Semantic and structural aspects of complement control in Korean

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In this article, I will present a survey of control structures in Korean. The survey is based on a sample of seventy SOA-argument-taking predicates, which are classified with respect to their complementation patterns and control properties. As a result, Korean is characterized as a language in which semantically determined control is predominant, whereas constructionally induced control is only marginal. In the discussion of the sample, I will show that there are two major classes of verbs exhibiting semantic control: the first class consists of matrix verbs such as *hwuhoyhata* 'regret' or *kangyohata* 'force', which require obligatory coreference between a matrix argument and the embedded subject due to their lexical meaning. The verbs of the second class are utterance verbs such as *malhata* 'tell', which select clauses headed by the quotative complementizer *ko*. With these verbs, subject, object, or split control arises if specific modal suffixes are attached to the verb heading the complement clause. In the second part of the paper, I will provide a lexical analysis of control in Korean, which adopts the Principle of Controller Choice proposed by Farkas (1988) as well as additional constraints which have to be assumed independently.

1. Introduction*

The phenomenon of control has been a central topic to all major theories of language. For several decades, however, the study of control phenomena has been confined to a few languages, mainly English. It is only recently that the empirical base has been extended to cover a wider range of languages. This development is accompanied by novel approaches to control in formal theory: while Williams (1980) and Hornstein (1999), among others, assume a highly restricted notion of control, excluding e.g. non-exhaustive control, Landau (2000, 2004)

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presents an analysis which covers partial and split control as well as control into finite (subjunctive) complements.

The aim of this paper is to contribute the profile of Korean to a typology of control. Therefore, a sample of SOA-argument-taking predicates is examined in the first part of the paper. As a result of this survey, Korean is characterized as a language that does not possess a designated control construction. Rather, control is determined semantically by the matrix predicate's meaning or certain modal suffixes on the embedded verb.

Presently, Korean is in the focus of some theoretical approaches to control because object control verbs like *seltukhata* 'persuade' are assumed to exhibit so-called 'backward control' with the controller being deeper in syntactic structure than the controllee. Cormack & Smith (2004) analyze *seltukhata* as an instance of control which is determined entirely semantically. In contrast, Monahan (2003) offers a syntactic approach where backward as well as forward control are analyzed as instances of movement into various θ-positions.

Without making any concession to Cormack & Smith's syntactic assumptions, the results of the present study are in line with their characterization of Korean object control verbs. As will be shown, semantically determined control is not restricted to object control but is predominant in subject control as well, while constructionally induced control is only marginal in Korean. Therefore, an approach that neglects the semantic nature of control in Korean misses an important feature of this language.

After a discussion of the sample in section 3, I will first focus on verbs that determine control solely due to their lexical meaning in section 4. As will be shown, subject control verbs belong to various verb classes whereas object control verbs uniformly pertain to the class of manipulative verbs. In section 5, I will focus on control triggered by modal affixes attached to the embedded verb. In section 6, I will present a semantic approach to control in Korean. Finally, some of the theoretical consequences will be discussed in the last section.

2. Definition of control

The notion of 'obligatory control' assumed in this paper is given in (1). It is defined for constructions with a matrix predicate selecting an SOA-argument (= state-of-affairs-argument):

(1) Definition of obligatory control (Stiebels, this volume)
Obligatory control applies to structures in which a predicate P_1 selects a SOA-argument and requires one of its (individual) arguments to be (improperly) included in the set of referents of an argument of the embedded predicate P_2 heading the SOA-argument.

Since the definition is aimed at typological research, it does not exclude control structures with pronominal controllees or control into finite complement clauses, both of which are attested for Korean (see below). Moreover, the definition is not restricted to cases of exhaustive control but also permits partial and split control. The possible control relations are shown in (2) (P_1 and P_2 are variables for the matrix and the embedded predicate, respectively. X and Y stand for the subject and object argument of the matrix verb; Z is the subject of the embedded verb, i.e., the controllee).

(2) Possible control relation in $[\mathbf{X}_i\ \mathbf{P_1}\ (\mathbf{Y}_j)\ [\mathbf{Z}_k\ \mathbf{P_2}\ \mathbf{...}]]$ with $k \cap \{i, j\} \neq \varnothing$:

	Subject control	Object control
exhaustive	k=i	k=j
partial	k ⊃ i	k ⊃ j
split	k=i+j	

Exhaustive control is given if the embedded verb's subject and one of the matrix arguments are referentially identical (k = i or k = j). Examples of verbs exhibiting exhaustive control are verbs such as *try* in *He*$_i$ *tried* [_$_i$ *to open the gate*] or *forbid* in *Peter*$_i$ *forbad his son*$_j$ [_$_j$ *to see the movie*]. In partial control, the controllee is only partially identical with one of the matrix arguments (k = i+v or k = j+v). Predicates permitting partial control are *want* as in *John*$_i$ [_$_{i+v}$ *wanted to meet at six*] or *afraid* as in *The chair*$_i$ *was afraid* [_$_{i+v}$ *to gather during the strike*]. All verbs with partial control also exhibit exhaustive control. Finally, in split control, two arguments of the control verb jointly control the controllee (i.e., k = i+j). Verbs that allow for split control (besides exhaustive control) are *talk about* as in *John*$_i$ *talked to Sarah*$_j$ *about* [_$_{i+j}$ *meeting each other at 6*] or *discuss* as in *Amy*$_i$ *figured that John*$_j$ *would discuss* [_$_{i+j}$ *protecting themselves during the strike*] (examples for partial and split control taken from Jackendoff & Culicover 2003).

As I will show below, split control arises in Korean if the embedded verb is followed by the propositive suffix *-ca*. Additionally, I will discuss instances of split and partial control with overtly realized controllees.

Since the definition of control given above is semantic in nature, the survey and analysis presented in the following stand in the tradition of approaches to control that focus on the importance of semantic factors (Jackendoff 1972, 1974, Růžička 1983, 1999, Dowty 1985, Farkas 1988, Chierchia 1988, Pollard and Sag 1994, and Jackendoff & Culicover 2003). For reasons of space, I will not discuss the majority of these proposals with respect to the data and my analysis. Moreover, some of the theoretical devices of these approaches such as theta-roles do not play any role in my analysis. I will, however, adopt the proposal made by

Farkas in my analysis in section 6. Finally, some of the shortcomings of syntactic analyses will be addressed in section 7.

