KOREAN ANAPHORA (I):
CAKI AS A RESUMPTIVE PRONOUN*

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We discuss Ā-bound resumptive-*caki* (=R-*caki*) in relative clauses and topic constructions. The leading argument is that some relative clauses and topic constructions containing *caki* do not have double Nominative construction counterparts. We argue that R-*caki* is a base-generated variable. And we present the Insulation Constraint (IC), which states that (i) R-*caki* in subject position does not require thick insulation, whereas R-*caki* in object position does, and that (ii) *ku* (= 'he') as a bound variable needs thick insulation, whether in subject or object position.

0. Introduction

In this paper, we discuss resumptive pronouns in Korean relative clauses and topic constructions. The relevant case is where a resumptive pronoun is bound by a topic, or by the head noun of a relative clause base-generated in Ā-position at D-structure, and not syntactically moved to Ā-position in the course of derivation from D-structure to S-structure. As an instance of resumptive pronouns in Korean relative clauses and topic constructions, consider the following examples:

(1) a. [[$_{\bar{s}}$ [$_s$ kangto$_j$-ka [$_{NP}$ *caki$_i$*-uy namphyen]-ul khal-lo
        robber NOM SELF 's husband-ACC knife-with

    ccillu-e cwuk-i-n]] ku yeca$_i$]
    stabbing kill-REL that woman

    'that woman$_i$ who a robber$_j$ killed [$_{NP}$ SELF$_i$'s husband]
    by stabbing with a knife.'

  b. Ku yeca$_i$ -nun, [$_{\bar{s}}$ [$_s$kangto$_j$-ka [$_{NP}$*caki$_i$*-uy
     that woman-TOP robber-NOM SELF 's

    namphyen]-ul khal-lo ccill-e cwuk-i-ess-ta]].
    husband-ACC knife-with stabbing kill-Past-Dec

'As for that woman$_i$, a robber$_j$ killed [$_{NP}$ SELF$_i$'s husband]
by stabbing with a knife.'

We argue that *caki* in (1a-b) is a resumptive pronoun bound by the head of
the relative clause or by the topic. As is generally assumed, a resumptive
pronoun must be present at D-structure, since it is a nonnull lexical NP (cf.
Chomsky (1977 and 1982)). In other words, it cannot be inserted at S-structure
or LF.

Defining the *caki* bound by a relative clause head or topic as a resumptive
pronoun explains many counterexamples to the binding conditions on anaphor-
ic *caki*. With *caki* as a resumptive pronoun, we claim that we should distin-
guish a disambiguating *caki* (=D-*caki*), which is an A-bound anaphor, from a
resumptive *caki* (=R-*caki*), which is an Ā-bound variable. Therefore, we argue
that R-*caki* is a base-generated variable. The most important point is that
resumptive *caki* is a variable, not an anaphor.

The second section discusses the Insulation Constraint (IC), which states that
caki as a resumptive pronoun in subject position does not require thick insula-
tion whereas *caki* as a resumptive pronoun in object position does.

1. *Caki* as Resumptive Pronoun

In this section, we will show that postulating a resumptive *caki* helps explain
the behavior of *caki* in relative clauses and topic constructions, formerly
considered exceptions to the Subject Priority Antecedent Condition (SPAC)[1]

[1] Korean anaphor *caki* had been traditionally considered to be subject to the Subject-
Antecedent Condition (SAC). As Kim (1976) has alrealdy noticed, however, there are two
apparent counterexamples to the SAC: (i) an experiencer-object NP can be an antecedent
for *caki* and (ii) a beneficiary-object NP can be an antecedent for *caki*. The Subject Pri-
ority Antecedent Condition (SPAC) on *caki* is an attempt to explain away these counterex-
amples, by stating that an experiencer-object NP or a beneficiary-object NP can be an
antecedent for *caki*.   But, as Susumu Kuno (personal communication) correctly pointed
out to me, the Relational Hierarchy would not work because the following Korean sentence:
  (i)[$_{NP}$[$_S$ Tom$_i$-i   *caki*$_{i, j}$-lul   salangha-ci-anh-nun] kes]-i   Mary$_j$-lul
              NOM SELF ACC love-COMP-not-ASP COMP-NOM   ACC

    kwelophi-ess-ta.
    distress-Past-Dec
    'That Tom$_i$ doesn't love SELF$_{i,j}$ distressed Mary$_j$.'

