative in Aissen’s sense, which exhibits core-level subordination, the
fronting of the causee NP would be impossible, as in any other case of core
level subordination.
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(26) a. *아틸-이 원녀-가 노르-키 해-오스-타
   son-NM mother-NM play-COMP do-PST-IND
   'The mother caused the son to play.'

b. *원녀-가 아평-가 알림타-타-코 섬카-하-나-타
   mother-NM father-NM pretty-IND-COMP think-do-PRES-IND
   'The father thinks that the mother is pretty.'

Note that (26.a) is only grammatical in the sense of The son caused it that the mother played. In (26.b) even this possibility is ruled out because of the selectional restriction on 알림타- 'pretty', which is not applicable to male humans.

The above three pieces of evidence allow me to safely conclude that (19) is an instance of core-level juncture. Now I will show what type of nexus (19) exhibits.

In order to determine the nexus type of (19), the distribution of core level operators should be examined. Foley and Van Valin consider modality to be such an operator and Foley and Olson (1985) list manner adverbials as core operators since they describe the manner in which an actor performs an action. It seems that in (19) each verb can be separately modified by modality auxiliary verbs. To put it in another way, an auxiliary verb that immediately follows the higher verb 해- does not have its scope over the whole sentence.

(27) a. 원녀-가 아릴-에끼-읷 노르-키 해-루-있-타
   mother-NM son-DM/-AM play-COMP do-able-IND
   'The mother can cause the son to play.'

b. 원녀-가 아릴-에끼-꺽 노르-수-윽-꺼 해-루-있-타
   mother-NM son-DM/-AM play-unable-COMP do-able-IND
   'The mother can cause the son to be unable to play.'

Note that the auxiliary verbs can only have deontic meaning, not epistemic, unlike English modals can or must. (27.a) shows that the sentence is concerned with only the mother's ability, not the son's. Example (27.b) further confirms that this is indeed the case. If the modal auxiliary verb in (27.a) has its scope over the whole sentence, (27.b) should be ungrammatical as the lower verb has a contradictory modal auxiliary verb. This supports my claim that the nexus type of the PCC is coordination, not cosubordination. Note that in determining the juncture level of (19), the possibility of subordination is precluded, because the clefting evidence shows that 아릴-에끼-竈 nol-ke 'the son to play' is not embedded under the higher verb 해-; (19)
does not have a subordinate nexus.

The evidence for coordination in the PCC is further corroborated by the fact that manner adverbials like *cosimsilepke* ‘carefully’ can never modify the actors and the verbs of both higher and lower clauses in (19) at the same time. In order to do so the same adverbial must be used for each of the verbs.

(28) a. ǝməni-ka *cosimsilepke* atil-ekenol-kehass-ta
   mother-NM carefully son-DM/-AM play-COMP do-PST-IND
   ‘The mother caused the son to play carefully.’ or
   ‘The mother carefully caused the son to play.’

b. ǝməni-ka *cosimsilepke* atil-eke/ɨl *cosimsilepke* nol-kehass-ta
   mother-NM carefully son-DM/-AM carefully play-COMP
   do-PST-IND
   ‘The mother carefully caused the son to play carefully.’

In (28.a) the adverbial has its scope over either the higher clause or the lower clause, but never the whole sentence. On the other hand, (28.b) clearly vindicates that this is indeed the case that a separate adverbial is needed to modify each of the actors. I conclude that the PCC in (19) is a core level coordination.

Now as for the CCP, consider the following model sentence.

(29) ǝməni-ka atil-lilnol-kenol-ehilhass-ta
   mother-NM son-NM play-COMP song-AM do-PST-IND
   ‘The mother sang a song so that the son could play.’

The above sentence clearly contains a purposive clause, since an NP, *nol-e-lil* ‘a song’ occurs between the two verbs. It is obvious that the purposive clause is subordinate as it constitutes an outer peripheral argument (‘outer’ as it does not appear in the logical structure of the verb *ha*; see Foley and Van Valin (1984:81-95) for the distinction between inner and outer peripheries). Being an outer peripheral argument subordinate to the verb *ha*-, its deletion does not render (29) ungrammatical.

(30) ǝməni-ka nol-e-lil hass-ta
    mother-NM song-AM do-PST-IND
    ‘The mother sang a song.’