3. SOA-argument-taking predicates in Korean

As a starting point, a list of approximately seventy SOA-argument-taking predicates was compiled. The predicates of the resulting sample were characterized with respect to the types of complement they license. Additionally, the specific combinations of matrix predicate and complement were subdivided into control and non-control structures in dependence of the definition of complement control given above. Before presenting the statistical distribution of complement types and control in section 3.2, the different types of complementation and their relation to control/non-control are introduced in section 3.1. If not otherwise mentioned, all examples presented in this paper were provided by my informants.

3.1. Types of complements and control

The types of complements found in the sample are nominalizations (via the verbal suffixes *-ki* and *-um* or the dummy noun *kes*), complements with the quotative particle *ko* and complements with the resultative suffix *-tolok*. In addition, a number of matrix predicates in the sample are nouns to which the embedded verb is connected by relativization. Finally, there are miscellaneous strategies where a verb selects a specific base form of the dependent verb or is part of a complex idiomatic sequence.

3.1.1. Nominalization

There are at least three sentential nominalizers in Korean: *-ki* and *-um* are suffixes which attach to the verb stem. According to the view generally held in literature, *-ki* and *-um* are in complementary distribution: *-um* is found with complements of factive verbs, whereas *-ki* appears with complements of non-factive verbs (Lee 1983, Sohn 1994, 1999, Yoon 1991 among others). Though this generalization is not uncontroversial and not without exceptions, I will keep with it since the distribution of *-ki* and *-um* is not central to the following discussion. *Kes* ‘thing’ is a defective noun. Formally, the nominalized clause in a *kes*-nominalization is a relative clause with *kes* being the head of the clause and the dependent verb exhibiting inflection specific to heads of relative clauses.

Distribution of nominalizers

The distribution of *-ki*, *-um*, and *kes* is illustrated by the following examples. Independent of the nominalizer chosen, all of the verb’s arguments can be realized inside the nominalization and get marked by verbal case. As (3) shows,

only *-um-* and *kes*-complements are compatible with the factive verb *alta* 'know'. Since *-um*-nominalizations sound formal, they are often replaced by a *kes*-nominalization in colloquial speech (Sohn 1999:322).

(3) a. Na-nun [ku-ka cohun salam i-m-ul/*i-ki-lul]
I-TOP he-NOM good man COP-NML-ACC/COP-NML-ACC
al-ko#iss-ta.
know-PROG-DECL
'I know that he is a good man.' (Lee 1983:96)

b. Na-nun [ku-ka cohun salam i-n kes-ul]
I-TOP he-NOM good man COP-PRES.REL[1] NML-ACC
al-ko#iss-ta.
know-PROG-DECL
'I know that he is a good man.'

On the other hand, *ki*-nominalizations are selected by a non-factive verb such as *palata* 'want' in (4a) while *um*-nominalizations are excluded. To some speakers, the use of *kes* in (4b) sounds rather unusual, which indicates that *ki*-nominalizations are preferred over *kes*-nominalizations as complements of non-factive verbs.

(4) a. Yenghi-nun [Chelswu-ka cohun salam *i-m-ul/i-ki-lul]
Yenghi-TOP Chelswu-NOM good man COP-NML-ACC/COP-NML-ACC
pala-n-ta.
want-PRES-DECL
'Yenghi wants Chelswu to be a good man.' (Lee 1983:96)

b. (?) Yenghi-nun [Chelswu-ka cohun salam i-l
Yenghi-TOP Chelswu-NOM good man COP-FUT.REL
kes-ul] pala-n-ta.
NML-ACC want-PRES-DECL
'Yenghi wants Chelswu to be a good man.'

Tense marking

Yoon (1991) notes that the three nominal constructions also differ with respect to the realization of tense. According to him, and others, *-ki* does not permit tense inflection on the verb it attaches to, while such a restriction does not apply to *-um* and *kes*. Yoon gives the examples in (5b/c) to show that *-ki* cannot follow

1 For the sake of simplicity, the suffixes *-(u)n*, *-nun*, and *-(u)l* are glossed as relativizers also indicating past, present or future tense, respectively (cf. Sells 1995). It is a subtle question if the information carried by these affixes is of a modal, temporal, or aspectual nature. Sohn (1999), e.g., analyzes *-(u)n* as a mere relative marker, which incorporates past tense after a verb stem. In addition, he segments *-nun* into the indicative suffix *-nu* and the relativizer *-n* while *-(u)l* is characterized as a prospective suffix.

a verb with the past tense marker *-ess/-ass* or the future marker *-lkesi*[2], but is only allowed to be suffixed to a verb which is unmarked for tense as in (5a).

(5) a. John-un [Mary-ka mwusahi o-ki-lul] pala-n-ta.
John-TOP Mary-NOM without.accident come-NML-ACC want-PRES-DECL
'John wants Mary to come without accident.'

b. ??? John-un [Mary-ka mwusahi o-ass-ki-lul]
J.-TOP M.-NOM w/o.accid. come-PAST-NML-ACC
pala-n-ta.
want-PRES-DECL
intended: 'John wants Mary to have come without accident.'

c. * John-un [Mary-ka mwusahi o-lkesi-ki-lul] pala-n-ta.
J.-TOP M.-NOM w/o.accid. come-FUT-NML-ACC want-PRES-DECL
intended: 'John wants Mary to come without accident.'
(Yoon 1991:119)

However, if the embedded verb *ota* 'come' in (5b) is replaced with *tochakhata* 'arrive' as in (6), the sentence becomes perfect in spite of the past tense suffix.

(6) John-un [Mary-ka mwusahi tochakhay-ss-ki-lul] pala-n-ta.[3]
J.-TOP M.-NOM w/o.accident arrive-PAST-NML-ACC want-PRES-DECL
'John wants Mary to have arrived without accident.'

The contrast between (5b) and (6) can be explained in the following way: desiderative matrix verbs such as *palata* 'want' can only be combined with the past form of the embedded verb if the referent of the matrix subject is uncertain that the event denoted by the embedded verb has come about. This is the case in (6): John can be waiting at home while he expects Mary to have arrived somewhere. However, in (5b) the embedded verb *ota* 'come' is a deictic verb denoting a movement towards a deictic center, which is the referent of the matrix subject *John*. Therefore, John must know if Mary has come without accident. Consequently, the desiderative *palata* 'want' cannot be combined with the past form of *ota* 'come'.