must be ambiguous with respect to whether *caki* refers to *Tom* or to *Mary*. According
to the Relational Hierarchy, however, no such ambiguity should be possible because a
subject NP *Tom* in (i) would block the coreferentiality between *caki* and an experiencer-
object NP *Mary*.   Though we admit that the Relational Hierarchy has some problems,
we continue to refer to the SPAC since the SPAC suffices for the objective of this paper to
distinguish between A-bound *caki* and Ā-bound *caki*. We do not try to formulate the exact
binding conditions for anaphoric *caki* here or to solve all the problems about anaphoric *caki*

ɔn *caki* :

(2) The anaphor *caki* is bound to a 3rd-person antecedent according to the following Relational Hierarchy :

subject > Experiencer/Beneficiary object

When a subject is disqualified as antecedent, an Experiencer or Beneficiary object becomes antecedent.

Some relative clauses and topic constructions do not have any argument-antecedent for *caki*. These are exceptions to the SPAC :

(3) a. Salam-tul-i   [$_{NP}$[$_{\bar{s}}$ [$_s$ kangto$_j$-ka   [$_{NP}$ *caki*$_i$-uy
     people   NOM   robber-NOM   SELF 's

namphyen]-ul khal-lo   ccill-e   cwuk-i-n]]
husband-ACC knife-with stabbing kill-Past-REL

ku yeca$_i$] -lul   wuyloha-ess-ta.
that woman-ACC comfort-Past-Dec

'Peple comforted that woman$_i$ who a robber$_j$ killed [$_{NP}$ SELF$_i$'s husband] by stabbing with a knife.'

b. Ku namca$_i$- nun, [$_{\bar{s}}$kangto$_j$-ka   [$_{NP}$ *caki*$_i$-uy ton]-ul
   that man   TOP robber NOM   SELF 's money-ACC

mongttang tele-ka-ss-ta].
all   rob-go-Past-Dec

'As for that man$_i$, a robber$_j$ robbed (of him$_i$) all of [$_{NP}$ SELF$_i$'s money].'

In (3a) and (3b), *caki* is coreferential with *ku yeca* (= 'that woman') or *ku namca* (= 'that man'), though *ku yeca/ku namca* is neither a subject nor an Experiencer/Beneficiary object. Since *caki* in (3a) does not have either a subject-antecedent or an Experiencer/Beneficiary object-antecedent, (3a) and (3b) would be wrongly excluded as ungrammatical by the SPAC. Since they are grammatical, however, we must find out why they are grammatical in spite of the violation of the SPAC.

Our claim is that we should distinguish a disambiguating *caki* (=D-*caki*) from a resumptive *caki* (=R-*caki*), and that the *caki* in (3a) and (3b) is a resumptive *caki*. We argue that resumptive *caki* is a variable, not an anaphor. Because R-*caki* is not an anaphor, it is not subject to the SPAC. Thus, relative clauses and topic constructions which do not have an argument-antecedent are not exceptions to the SPAC at all, because they do not contain an anaphor.