The embeddedness of the purposive clause indicates that (29) exhibits the
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nexus type of subordination and the nexus is at the peripheral level. The embeddedness naturally rules out the other two nexus types, coordination and cosubordination.

The predicate of the embedded purposive clause in (29) in turn chooses its own outer peripheral arguments independently of the superordinate predicate, indicating that (29) is an instance of peripheral subordination.

(31) omawi-ka atil-i paes-eso nol-ke conwes-eso noles-lil
mother-NM son-NM room-LOC play-COMP garden-LOC song-AM
ha-ess-tda
do-PST-IND
‘The mother sang a song in the garden so that the son could play in the room.’

Having identified the nexus-juncture types of both PCC and CCP, the next question to answer is why the PCC shows a tighter syntactic linkage than the CCP.

3.3. Syntactic and Semantic Bondedness: A Case of Iconicity

Foley and Van Valin’s Interclausal Relations Hierarchy (IRH) in (14) predicts that causative is associated with the most tightly linked constriction available in a given language. As far as I can tell from their exposition of the Clause Linkage Theory, the CCP will rank as Jussive in the IRH, much lower than the causative, i.e. the PCC in the present case.

This difference in ranking between the PCC and the CCP is not unnatural in semantic and pragmatic terms. First, in the situation expressed by the CCP, there is no logically necessary connection between the action denoted by the higher verb and that denoted by the lower verb. This is indeed syntactically reflected by the optionality of the purposive clause as in (29) and (30). In other words, the action denoted by the lower verb is not logically dependent on the action denoted by the higher verb. So in (29) the playing of the son may or may not happen independently of the singing of the mother.

On the other hand, in a causative situation as in (19), the playing of the son is totally dependent on the causing act of the mother; the playing of the son could not have happened but for the causing of the mother. In other words, there is a cause and effect relation in (19), unlike in (29). This is why in languages that have a morphological operation of lexically deriving causative verbs from non-causative verbs, the causee NP appears as a fully
constituted argument. To my knowledge no language has a purposive phrase or clause as a core argument. This cohesive or compact relation between cause and effect is syntactically realized via tighter syntactic linkage.

Secondly, though closely related to the above argument, it is the causative sentence that is implicative, not the CCP. So (19) implies the truth of (31), whereas (29) does not.

(32) atil-i nol-ɔss-ta
    son-NM play-PST-IND
    'The son played.'

Givón (1980) explains what he calls ‘implicativity’ in terms of ‘binding’, ‘independence’ and ‘success’. Applying these parameters to the PCC and the CCP, it is the former that is more conceptually tighter relation. For instance, the causee NP in (19) has less independence than the subject NP or the actor of the subordinate purposive clause in (29).

In terms of Foley and Van Valin’s ISRH in (13), I can rank the relation expressed by the CCP in a lower position than causation. And this difference expressed by the CCP in a lower position than causation. And this difference in terms of ISRH is complemented by the difference in syntactic linkage between the PCC and the CCP. As I have argued in the previous section, the PCC is a core level coordination, whereas the CCP is a peripheral subordination. According to the Syntactic Bondedness Hierarchy, core coordination is of a stronger linkage than peripheral subordination. Hence the correlation between form and function in these two Korean constructions is correctly predicted or accounted for by the IRH in (14). In other words, this correlation between form and function constitutes as case of iconicity; the semantic bondedness (or conceptual distance à la Haiman (1985) is iconically manifested by the corresponding syntactic bondedness (see also Lee (1985)).

3.4. Problems for the Clause Linkage Theory

So far, Foley and Van Valin’s syntactic linkage theory fares well. There seem to be, however, two problems in Korean causatives that militate against the IRH. First, I have identified (16.a) as a nuclear cosubordination.

(16) a. əməni-ka atil-eke cacan-ka-lil puli-ə-cu-ɔss-ta
    mother-NM son-DM lullaby-AM sing-PF-give-PST-IND
    'The mother sang a lullaby for the son.'
My question is as follows: why causation which Foley and Van Valin (1984:269) list as the strongest relation on ISRH in (13) is not expressed by the strongest syntactically bonded nexus-juncture type, i.e. nuclear cosubordination, which is already available in Korean for sentences like (16.a)? Instead causation is expressed by a much weaker nexus-juncture type, core coordination. In Foley and Van Valin’s words (1984:271-272):

Thus, for example, if a language has only core and peripheral junctures, causative, modality and psych-action relations will be realized in the MOST tightly linked core-junctures the language has... This claim also does not preclude the possibility documented above, that a particular semantic relation may have more than one syntactic manifestation... If for example, causation can be expressed more than one way in a language, one of those ways must be in the MOST tightly linked construction found in the language. (Emphasis -JJS)

Unfortunately, Foley and Van Valin are not specific enough on what they mean by ‘more than one way’, when many languages have both morphological and periphrastic causative constructions. Their vague statement seems to have led Klaiman (1986) to claim that the following Bengali morphological causatives comprise instances of nuclear cosubordination.