The contrast between (5b) and (6) shows that the suffixation of *-ki* to tense-marked stems is not ruled out categorically. Moreover, the restriction on the use of *-ki* does not hold when a nominalization functions as adjunct. In (7) the *ki*-nominalization is marked by the adverbial postpostion *-ey*. As can be seen by examples (7b) and (7c), *-ki* is compatible with the past or future form of the verb.

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2 *-lkesi* is a complex form, which can be analyzed into the future (prospective) relativizer *-l*, the nominalizer *kes* 'thing' and the copula *i(ta)* 'be'. Following Yoon (1991), among others, I simply gloss it as a marker of future tense.

3 I owe this example to Nayoung Kwon (p.c.).

(7) a. [Cikum yoksil-ul swuliha-ki]-ey cip-i maywu telep-ta.
now bathroom-ACC renovate-NML-at house-NOM very dirty-DECL
'Since they are renovating the bathroom now, the house is very dirty.'

b. [Nwun-i w-ass-ki]-ey sukhi tha-le ka-ss-e.
snow-NOM come-PAST-NML-at ski ride-to go-PAST-INT
'Since it had snowed, (I) went skiing.' (Sohn 1999:320)

c. [Onul-cenyek sonnim-i o-lkesi-ki]-ey na-nun cangpole ka-n-ta.
today-evening guest-NOM come-FUT-NML-at I-TOP shopping go-PRES-DECL
'Since we will have guests this evening, I go shopping.'

The data in (7) strongly suggest that the prohibition of tense markers is not inherent to the *ki*-nominalization but is determined by the meaning of the matrix verb.

The prohibition of past and future tense markers does not apply to *-um* and *kes* since they are selected by factive verbs. As (8b) and (8c) show, *-um* is compatible with the past and future form of the verb.

(8) a. Yeyswu-nun salamtul-eykey [chenkwuk-i kakkai o-m-ul] cenphahay-ss-ta.
J.-TOP people-DAT kingdom.of.h.-NOM near come-NML-ACC announce-PAST-DECL
'Jesus announced to the people that the kingdom of heaven is near (literally: comes near).'

b. Pawul-un uli-eykey [Yeyswu-kkeyse uli-lul-wihay cwuk-ess-um-ul] cenphahay-ss-ta.
P.-TOP we-DAT J.-NOM.HON we-ACC-for die-PAST-NML-ACC announce-PAST-DECL
'Paul announced to us that Jesus had died for us.'

c. Peytulo-nun salamtul-eykey [Yeyswu-kkeyse tasi i ttang-ey o-lkesi-m-ul] cenphahay-ss-ta.
P.-TOP people-DAT J.-NOM.HON again this earth-to come-FUT-NML-ACC announce-PAST-DECL
'Peter announced to the people that Jesus will come back to earth.'

Finally, the nominalizer *kes* is also compatible with the full range of tense markers. This is illustrated by the examples in (9) below.

(9) a. John-un [Mary-ka ecey o-n kes-ul] al-ass-ta.
John-TOP Mary-NOM yesterd. come-PAST.REL NML-ACC know-PAST-DECL
'John knew that Mary came yesterday.'

b. John-un [Mary-ka o-nun kes-ul] po-n-ta.
John-TOP Mary-NOM come-PRES.REL NML-ACC see-PRES-DECL
'John sees Mary coming.'

c. John-un [Mary-ka nayil o-l kes-ul] kitayha-n-ta.
John-TOP Mary-NOM tomor. come-FUT.REL NML-ACC expect-PRES-DECL
'John expects Mary to come tomorrow.'

The tense marking found with nominalizations used as complements is shown in (10). As can be seen, only the combination of *ki*-nominalizer and future tense is ruled out.

(10) Tense Markers and Nominalized Complements

	Past	Present	Future
-(u)m	*-ess/-ass*	∅	*-(u)lkesi*
-ki	*-ess/-ass*	∅	**-(u)lkesi*
kes	*-(u)n*	*-nun*	*-(u)l*

Nominalization and control

All of the matrix verbs discussed above do not exhibit control if combined with a nominalization: *alta* 'know' in (3), *palata* 'want' in (5), *cenphahata* 'announce' in (8), *pota* 'see' in (9b), and *kitayhata* 'expect' in (9c) allow the subject inside the argument to be referentially independent from the matrix subject or object. Therefore, it is evident that the choice of a nominalized complement does not trigger control, i.e., a nominalized complement cannot be utilized to induce control and can therefore be considered as 'control-neutral'.

Control into nominalized complements only shows up if the matrix verb determines control by its meaning. This is the case in the following example. In (11), the verb *hwuhoyhata* 'regret' triggers subject control: the unrealized subject argument inside the nominalization in (11a) is obligatorily coreferential with the matrix subject. An embedded subject with independent reference such as *atul* 'son' in (11b) renders the sentence ungrammatical.

(11) a. Chelswu-nun$_i$ [_$_{i/*j}$ku il-ul ha-n kes-ul] hwuhoyhay-ss-ta.
C.-TOP that thing-ACC do-PAST.REL NML-ACC regret-PAST-DECL
'Chelswu regretted doing that.'

b. *Chelswu-nun [ku-uy atul-i ku il-ul ha-n kes-ul]
C.-TOP he-GEN son-NOM that thing-ACC do-PAST.REL NML-ACC
hwuhoyhay-ss-ta.
regret-PAST-DECL
intended: 'Chelswu regretted that his son did that.'

Here, control is simply an effect of the lexical meaning of *hwuhoyhata* 'regret': one can only regret actions one has done on its own. Following Stiebels (this volume), I will call this type of control 'inherent control' as opposed to 'constructional control' (or 'syntactic control' in Cormack & Smith's 2004 terminology).

Kangyohata 'force' in (12) is an instance of semantically determined object control: since *kangyohata* means something like 'act upon a person in order to make him/her do the action expressed by the embedded verb', the coreferentiality of the matrix object and the embedded subject is fixed lexically.

(12) a. Theylelisuthu-nun$_i$ incil-tul-eykey$_j$ [_$_{j/*i/*k}$ nwup-ki-lul]
terrorist-TOP hostage-PL-DAT lie.down-NML-ACC
kangyohay-ss-ta.
force-PAST-DECL
'The terrorists forced the hostages to lie down.'

b. * Theylelisuthu-nun phaillet-eykey [incil-tul-eykey
terrorist-TOP pilot-DAT hostage-PL-DAT
nwup-ki-lul] kangyohay-ss-ta.
lie.down-NML-ACC force-PAST-DECL
intended: 'The terrorists forced the pilot that the hostages lie down.'