1.1. R-*caki* is a Variable

1.1.1. R-*caki* in Relative Clauses and Topic Constructions

Consider the following relative clauses and topic constructions which contain *caki* :

(4) [[$_{\bar{s}}$ *caki*$_i$-ka   sihem-ey silphayha-n]John$_i$]
     SELF–NOM   exam-in fail   REL

'John$_i$ who SELF$_i$ failed in the exam'

(5) [[$_{\bar{s}}$ kangto-ka   [$_{NP}$ *caki*$_i$-uy namphyen]-ul khal-lo   ccillu-n]
     robber-NOM   SELF 's husband-ACC knife-with stab-REL

ku   yeca$_i$]
that woman

'that woman$_i$ who a robber$_j$ stabbed [$_{NP}$ SELF$_i$'s husband] with a knife'

(6) John$_i$-un,   [$_{\bar{s}}$ *caki*$_i$-ka   sihem-ey silphayha-ess-ta].
         TOP   SELF–NOM exam-in fail-Past-Dec

'As for John$_i$, SELF$_i$ failed in the exam.'

In (4) and (6), Nominative Case-marked *caki* is in subject position. In (5), Genitive Case-marked *caki* is in object position.

We would like to argue that *caki* in (4)-(6) is not an anaphor, but a variable. That is, we argue that *caki* in (4) is bound by the trace of the relativized topic of the relative clause in Ā-position :

(7) [[$_{NP}$[$_{\bar{s}}$ t_i [*caki*$_i$-ka sihem-ey silphayha-n]] John$_i$]

The following definition of variable dictates that *caki* in (4) be a variable since it is bound to an Ā-position (cf. Chomsky (1981 a, b and 1982)) :

(8) a. X is a variable if it is locally Ā-bound and in an A-position.
    b. X binds Z iff X c-commands Z and X and Z are coindexed.
    c. X locally binds Z if X binds Z and there is no Y such that Y binds Z and Y does not bind X.

1.1.1.1. Ungrammaticality of Double-Subject Sentence Counterpart

The first argument for the hypothesis that the trace of the relativized topic of the relative clause binds *caki* in (4)-(5) runs as follows. Instead of (7), let us suppose the following structure with an alternative argument position in front

of *caki* :

(9) $[_{NP}[_{\bar{S}}\quad t_i\ [_S\ e_i\ caki_i\text{-ka sihem-ey silphayha-n}]]$ John$_i]$

If it could be established that e_i were the subject (the big subject of the double subject construction), then the conclusion that *caki* is a variable would not follow. That is, e_i, but not *caki*, would be a variable, since the trace of the relativized topic of the relative clause in (9) locally Ā-binds e_i (and no other variable), and e_i is locally Ā-bound by the trace of the relativized topic of the relative clause. The Bijection Principle, stated as follows :[2]

(10) An Ā-position locally binds one and only one variable, and a variable is locally bound by one and only one Ā-position.

says nothing about A-positions and variables. But the Subject Priority Antecedent Condition (SPAC) (2) on anaphoric *caki* dictates that *caki* have an antecedent. And *caki*'s being coindexed with *e* in (9) satisfies the SPAC. So the conclusion that *caki* is an anaphor goes through. But, does this conclusion really follow ?   Is the gap in front of *caki* in (9) really a viable alternative? What is crucial is whether all instances of sentences such as (4) can be represented as instances of double subject constructions. For us to establish that *caki* in (4) is not an anaphor, it is essential for us to find relative clauses of the pattern of (4) that *cannot* be related to double-subject sentence patterns. This counter-argument is borne out: we do have relative clauses that cannot be related to double-subject sentence patterns. Though (5) is grammatical, its double subject counterpart is ungrammatical :

(11) *Ku yeca$_i$-ka $[_{\bar{S}}[_S$ kangto$_j$-ka $[_{NP}$ *caki$_i$*-uy namphyen]-ul khal-lo
that woman-NOM robber-NOM   SELF's husband-ACC knife-with
ccill-ess-ta]].
stab-Past-Dec

Though the double subject sentence like (11) is ungrammatical, the relative clause like (5) is grammatical. This contrast shows that relative clause like (5) cannot be derived from the double subject sentence (11), since (11) is ungrammati-

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[2] This principle in its present form is too strong, since it wrongly excludes the following sentence as ungrammatical :

(i) John$_i$, his$_i$ mother likes e_i.