(33) a. jodu modhu-ke bosaalo
    Jodu Modhu-DM seated
    ‘Jodu seated (caused-to-sit) Modhu.’

b. jodu modhu-ke diye kaaj korallo
    Jodu Modhu-by work caused-to-do
    ‘Jodu got Modhu to do the work.’

Klaiman (1986:30) claims that ‘according to FVV (=Foley and Van Valin -JJS) morphological causatives of the type in (48) (my (33)) comprise instances of nuclear cosubordination’, making specific reference to Foley and Van Valin (1984:105, 293). On these pages, they given French causative construction in (34.a) (see Aissen (1974, 1979)), and Jacalteca causative construction in (34.b) and (34.c) (see Craig (1977)).

(34) a. Je le ferai lire à Jean.
    ‘I’ll have John read it.’

b. Ch-O-(y)-a’ ix xew-oj naj
    NPST-3ABS-3ERG-C CL/she rest-INF CL/he
    ‘She makes him rest.’
c. Ch-O-(y)-a’ xew-oj ix naj
NPST-3ABS-3ERG-C rest-INF CL/she CL/he
‘She makes him rest.’

Specifically, Foley and Van Valin refer to (34.c) which has a complex nucleus in contrast to (34.b) which is a core juncture causative since the difference between nuclear and core causatives with intransitive verbs can be distinguished by the fact that ‘(t)he ability of the non-causative verb to occur adjacent to the causative verb inside the noun classifiers is unique to nuclear juncture causative construction (1984:294).’ According to this diagnostic test, only (34.c) (and French (34.a)) is an instance of nuclear juncture causative, not (34.b). Note that (34) involves independent lexical items as causative verbs, not a causative affix as in Bengali. Otherwise, a separate noun classifier $ix$ cannot appear freely between the higher verb and the lower verb. If a causative affix has a logical structure comparable to that of lexical verbs as Klaiman seems to interpret, this will violate the principle of R(ole) and R(efERENCE) G(rammar) proposed by Foley and Van Valin, who clearly state (1984:15):

unlike transformational grammar, which posits multiple levels of analysis (D-structure, S-structure, logical form, surface structure), RRG postulates only two: a semantic ‘logical structure’ in which the predicate of a clause and its arguments are represented, and the actual morphosyntactic form of the utterance. There are no abstract syntactic structures akin to D- or S-structures. Consequently, there are no abstract syntactic derivations from a more abstract to a less abstract level of syntactic representation.

So RRG does not allow the positing of the logical structure for a (morphological) causative affix comparable to that of a single clause. In other words, the causative verb in Bengali as illustrated in (33) is a single nucleus. Hence the issue of junctures does not arise, as there is only one nucleus. It is only when more than one nucleus are involved in a juncture that one can discuss clause linkage. In fact, Foley and Van Valin (1984:104) say that the verb in a morphological causative is a single nucleus.

Under Klaiman’s view, RRG is not so different from TG, after all. In fact, when they discuss interclausal theory, Foley and Van Valin do not mention a single morphological causative verb at all. A morphological causative verb, albeit with a causative affix in it, does not involve any juncture at all, since it is a single predicate in its own right. Hence no clause linkage is involved, as far as morphological causative verbs are concerned.

This confusion further points to the problem within RRG. It is not clearly
explicated in RRG what kind of relationship exists between logical structure and the Clause Linkage Theory, and how to incorporate such relationship in RRG, which only allows direct mapping between logical structure and morphological form without intermediate abstract structures as in TG. Foley and Van Valin (1984:200-202) illustrate in passing how the mapping between logical structure and morphosyntactic form in some nuclear junctures may be carried out. If RRG is to be a viable theory, especially with respect to clause linkage, the problem of mapping the logical structure and morphosyntactic form in clause-to-clause linkage has to be addressed in a clear and unequivocal manner. Hence such interpretation as Klaiman’s (1986) is more or less expected, although it directly violates the principle of RRG.