So far, we have come to the conclusion that control with nominalizations results only if triggered by the matrix verb's meaning. In the next section, I will discuss an exception to this generalization.

Nominalization and two-place adjectives

There is a class of two place predicates that mark both of their arguments with nominative. The lexical category of these predicates has been a controversial issue: while some authors regard them as adjectives (Han 1991, Sohn 1994, 1999), others such as Yang (1994) consider them as static verbs since they can hardly be distinguished from verbs morphologically. For the sake of simplicity, I will follow Sohn and others and refer to this class of predicates as adjectives. Semantically, these adjectives are experiencer/psych-predicates with an experiencer and a stimulus argument. This type of predicate is illustrated by *twulyepta* 'fear, be afraid' in (13).

(13) a. Chelswu-nun$_i$ [_$_{i/j}$ Yenghi-lul tasi manna-nun kes-i] twulyep-ta.
C.-TOP Y.-ACC again meet-PRES.REL NML-NOM fear-DECL
'Chelswu fears that he/s.o. meets Yenghi again.'

b. Chelswu-nun$_i$ [Mina-ka Yenghi-lul tasi manna-nun kes-i]
C.-TOP M.-NOM Y.-ACC again meet-PRES.REL NML-NOM
twulyep-ta.
fear-DECL
'Chelswu fears that Mina meets Yenghi again.'

As the admissibility of the disjoint embedded subject *Mina* in (13b) shows, the *kes*-nominalization does not involve control. However, if the *ki*-nominalization is chosen instead, subject control results, as has already been mentioned by Kim (1990). This is shown by the pair of examples in (14), which is identical to the previous pair with the exception of the use of *-ki* instead of *kes*. (14a) is an instance of control with the unrealized subject of the subordinate verb being obligatorily coreferential with the matrix subject *Chelswu*. As (14b) illustrates, the realization of an independent embedded subject renders the sentence ungrammatical.

(14) a. Chelswu-nun$_i$ [_$_{i/*j}$ Yenghi-lul tasi manna-ki-ka] twulyep-ta.
C.-TOP Y.-ACC again meet-NML-NOM fear-DECL
'Chelswu fears to meet Yenghi again.'

b. *Chelswu-nun [Mina-ka Yenghi-lul tasi manna-ki-ka] twulyep-ta.
C.-TOP M.-NOM Y.-ACC again meet-NML-NOM fear-DECL
intended: 'Chelswu fears that Mina meets Yenghi again.'

As already shown above, the use of the *ki*-nominalization with nominative-accusative-verbs such as *palata* 'want' in (4) does not trigger control. Therefore, the control effect cannot be tied simply to the use of *-ki* instead of *kes*.

Yang (1994) argues convincingly that psych-predicates like *twulyepta* in (14) are stative. It is a well-known fact for Korean as well as Japanese that there is a close relation between statitivity and the double nominative case pattern. Yet, to my knowledge, the relation between stativity and control has neither been discussed nor analyzed yet.

3.1.2. Quotative clauses

The complementizer *ko* is called a 'quotative particle' by Sohn (1994, 1999). *Ko*-complements are licensed by verbs that involve some utterance such as *potohata* 'report' in (15). Clauses headed by *ko* are also attested as complements of verbs like *mitta* 'believe' in (16). For Sells (1995:297) *ko* is "basically a marker of someone's words or thoughts." As the examples show, *ko* follows sentence-type markers such as the declarative *-ta*. In Sells' (1995) analysis of the Korean verb morphology *ko* occupies the outer slot of the four slots he assumes for verbal suffixes. Therefore, the verbs in *ko*-complements can bear the full range of verbal affixes found also with verbs in matrix clauses.

(15) Cenellisuthu-nun [Sadam-i cap-hi-ess-ta-ko] potohay-ss-ta.
Journalist-TOP S.-NOM capture-PASS-PAST-DECL-CMP report-PAST-DECL
'The journalist reported that Saddam was captured.'

(16) Ai-tul-un [Santa-Halapeci-ka issta-ko] mit-nun-ta.
child-PL-TOP Santa-Claus-NOM exist-CMP believe-PRES-DECL
'The children believe that Santa Claus exists.'

Both examples above demonstrate that *ko*-complements do not induce control. However, if a modal affix such as the imperative *-la* is attached to the embedded verb, obligatory control arises. This is shown by the contrast between (17a) and (b): whereas (17a) without a modal affix does not show control, (17b) exhibits object control since the imperative suffix *-la* follows the verbal base *ha-* 'do'.

(17) a. Chelswu-nun$_i$ Yenghi-eykey$_j$ [_$_{i/j/k}$ caknyen-ey safari-yehayng-ul
C.-TOP Y.-DAT last.year-in safari-trip-ACC
hay-ss-ta-ko] malhay-ss-ta.
do-PAST-DECL-CMP say-PAST-DECL
'Chelswu told Yenghi that he/she/s.o. did a safari trip last year.'

b. Chelswu-nun$_i$ Yenghi-eykey$_j$ [_$_{j/*i/*k}$ naynyen-ey
C.-TOP Y.-DAT next.year-in
safari-yehayng-ul ha-la-ko] malhay-ss-ta.
safari-trip-ACC do-IMP-CMP say-PAST-DECL
'Chelswu told Yenghi to go on a safari trip next year.'

To my knowledge, the control effect of modal affixes such as the imperative has not been analyzed systematically in the literature. I will focus on control triggered by modal affixes in section 5.

3.1.3. Result clauses

According to Sohn (1994:75) *-tolok* is a resultative suffix meaning 'to the extent that, so that'. It can be attached to a verbal stem to form result clauses like the one in (18a) (Lee & Lee 2003). With the exception of the subject honorific *-si*, no other affix can precede *-tolok*. Consequently, if *-tolok* is attached to a verb, neither tense nor modal markers can appear. *Tolok*-clauses are also attested as complements of object control verbs such as *kangyohata* 'force' in (18b).

(18) a. Minca-nun [phal-i aphu-tolok] ilhay-ss-ta.
Minca-TOP arm-NOM hurt-CMP work-PAST-DECL
'Minca worked so hard that her arms hurt.' (Sohn 1994:75)

b. Theylelisuthu-nun$_i$ incil-tul-eykey$_j$ [_$_{j/*i/*k}$ nwup-tolok]
terrorist-TOP hostage-PL-DAT lie.d.-CMP
kangyohay-ss-ta.
force-PAST-DECL
'The terrorists forced the hostages to lie down.'