(i) is grammatical, contrary to the prediction of this principle. We need to distinguish referential NPs (R-expressions and pronouns) from nonreferential NPs (*wh*-words and quantifiers). In this respect, this principle should have been stated as follows:

(ii) A WH-Operator or a Quantifier in Ā-position locally binds one and only one variable, and a variable is locally bound by one and only one WH-Operator or Quantifier in an Ā-position.

But, as Kuno (1985 b) convincingly argues, this principle still has too many counterexamples and weaknesses. Refer to Kuno (1985 b) for more criticism of this principle.

cal. The ungrammaticality of (11) shows that it is impossible to have a subject-antecedent for *caki* in (5), and hence that *caki* in the relative clause (5) is not an anaphor. Since there is no intervening empty category which can serve as antecedent for *caki* in (5), (9) does not seem plausible for (5).

Returning to (11), let us consider why it is ungrammatical. In order to explain the ungrammaticality of (11), let us consider Subjectivization. The following is a modified version of Kuno's (1973) Subjectivization, converting Japanese *-no* and *-ga* into Korean *-uy* and *-ka*, respectively:

(12) Change the sentence-initial NP-*uy* to NP-*ka*,
     and make it the new subject of the sentence.

Kuno's Subjectivization derives (13a) from (13b):

(13) a. John-i   apeci-ka   sensayng-i-ta.
        NOM father-NOM teacher-be-Dec

        'It is John whose father is a teacher.'
     b. John-uy apeci-ka   sensayng-i-ta.
            's father-NOM teacher-be-Dec

        'John's father is a teacher.'

As Kuno observed, only Subjectivization of a sentence-initial NP-*uy* to NP-*ka* results in a grammatical sentence. Subjectivization of a sentence-medial NP-*uy* to NP-*ka* results in ungrammaticality:

(14) *Ku yeca$_i$-   ka   [$_{\bar{s}}$[$_s$ kangto$_j$-ka [$_{NP}$ t_i-uy
      that woman-NOM   robber-NOM   's

      namphyen]-ul   khal-lo   ccill-ess-ta]].
      husband   ACC knife-with stab-Past-Dec

Therefore, the first part of Kuno's formulation of Subjectivization, (12), entails the following constraint on Subjectivization as a movement rule:

(15) NP-*uy* which is not in sentence-initial position cannot undergo
     Subjectivization.

Now let us return to (11). If we compare (11) with (14), we immediately see that the sentence-initial NPs in these examples are derived from sentence-internal genitive NPs. In (11), *ku yeca* (='that woman') is derived from sentence-internal genitive NP position. This derivation apparently violates (15), which bans Subjectivization of NP-*uy* which is not in sentence-initial position.

So far, we have considered why (11) is ungrammatical. Since (11) is ungrammatical, (5) cannot be derived from (11). Thus, the ungrammaticality of (11) undermines the putative analysis of (4) as (9).

Now let us return to (4) and consider why its double-subject sentence counterpart is ungrammatical. Its double-subject sentence counterpart would be (16):

(16) *John$_i$-i   [$_S$ *caki$_i$*-ka   sihem-ey silphayha-ess-ta].
          NOM   SELF–NOM exam-in fail-Past-Dec

'John$_i$, SELF$_i$ failed in the exam.'

(17) John$_i$-i   sihem-ey silphayha-ess-ta.
          NOM exam-in fail-Past-Dec

'John$_i$ failed in the exam.'

First of all, (16) cannot be derived from (17) by moving *John* to the front of the sentence and inserting *caki* in place of *John*'s trace; *caki* is a non-null lexical NP and we allow lexical insertion only at D-structure.

Now compare (16) with the following grammatical examples:

(18) Bill-i   [$_S$ apeci -ka   sa.ep -ey   silphayha-ess-ta].
          NOM   father-NOM business-in fail-Past-Dec

'It is Bill whose father failed in business.'