If the morphological causative does not belong to the clause linkage theory, as I have argued above, then the Korean PCC is problematic for Foley and Van Valin’s IRH. Why does Korean not use nuclear juncture for causative relation, although it is readily available in the system? To put it differently, causative is not etically expressed by the strongest syntactically linked construction in Korean, since the PCC is a core coordination, while Korean already has nuclear juncture constructions as in (16.a). What if the complement causative construction in the sense of Aissen (1974, 1979) is the other way in which causative is expressed? This leads to the second problem for the Clause Linkage Theory.

The fact that the whole complement can be optionally marked by Accusative *hil in complement causatives is itself strong evidence that the complement is indeed a core argument of (or embedded under) the higher verb *ha-. Hence the accusative marker can appear right after the complementizer *ke.

(35) a. ῥ mỡ-κα atil-i nol-ke ha-ọs-s-ta
    mother-NM son-NM play-COMP do-PST-IND
    ‘The mother caused the son to play.’
  
    b. ῥ mỡ-κα atil-i nol-ke-lil ha-ọs-s-ta
    mother-NM son-NM play-COMP-AM do-PST-IND
    ‘same as above’

Further evidence that the complement is embedded under the higher verb comes from the fact that only complement causatives exemplified in (35) can be used as an answer to the following question.

(36) muus-il ῥ mỡ-κα ha-ọs-s-ninya
    what-AM mother-NM do-PST-Q
'What did the mother do?'

Note that in (36) the argument questioned is a core argument of the verb *ha-*. The PCC cannot be used as an answer to (36). Instead the PCC is appropriate for questions of the kind in (37).

(37) nuku-eke/-lil amani-ka nol-ke ha-ass-ninya
who-DM/-AM mother-NM play-COMP do-PST-Q

'Who did the mother cause to play?'

Clearly, the complement causative constitutes an instance of subordination, having an entire full clause as a core argument. In fact, a periphery embedded in a core. Hence the complement causative comprises an instance of core subordination. Now I list the three constructions that I have so far concentrated on along with their juncture-nexus types.

<table>
<thead>
<tr>
<th>Constructions</th>
<th>Juncture-Nexus</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. PCC</td>
<td>core coordination</td>
</tr>
<tr>
<td>b. Complement Causative</td>
<td>core subordination</td>
</tr>
<tr>
<td>c. CCP</td>
<td>peripheral subordination</td>
</tr>
</tbody>
</table>

In terms of the Syntactic Bondedness Hierarchy in (12), it is the complement causative construction (CCC) that is the most tightly linked of all the three. The PCC is the second most tightly linked. And the CCP is, as expected, the least tightly linked of all.

However, two facts that I have observed among Korean speakers compel me to question the relation between the PCC and the CCC in terms of IRH in (14). First, many speakers including myself tend not to use the CCC to express causation. Rather they use the CCC to express actions with purposes (or what Yang calls secondary function). Secondly, if they ever use the CCC to express causation (e.g. at a linguist's urging), many claim that it does not imply the truth of the complement. I have conducted an informal study with 16 Korean students at Monash University and their spouses to test my initial suspicion. 87.5 per cent of the subjects claimed that the PCC is implicative. Only 50 percent of the subjects indicated that the CCC is implicative.

My question is: why do these speakers choose the PCC over CCC to express causative relation, when according to IRH it is the latter that exhibits a tighter syntactic linkage? Note that the result of 50 percent obtained with the CCC must be evaluated in the light of the fact that almost
all the informants tend not to use it to express causation. This particular construction, the CCC seems to have fallen out of use in Korean.\footnote{I am aware that this claim has to be verified by using far more informants from diverse social classes. Furthermore, historical documents have to be consulted to confirm the genesis of the PCC put forward in this paper. I have to be contented to leave these problems for future research.} Instead a less syntactically bonded construction, the PCC, is now favored over the CCC in expressing causation. Is it the case that IRH fails in Korean causative constructions?

The two problems for the Clause Linkage Theory that I have raised in this paper boil down to: why is causation, the strongest semantic relation, not etically realized by the most tightly linked constructions that are already available in Korean?