As (18a) shows, *tolok*-clauses do not suppress the external argument of the embedded verb. Therefore, the object control in (18b) cannot be regarded as a structural effect of the *tolok*-complement. Moreover, the use of a *tolok*-result clause such as the one in (18a) seems to be fairly unrestricted. (18a) suggests that a part-whole relation as between *phal* 'arm' and *Minca* may have to exist in order for a result clause to be licensed. However, such a relation cannot be found in the following example.

(19) [Os-i humppek cec-tolok] pi-ka ssotacye-ss-ta.
clothes-NOM entirely wet-CMP rain-NOM pour.down-PAST-DECL
'The rain poured down so that my clothes got soaking wet.'

Therefore, it seems plausible that the only restriction on *tolok*-result clauses seems to be that the event denoted by the *tolok*-clause can be brought about by the event referred to by the matrix verb.

3.1.4. Complements of matrix nouns

Some English control verbs are translated most naturally into Korean by a construction in which the matrix predicate is a noun followed by an auxiliary or auxiliarized verb such as the copula *ita* 'be', the verb *issta* 'exist' or *toyta* 'become'. In this case, the embedded verb is connected to the matrix noun by relativization. The sentences in (20) illustrate this construction with the nouns *kyeyhoyk* 'plan' and *cwunpi* 'readiness'. Though superficially identical, the sentences in (20) are semantically different from an ordinary relative clause since the head noun *kyeyhoyk* 'plan' or *cwunpi* 'readiness' cannot be postulated to be coreferential with an unrealized argument or adjunct in the embedded clause.

(20) a. Yenghi-nun$_i$ [_$_{i/*j}$ onul pwuekh-ul chyengsoha-l] kyeyhoyk i-ta.
Yenghi-TOP today kitchen-ACC clean-FUT.REL plan COP-DECL
'Yenghi has planed to clean the kitchen today.'

b. Na-nun$_i$ [_$_{i/*j}$ tokil-ul ttena-l] cwunpi-ka toy-e#iss-ta.
I-TOP Germany-ACC leave-FUT.REL readin.-NOM bec.-RES-DECL
'I am ready to leave Germany.'

All instances of matrix nouns in the sample involve subject control (besides raising in some cases[4]).

3.1.5. Miscellaneous strategies

Besides clausal complementation, there are also closer combinations where the matrix verb subcategorizes for a specific base form of the dependent verb. All of these combinations, which can be regarded as instances of clause union, exhibit subject control (in addition to raising in some cases) but never object control. In (21a) *pota* 'try' requires a form which is yielded by attaching *-e/-a* to the stem. This form is sometimes referred to as 'infinitive' in the literature (Martin 1992, Sohn 1994, 1999 among others). Less frequently, matrix verbs such as *siphta* 'wish' in (21b) combine with the *ko*-form of the verb[5], which is called 'gerundive' by Martin (1992) and Sohn (1994, 1999).

(21) a. John-un$_i$ [_$_{i/*j}$ i nonmwun-ul ilk-e] po-ass-ta.[6]
J.-TOP this paper-ACC read-INF try-PAST-DECL
'John tried to read this paper.'

b. Na-nun$_i$ [_$_{i/*j}$ ttena-ko] siph-ta.
I-TOP leave-GER wish-DECL
'I wish to go.'

Typically, the matrix verb develops a special meaning in such combinations. For example, *pota*, which means 'try' in (21a), means 'see' in isolation, and *siphta* 'wish' in (21b) is not attested as an independent verb without a *ko*-complement. In addition to such formations, there are also more complex idiomatized sequences such as *ka-lyeko hata* (go-VOL.CONJ do) 'intend to go' comprising the so-called 'intentive conjunctive' *-(u)lyeko* and the light verb *hata* 'do' or *ka-ya-man hata* (go-if-only do) 'must go', which consists of the conditional form of the base verb, the particle *man* 'only' and *hata*.

The formations introduced in this section are instances of constructionally induced control, i.e. the type of complement always involves control. For exam-

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4 An instance of a matrix noun exhibiting raising is *philyo* 'neccessity':
(i) *Pi-ka o-l philyo-ka iss-ta.*
rain-NOM come-FUT.REL necc.-NOM exist-DECL
'It is neccessary that it rains.'

5 The gerundive suffix *-ko* is not identical to the quotative particle *ko*. The gerundive *-ko* can only be preceded by the verb stem or verb stem plus subject honorific *-(u)si,* while the quotative *ko* can follow the full array of verbal suffixes. Consequently, in Sells' (1995) analysis the quotative *ko* occupies the outer verbal slot 4, whereas the gerundive *-ko* can only appear in slot 2.

6 Verb-Verb-Sequences with the first verb being in the infinitive form have been analyzed as serial verb constructions (Lee 1992, Suh 2000). For reasons of space, I will not discuss these analyses. In principle, a characterization as a control structure and a characterization as a serial verb construction do not exclude each other.

ple, there are no instances of *ko*-complement plus *siphta* that permit the dependent verb to realize a referentially independent subject. Although such formations are frequent in language use since they refer to highly frequent concepts such as 'wish' or 'must', they are attested only for a handful of matrix verbs and almost always involve reanalysis or idiomatization. Therefore, they can be considered as marginal compared to the types of complementation introduced in the preceding sections.

3.2. Distribution of complementation patterns in the sample

The matrix predicates in the sample are either verbs, adjectives, or nouns. Their distribution is given in (22).

(22) Matrix predicates: distribution of lexical classes in sample

lexical category of matrix predicate	number (percentage)
verbs	58 (83%)
adjectives (stative verbs)	5 (7%)
nouns	7 (10%)

Matrix verbs

The table in (23) shows the distribution of control types and complement types that appear with the matrix verbs in the sample. The roman numbers in the last column refer to the classes which are constituted by verbs exhibiting identical complementation patterns.

(23) Matrix verbs: complement types and control

			control-inducing	control-neutral			
				NML	QUOT (*ko*)	RESULT (*-tolok*)	
structural control	subj	4	√	*	*	*	I
	obj	0					
inherent control	subj	8	*	√	*	*	II
		1	*	√	√	*	III
	obj	10	*	√	√	√	V
control dependent on modal affixes	subj	7	*	√/*	√	*	IV
non-control	/	23	*	√	*	*	II
		5	*	√	√	*	III

As can be seen from the table, there are only four instances of structural control, which are characterized by miscellaneous types of complementation (class I).