(18) is derived by Subjectivization from the D-structure of the following sentence:

(19) a. Bill-uy apeci -ka   sa.ep -ey   silphayha-ess-ta.
          's father-NOM business-in fail-Past-Dec
          'Bill's father failed in business.'
    b. *D-structure*
          [[Bill [apeci]] sa.ep-ey silphayha-ess-ta]

But, if we substitute *caki* for the second Nominative NP in (19a), the resulting sentence is totally ungrammatical:

(20) *Bill-uy *caki*-ka   sa.ep -ey   silphayha-ess-ta.
          's SELF-NOM business-in fail-Past-Dec
'*Bill's SELF failed in the business.'

Then, the reason why (16) is ungrammatical becomes self-evident. Its putative source before Subjectivization is ungrammatical:

(21) *John-uy *caki*-ka   sihem-ey silphayha-ess-ta.
          's SELF-NOM exam-in fail-Past-Dec

'*John's SELF failed in the exam.'

The ungrammaticality of (20)-(21) shows that *caki* cannot be the head of a genitive NP.

As regarding the (9)-type derivation of a sentence like (4), it is blocked because its putative source (16) is ungrammatical. Then, (9) is not tenable for (4) and *caki* in (4) cannot be an anaphor. Therefore, we conclude that *caki* in (4) is locally bound by the trace of the relativized topic of the relative clause. And *caki* in (4) is a variable since it is locally bound by the trace of the relativized

topic of the relative clause which is in Ā-position.

But (9) is still partially viable, as some relative clauses containing *caki* have a grammatical double-subject construction counterpart. Observe the following examples :

(22) [[$_{\bar{S}}$ [$_{NP}$ *caki*$_i$-uy atul]-i   welnam-cen-eyse cwuk-un] ku   yeca$_i$]
      SELF 's son-NOM Vietnam-war-in die-REL   that   woman

    'that woman$_i$ who [$_{NP}$ SELF$_i$'s son] died in the Vietnam war'

(22) has the following grammatical double-subject construction counterpart :

(23) ku yeca$_i$-ka   [$_S$[$_{NP}$ *caki*$_i$-uy atul]-i   welnam-cen-eyse
    that woman -NOM   SELF 's son-NOM Vietnam-war-in
    cwuk-ess-ta].
    die-Past-Dec

    'It is that woman$_i$ who [$_{NP}$ SELF 's son] died in the Vietnam war.'

The grammaticality of (23) shows that (22) can be analyzed ambiguously as having either the (7)-type structure or the (9)-type structure. If they are analyzed as having the (7)-type structure, *caki* in them is R-*caki*, a variable. But, if they are analyzed as having the (9)-type structure, *caki* in them is D-*caki*, an anaphor. Thus, this structural ambiguity of (22) shows that it is *not* the case that all *caki* in relative clauses are R-*caki*. This structural ambiguity, however, does not affect the main claim of this paper that *caki* in (4)-(5) is R-*caki*, since (4)-(5) do not exhibit this structural ambiguity. As we have already argued, double-subject counterparts of (4)-(5) are ungrammatical : (16) is ungrammatical due to the ungrammaticality of the putative sources before Subjectivization, and (11) is ungrammatical since it violates the Ban on Subjectivization of a sentence-internal Genitive Case-marked NP. Then, (4)-(5) cannot be analyzed as having the (9)-type structure because they cannot be derived from their double-subject counterparts (16) and (11), respectively ; their double-subject counterparts are ungrammatical. Therefore, *caki* in (4)-(5) cannot be D-*caki*.

1.2. R-*caki* is a Base-generated Variable

Let us consider why R-*caki* must be base-generated at D-structure.

Someone might argue that *caki* is inserted in place of a variable left behind by syntactic movement of a Null Operator (NO) at S-structure. But this assumption is incorrect since *caki* is a non-null lexical NP and lexical insertion is allowed only at D-structure (cf. Chomsky (1965 and 1981 a)). As a non-null lexical NP, it must be present at D-structure.