3.5. A Diachronic Scenario for the PCC

It seems to me that the problems that I have pointed out with respect to the Clause Linkage Theory can be neutralized only if it is assumed that language practices therapy, not prophylaxis (also Lightfoot 1979:123-124). Language change proceeds without consideration for all the possible effects the change may have on the language system as a whole.

As I have argued in Section 2, the PCC has developed from the CCP. Given the fact that the CCC is intermediate between the PCC and the CCP, one can suggest the following genesis of the PCC.

\[
\begin{array}{c}
\text{CCP} \\
\uparrow \\
\text{CCC} \\
\downarrow \\
\text{PCC}
\end{array}
\]

The way that the CCC initially developed from the CCP seems to be like this. Korean started to use the CCP to express causation, presumably as a more productive way of expressing causation, since the morphological causative is lexically restricted, that is non-productive. The CCP then carried a dual function, causation and action with a purpose. However, language is blind to the consequences resulting from such a linguistic change. The dual function of the CCP must have had a serious implication for language use. That is in order to disambiguate such a causative use of the CCP from its
normal or original use, Korean seems to have tightened the syntactic linkage of the higher and lower clauses. And it is the causative use of the CCP that this tighter linkage applied to, not to the original purposive use. This is inline with the fact that causation is indeed a much stronger semantic relation than purpose related action, as ISRH in (13) shows.

Korean reflects this tighter clause linkage by turning the CCP into what Silverstein (1976, 1980) calls ‘a normal form’. By normal forms, Silverstein means the reduction of the full panoply of case markers. So the more tightly linked the dependent clause is to the adjacent clause, the more case marking possibilities in it are reduced (also Foley and Van Valin (1984:278)). In the CCC, which is the direct descendent of the CCP, there is still a full panoply of case markers permitted, since the causee NP appears in Nominative case. Hence the CCC has almost fallen out of use in favor of the PCC, the normalized form.

On the other hand, in the PCC, Nominative is not allowed. Either accusative or dative marks the causee NP. In other words, Korean has reduced the case marking possibilities in the dependent clause via normalization. Hence the favorite use of the PCC over the CCC to express causation. This, however, has played havoc with Foley and Van Valin’s Clause Linkage Theory, since the net result of the normalization, is that Korean now uses a less tightly knit construction, core coordination, to express causative relation rather than a more tightly knit construction, core subordination. Such an unfortunate consequence is not at all uncommon in language, since language practices therapy, not prophylaxis. However, this remains a problem for Foley and Van Valin’s clause Linkage Theory, since they (1984:274) claim to have incorporated Silverstein’s theory into their own.

However, if one supposes that the therapy with regard to the PCC has not been completed, this unfortunate consequence may turn out to be only transitional.

Recall Korean has already the most tight juncture-nexus, namely nuclear cosubordination as in (16.a). I have pointed out in some detail that the presence of this juncture-nexus type in Korean is also problematic for the Clause Linkage Theory, since it is not used for causatives at all. It can be argued that the ‘drift’ of the PCC has not come to its destination, that is the PCC will undergo further linkage to iron out this unfortunate consequence that has happened in the process of the drift. As Korean is a SOV language, the amalgamation of the causative verb ha- and the lower verb in the PCC is a very likely possibility (as it is already noted that such amalgamation is evident in nuclear cosubordination in Korean). This will be possible if the morpheme ke becomes semantically bleached. Such semantic bleaching of
the purposive morpheme is cross-linguistically common (Stassen 1985:72). In other words, the morpheme ke will function as no more than the phonological filler that occurs between the two nuclei in the nuclear juncture as in (16.a). This is quite speculative, but the fact that Korean PCC has already taken the first step via normalization toward this ultimate change is not to be ignored. And only after the purposive morpheme is semantically neutralized, the therapy will have run its full course.

4. Summary

In this paper I have argued for the same origin of the CCP and the PCC. Using the Clause Linkage Theory, I have demonstrated that the PCC is a less tightly knit construction than the CCC, which is intermediate between the PCC and the CCP. This finding runs counter to what the IRH predicts, since the CCC has almost fallen out of use. I have provided a diachronic scenario to account for this mismatch between form and function, by arguing that it may have been brought about in the process of the change from the CCP to the PCC. I have also called for a need to clearly explicate the relationship between logical structure and clause-to-clause linkage in RRG.

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