The remaining matrix verbs select control-neutral complements. They can be grouped into four classes in dependence of the types of complements they occur with and the type of control they exhibit. As (23) shows, of the nine theoretically possible combinations of the three complementation types nominalization, *ko*-, and *tolok*-clause, only four are attested in the sample. In (23), I do not differentiate further between *ki*-, *um*-, and *kes*-nominalization. Since all three types of complements are control-neutral, it is expected that there is no coincidence between complement type and control. However, for the classes II to V some correlation between semantic verb class, complementation patterns and control can be noted:

The verbs of class II, which can select only nominalizations, are mainly desiderative and phasal/aspectual verbs. The class III verbs allow for both quotative clauses and nominalizations. The members of this class are mostly verbs of propositional attitude such as *cwucanghata* 'claim' or *mitta* 'believe'. As can be seen from the table, both class II and class III verbs show either inherent control or non-control depending on the meaning of the specific verb chosen.The verbs of class IV are utterance verbs such as *malhata* 'say'. Consequently, all verbs in this class permit *ko*-complements. However, with respect to nominalizations class IV-verbs behave heterogeneously: while *hyeppakhata* 'threaten', *iyakihata* 'tell', *malhata* 'say', and *potohata* 'report' can combine with a *kes*-nominalization quite naturally, native speakers only reluctantly accept *kes*-complements with *soksakita* 'whisper' and *solichita* 'shout'. In addition, the complex verb *sinho-lul ponayta* 'signal (lit. send (a) signal)' cannot select an accusative-marked nominalization at all, presumably because *ponayta* 'send' already combines with the accusative-marked *sinho* 'signal'. Since the majority of class-IV verbs exhibit the same complementation pattern as the verbs in class III, it may seem more plausible to subsume these verbs under class III. However, they should rather be regarded to constitute a class of their own. First, they can be characterized homogeneously as utterance verbs as opposed to the propositional attitude verbs of class III. Second, only with the verbs of this class control can be triggered by attaching a modal marker such as the imperative *-la* to the embedded verb.

Finally, the verbs of class V, which are manipulative/directive verbs, can combine with all three types of complements. All the verbs of class V are characterized by inherent object control, which is a result of their manipulative/directive meaning. In addition, only the verbs of this class can select *tolok*-complements since the selection of *tolok*-complements is tied to a manipulative meaning of the verb.

53 of the 58 verbs can combine with a nominalization (= 91% of the verbs). 23 verbs (= 40% of verbs) select a *ko*-complement and 10 verbs (= 17% of verbs) select a *tolok*-complement. Nominalization is clearly the prevalent type of

complementation, whereas *ko*- and *tolok*-complements are used significantly less because these complementizers can be selected only by matrix verbs belonging to specific semantic classes (verbs involving some kind of utterance or thought and verbs involving manipulation/direction, respectively). A list of the complementation types attested for each predicate of the sample is given in the appendix of this paper.

The table (23) explicates the significance of semantically determined control: as argued above, all of the complement types of nominalizations, *ko*- and *tolok*-clauses are control-neutral. Therefore, all cases of control exhibited by the verbs of class II to V are instances of semantic control, i.e. 19 verbs are inherent control verbs and 7 verbs show control if combined with a modally marked verb inside a *ko*-complement. Consequently, 45% of the verbs in the sample exhibit semantic control as opposed to 7% of verbs with constructional control (class I) and 48% verbs that never exhibit control. This ratio clearly shows the significance of semantic control, which can only become transparent in a language that lacks constructional control.

Matrix adjectives and matrix nouns

All the five adjectival matrix predicates of the sample exclusively combine with a nominalization. Unlike verbs, adjectives do not subcategorize for *ko*- or *tolok*-complements. Moreover, adjectives display control in dependence of the nominalization chosen: if combined with a *ki*-complement, they exhibit subject control whereas combined with a *kes*-complement, they do not. The seven matrix nouns of the sample connect with the embedded verb only via relativization. All instances of matrix nouns in the sample are characterized by subject control or raising.

The adjectives and nouns constitute a significant part (=17%) of the SOA-argument-taking predicates in the sample. However, an analysis of control found with these predicates shall not be given in this paper. In the following, I will focus on verbal matrix predicates. Therefore, I proceed with a discussion of control verbs that determine control due to their lexical meaning.

4. Inherent control verbs

There are a number of verbs which involve control solely due to their lexical meaning, i.e. inherent control verbs. In the following, I will discuss the control relations found with these verbs.

4.1. Subject control

Semantic Characteristics

Kepwuhata 'refuse' given in (24) is a subject control verb. Consequently, an unexpressed embedded subject is obligatorily coreferent with the matrix subject as in (24a). As (24b) shows, the embedded verb cannot realize an independent subject. Moreover, the complement is a *ki*-nominalization because *kepwuhata* is a non-factive verb. Since *kepwuhata* is not an object control verb, *tolok*-complements are excluded. Likewise, *ko*-complements are not admissible.

(24) a. Chelswu-nun$_i$ [_$_{i/*j}$ koki(-lul) mek-ki-lul] kepwuhay-ss-ta.
C.-TOP meat(-ACC) eat-NML-ACC refuse-PAST-DECL
'Chelswu refuses to eat meat.'

b. *Chelswu-nun [atul-i koki(-lul) mek-ki-lul] kepwuhay-ss-ta.
C.-TOP son-NOM meat(-ACC) eat-NML-ACC refuse-PAST-DECL
intended: 'Chelswu refuses that his son eat meat.'

Kepwuhata 'refuse' is a subject control verb because the referent of the matrix verb's subject can only refuse to realize the action denoted by the embedded verb if s/he controls this action as referent of the embedded verb's subject. Hence, control results from the matrix verb's meaning. The same argumentation applies to *hwuhoyhata* 'regret' given in (11) above. The referent can only regret the action referred to by the embedded verb if s/he has done that action. Again this entails that the subject arguments of the matrix verb and the embedded verb have to be identified.

(25) shows the subject control verbs of the sample. The roman number preceding a sequence of verbs refers to the verb class given in the table in (23) above. With the exception of the verbs in class I, which can be considered as instances of constructional control, all the remaining verbs in (25) exhibit semantic control.