We have a parallel argument for English resumptive pronouns. It is well-known that English resumptive pronouns violate Subjacency (cf. Chomsky (1982)). Consider the following English sentences containing resumptive pro-

nouns :

(24) a. the gangster$_i$[$_{\bar{s}}$ who$_i$ they think that if the police arrest *him*$_i$,
     then everyone will be happy]

 b. I wonder[$_{\bar{s}}$ who$_i$ they think that if the police arrest *him*$_i$,
     then everybody will be happy]

In (24), the relation between *who* and *him* violates Subjacency. If *who* in (24) were moved from the position of *him*, (24) should be ungrammatical due to violation of Subjacency. But it is grammatical. From this it follows that *who* in (24) is not moved from the position of *him*, but is base-generated in Ā-position (cf. Chomsky (1982)). In other words, it is not the case that *who* in (24) is moved from the position of *him* and that *him* is inserted later. Therefore, both *who* and *him* must be base-generated.

But Relativization in English is subject to Subjacency when it involves movement. (24) without an overt resumptive pronoun is totally ungrammatical, as (25) shows :

(25) a. *the gangster$_i$ [$_{\bar{s}}$ who$_i$ they think that if the police
     arrest e_i, then everyone will be happy]

 b. * I wonder[$_{\bar{s}}$ who$_i$ they think that if the police arrest e_i,
     then everybody will be happy]

The contrast between the grammaticality of (24) and the ungrammaticality of (25) shows that involvement or non-involvement of movement plays a crucial role in determining grammatical judgments. Since (24) does not involve movement at all, it is not constrained by Subjacency and is grammatical. But (25) is constrained by Subjacency because it involves movement, and is ungrammatical because it violates Subjacency.

The grammaticality of (24), in turn, supports our argument that R-*caki* in Korean is a base-generated variable. As a resumptive pronoun, R-*caki* cannot be inserted later on at S-structure or at LF, and must be base-generated at D-structure.

2. Depth of Embedding and the Insulation Constraint (IC)

Now let us consider the difference between R-*caki* and *ku* as resumptive pronouns with respect to depth of embedding: R-*caki* in subject position is grammatical with shallow insulation, but *ku* as a bound variable in subject position needs thick insulation. We define 'thick insulation' as follows:

(26) presence of more than two maximal projections between a resumptive pronoun and its Ā-binder ;

 a. insulation within an NP, the resumptive pronoun being a Genitive NP
 b. deep embedding, such as the embedding of a resumptive pronoun

within a relative clause or an adverbial clause

If *ku* (='he') as a bound variable is not thickly insulated, it will produce ungrammatical sentences like :

(27) *[[$_\text{s}$ *ku*$_\text{i}$-ka   sihem-ey silphayha-n] John$_\text{i}$]
     he-NOM exam-in fail-REL

     'John$_\text{i}$ who he$_\text{i}$ failed in the exam'

However, (4) is grammatical, which is repeated here for convenience :

(4) [[$_\text{s}$ *caki*$_\text{i}$-ka   sihem-ey silphayha-n] John$_\text{i}$]
     SELF-NOM exam-in fail-REL
     'John$_\text{i}$ who SELF$_\text{i}$ failed in the exam'

But, R-*caki* and *ku* are similar in that neither may appear in object position, unless thickly insulated, i.e., both of them need thick insulation when in object position. Observe the following examples :

(28) a. *[[$_\text{s}$ kyengkwan$_\text{j}$-i   *ku*$_\text{i}$-lul   ttayli-n] John$_\text{i}$]
         policeman-NOM he ACC hit-REL

      'John$_\text{i}$ who the policeman$_\text{j}$ hit *him*$_\text{i}$'

   b. [[$_\text{s}$nay-ka [$_\text{NP}$ *ku*$_\text{i}$-uy ilum]-ul   icepeli-n]   haksayng$_\text{i}$]
      I-NOM   he 's   name-ACC forgot-REL student
      'a student$_\text{i}$ who his$_\text{i}$ name I have forgotten'