(25) Subject control verbs
class I: V-*e/a pota* 'try', V-*e/a tayta* 'go on (again and again)', V-*e/a pelita* 'finish', V-*ko siphta* 'wish';
class II: *kepwuhata* 'refuse', *samkata* 'refrain', *soholhihata* 'neglect', *hwuhoyhata* 'regret', *sicakhata* 'begin', *kyeysokhata* 'continue', *kkuthmachita* 'finish', *memchwuta* 'stop';
class III: *yaksokhata* 'promise'

It is evident that the subject control verbs in (25) belong to different semantic verb classes: V-*e/a tayta* 'go on', V-*e/a pelita* 'finish', *sicakhata* 'begin', *kyeysokhata* 'continue', *kkuthmachita* 'finish', and *memchwuta* 'stop' are aspectual/phasal verbs; V-*ko siphta* 'wish', and *kepwuhata* 'refuse' are desiderative verbs; V-*e/a pota* 'try', *soholhihata* 'neglect', and *samkata* 'refrain' are implica-

tive verbs; *hwuhoyhata* ‘regret’ is a factive/commentative verb; *yaksokhata* ‘promise’ can be characterized as a verb of commitment.

However, taking a closer look, it becomes obvious that all the verbs share a common semantic characteristic: the verbs that are selected by the subject control verbs above all denote actions that are intentionally executed or brought about by the referent of the matrix subject. This clearly holds for ‘refuse’, ‘try’, ‘neglect’, ‘refrain’, and ‘regret’. It is also valid for the phasal/aspectual verbs ‘go on’, ‘finish’, ‘begin’, ‘continue’, and ‘stop’: since these verbs imply that the subject referent volitionally begins, continues, finishes, or stops the event denoted by the subordinate verb, they entail the identity of the matrix subject and the embedded subject. Some of these aspectual verbs such as *sicakhata* ‘begin’ or *kyeysokhata* ‘continue’ also have a raising variant without a thematic subject. However, in their subject control reading they require that the referent of the matrix subject intentionally executes the action referred to by the embedded verb. Before presenting evidence for the assumption of a control variant for aspectual verbs, I will first summarize the considerations above as a condition on semantic subject control given in (26).

(26) Condition on Semantic Subject Control
A matrix verb exhibits semantic subject control iff its meaning involves that the event denoted by the embedded verb is brought about by the referent of the matrix subject.

The only exception to this generalization seems to be the desiderative V-*ko siphta* ‘wish’, which does not require the event denoted by the embedded verb to be brought about by the referent of the matrix subject. On the contrary, most naturally one wishes an event to come true that one cannot bring about oneself. However, V-*ko siphta*, which selects the *ko*-form of the dependent verb, belongs to the verbs of class I, which are characterized by constructional control.

Control versus raising

Some of the verbs cited in (25) are phase/aspectual verbs which could alternatively be considered to be raising verbs since they do not pose any thematic restriction on the matrix subject. However, some of them such as V-*e/a pelita* ‘finish’ require an agentive subject thereby qualifying as control verbs. With other verbs the situation is more intricate. *Sicakhata* ‘begin’, e.g., permits inanimate subjects such as *pi* ‘rain’ in the following example.

(27) Pi-ka o-ki sicakhay-ss-ta.
rain-NOM come-NML begin-PAST-DECL
‘It began to rain.’

Yet, even for *sicakhata* ‘begin’, one can assume a variant with an agentive subject which renders *sicakhata* ambiguous between a raising and a control reading.

This assumption goes back to Perlmutter's (1970) analysis of the English verb *begin* and has been adopted, for instance, in Matsumoto's (1996) analysis of aspectual compound verbs in Japanese. As for Korean control verbs, such an assumption is backed by the following data: Sells (1998) mentions that raising predicates cannot be followed by the subject honorific suffix *-(u)si*. This is shown by the example in (28), where *-(u)si* can only appear on the embedded verb *ilkta* 'read' but not on the matrix verb *pota* 'seem'.

(28) ilk-usi-na po(*-si)-ta
read-SHON-CMP seem(-*SHON)-DECL
'(someone honorable) seems to read' (Sells 1998:11)

The ungrammaticality of such examples can be explained by a locality condition on subject honorification as assumed by Kuno (1987) for Japanese. This condition requires that subject honorification can only apply if the honorific suffix is attached to a morpheme whose argument structure contains the subject argument. Since the argument structure of a raising verb does not contain a thematic subject, (28) is ungrammatical. *Sicakhata*, however, can precede the subject honorific *-si* as in (28). The grammaticality of (28) then indicates that *sicakhata* can function as a control verb with a thematic (agentive) subject.

(29) Sensayngnim-kkeyse$_i$ [_$_{i/*j}$ chayk-ul ilk-ki] sicakha-si-ess-ta.
teacher-NOM.HON book-ACC read-NML begin-SHON-PAST-DECL
'The teacher began to read the book.'

All of the phase/aspectual verbs cited in (25) can be followed by the subject honorific. Therefore, I characterize these verbs as subject control verbs, which have a raising variant in some cases.

Overt controllees

In addition to a null-subject, subject control verbs such as *kepwuhata* 'refuse' also allow an overt embedded subject such as the reflexive *caki* in (30a). The embedded subject can also consist of two coordinated constituents such as the reflexive and the noun *atul* 'son' in (30b). As a consequence, partial control arises, i.e., the referent of the matrix subject is contained in the referent of the embedded subject.

(30) a. Chelswu-nun$_i$ [caki-ka$_i$ koki(-lul) mek-ki-lul] kepwuhay-ss-ta.
C.-TOP self-NOM meat(-ACC) eat-NML-ACC refuse-PAST-DECL
lit.: 'Chelswu refuses that he himself eat meat.'

b. Chelswu-nun$_i$ [caki-wa$_i$ atul-i koki(-lul) mek-ki-lul]
C.-TOP self-and son-NOM meat(-ACC) eat-NML-ACC
kepwuhay-ss-ta.
refuse-PAST-DECL
lit.: 'Chelswu refuses that he himself and his son eat meat.'

Overt embedded subjects are not restricted to nominalized complements. They can also appear in *ko*-complements. As (31) shows, the subject control verb *yaksokhata* 'promise' is compatible with *ko*-complements that contain a coordination of a reflexive and a personal pronoun. The reflexive is identified with the matrix subject while the referent of the pronoun *kunye* 'she' is identified with the referent of the matrix object or another person. As a consequence, split or partial control arises.