(29) a. *[[$_\text{s}$ kangto$_\text{j}$-ka   *ku.nye*$_\text{i}$-lul khal-lo   ccillu-n]   ku yeca$_\text{i}$]
         robber-NOM she ACC   knife-with stab-REL that woman
         'that woman$_\text{i}$ who a robber$_\text{j}$ stabbed *her*$_\text{i}$ with a knife'

   b. [[$_\text{s}$ kangto$_\text{j}$-ka   [$_\text{NP}$ *ku.nye*$_\text{i}$-uy namphyen]-ul khal-lo
         robber-NOM   she   's   husband ACC knife-with
      ccillu-n]   ku yeca$_\text{i}$]
      stab-REL that woman

      'that woman$_\text{i}$ who a robber$_\text{j}$ stabbed [$_\text{NP}$ *her*$_\text{i}$ husband]   with a knife'

(30) a. *[[$_\text{s}$ kyengkwan$_\text{j}$-i   *caki*$_\text{i}$-lul   ttayli-n] John$_\text{i}$]
         policeman   NOM   SELF-ACC hit-REL

      'John$_\text{i}$ who the policeman$_\text{j}$ hit SELF$_\text{i}$'

   b. [[$_\text{s}$ sensayng-nim$_\text{j}$-i   [$_\text{NP}$*caki*$_\text{i}$-uy   atul]-ul ttayli-n] John$_\text{i}$]
      teacher-HON-NOM   SELF 's   son-ACC hit-REL
      'John$_\text{i}$ who the teacher$_\text{j}$ hit SELF$_\text{i}$'s son'

(28)-(29) show that *ku* as a bound variable requires thick insulation : ungrammaticality results unless it is thickly insulated, as the (a) sentences show. When we compare the grammatical (4) with the ungrammatical (30a), we find that R-*caki* is easily allowed in subject position, but that R-*caki* is allowed in

object position only when it is thickly insulated. We attribute the object position's requirement of thick insulation to the fact that an object, but not a subject, is subcategorized for by a verb. A subject serves as specifier of projections of a verb, not as verbal complement. Because an object is sub-categorized for by a verb, R-*caki*   is not allowed as an object unless it is thickly insulated. Thus, we obtain the following generalization regarding R-*caki* :

(31) *R-caki* in a non-subcategorized position is licensed without thick insula-tion, but R-*caki* in subcategorized position needs thick insulation.

In the beginning of this section, we pointed out that *caki*   as a resumptive pronoun in subject position is licensed with shallow insulation, but that *ku* as a bound variable in subject position needs thick insulation. The second point is illustrated by the following examples where *ku/ ku.nye* in subject position is thickly insulated:

(32) [[$_\bar{S}$[$_{NP}$[$_\bar{S}$$ku_i$-ka   kaluchi-n] haksayng-tul]-i motwu sihem-ey
            he–NOM   teach-REL students–NOM all   exam-in

hapkyekha-n] John$_i$]
succeed REL

'John$_i$ who all the students [$_\bar{S}$ he$_i$ taught] passed the exam'

(33) [[$_\bar{S}$[$_{NP}$ *ku.nye$_i$*-uy atul]-i   welnam-cen-eyse cwuk-un] ku yeca$_i$]
            she   's son-NOM Vietnam-war-in die-REL   that woman

'that woman$_i$ who [$_{NP}$ *her$_i$* son] died in the Vietnam war'

Now, we obtain the following observations regarding *caki* and *ku* as resumptive pronouns with respect to insulation :

(34) R-*caki* in subject position is grammatical with shallow insulation, but R-*caki* in object position needs thick insulation.

(35) *ku/ ku.nye* as resumptive pronoun needs thick insulation, whether in subject position or object position.

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