(31) Chelswu-ka$_i$ Yenghi-eykey$_j$ [caki$_i$-wa kunye$_{k/(?)j}$-ka
C.-NOM Y.-DAT self-and she-NOM
ttena-keyss-ta]-ko yaksokhay-ss-ta.[7]
leave-VOL-DECL-CMP promise-PAST-DECL
'Chelswu promised Yenghi$_j$ that he (himself) and she$_{k/(?)j}$ will leave together.'

The admissibility of overt subjects shows that control is determined entirely semantically: neither the nominalization nor the *ko*-complements suppresses the subject of the embedded verb. Therefore, control does not result from the need of the identification of a suppressed subject argument.

In addition, the possibility of a coordinated subject constitutes an interesting typological case where split and partial control can be indicated by the conjunction of overt pronouns.

4.2. Object control

All of the object control verbs in the sample are directive verbs which involve manipulation of the object referent to various degrees. These verbs are given in (32).

(32) Object Control Verbs
class V: *yokwuhata* 'demand', *kangyohata* 'force', *seltukhata* 'persuade', *myenglyenghata* 'order', *yochenghata* 'request', *pwuthakhata* 'ask (as a favor)', *tokchokhata* 'press', *pwuchwukita* 'encourage', *kwenyuhata* 'induce', *chwungkohata* 'advise'

7 There seems to be some speaker variation in interpreting (31) as a case of split control. Out of eleven native speakers asked, all could accept the sentence in a partial control reading, while only six considered the sentence as grammatical with *kunye* 'she' and *Yenghi* being referentially identical.

In contrast to subject control verbs, all object control verbs belong to the class of manipulative/directive verbs. They share the meaning that the object referent is manipulated in order to make him bring about the event denoted by the embedded verb. This meaning entails referential identity of the matrix object and the embedded subject, i.e., object control. The relation between verb meaning and object control can be captured by the condition on semantic object control in (33).

(33) Condition on Semantic Object Control
A matrix verb exhibits semantic object control if its meaning involves the manipulation of the object referent to make him/her bring about the event denoted by the embedded verb.

Complement types

All object control verbs in the sample display the same array of complement types, i.e., nominalization, *ko*- and *tolok*-clauses. This is illustrated by the three sentences with the object control verb *seltukhata* 'persuade'.

(34) a. Chelswu-ka$_i$ Ilkyun-eykey$_j$ [_$_{j/*i/*k}$ Yenghi-lul manna-l kes-ul]
C.-NOM I.-DAT Y.-ACC meet-FUT.REL NML-ACC
seltukhay-ss-ta.
persuade-PAST-DECL
'Chelswu persuaded Ilkyun to meet Yenghi.'

b. Chelswu-ka$_i$ Ilkyun-eykey$_j$ [_$_{j/*i/*k}$ Yenghi-lul manna-la-ko]
C.-NOM I.-DAT Y.-ACC meet-IMP-CMP
seltukhay-ss-ta.
persuade-PAST-DECL
'Chelswu persuaded Ilkyun to meet Yenghi.'

c. Chelswu-ka$_i$ Ilkyun-eykey$_j$ [_$_{j/*i/*k}$ Yenghi-lul manna-tolok]
C.-NOM I.-DAT Y.-ACC meet-CMP
seltukhay-ss-ta.
persuade-PAST-DECL
'Chelswu persuaded Ilkyun to meet Yenghi.'

The compatibility with *ko*- and *tolok*-complements can be explained straightforwardly considering the directive or manipulative character of these verbs: the object referent is manipulated in order to make him/her bring about the event referred to by the embedded verb as a result. Therefore, *tolok*-complements are licensed by object control verbs. In this way, *tolok*-complements selected by object control verbs are interpreted analogously to resultative adjuncts as in the following sentence:

(35) Chelswu-nun kikyey-lul$_i$ [_$_{i/*j}$ cal caktongha-tolok]
C.-TOP machine-ACC well run-CMP
koch-yess-ta.
repair-PAST-DECL
'Chelswu repaired the machine so that it ran well.'

Overt controllees

Again, as in subject control structures, the embedded subject can be overt. In the sentences below, the embedded subject is a coordination of the personal pronoun *ku* and the proper noun *Mary*. Since *ku* is coreferential with *Bill*, the sentence constitutes a case of partial control.

(36) John-un$_i$ Bill-eykey$_j$ [ku$_{j/*i/*k}$-wa Mary-ka hamkkey ttena]-tolok
J.-TOP B.-DAT he-and Mary-NOM together leave-CMP
seltukhay-ss-ta.
persuade-PAST-DECL
'John persuaded Bill that he (= Bill) and Mary leave together.'
(Kim 1995:208)

There are also instances of an overt embedded object found with exhaustive control. The following example is taken from Kim (1995:199).

(37) John-un Mary-eykey$_i$ [Mary-ka$_i$ cip-ey ka-tolok] myenglyenghay-ss-ta.
J.-TOP M.-DAT M.-NOM house-to go-CMP order-PAST-DECL
'John ordered Mary, that Mary go home.'

Though the example above is judged as grammatical by Kim, there seems to be a variation in grammaticality judgments. The next example is taken from Choi (1988), who regards it as marked. As the paraphrase indicates, such examples involve emphasis and contrastive focus.

(38) ? Na-nun John$_i$-eykey [ku$_i$-ka ku kes-ul ha-l kes-ul]
I-TOP J.-DAT he-NOM this thing-ACC do-FUT.REL NML-ACC
myenghay-ss-ta.
order-PAST-DECL
'I ordered John that he do it and not anyone else.'
(Choi 1988:153 after Owen-Bratt 1996:47)

The marked or emphatic status can be motivated by the fact that the coreference of the embedded subject and the matrix subject is already fixed semantically. Therefore, the realization of the embedded subject is superfluous except for the purpose of emphasis or contrast.

In the literature, some instances of *seltukhata* with an overt embedded subject are cited as non-control variant. Monahan (2003:358) regards (39a) as a non-control version of *seltukhata* since the matrix object and the embedded subject

are distinct in reference. Moreover, it seems that the non-control version is indicated by the quotative complementizer *ko* as opposed to the control variant with *tolok*. However, the example in (39b) demonstrates that the *tolok*-variant also allows disjoint subject referents.

(39) a. Chelswu-nun Yenghi-lul/eykey [Swuyeng-i kakey-ey
C.-TOP Y.-ACC/DAT S.-NOM store-to
ka-yaha-n-ta-ko] seltukhay-ss-ta.
go-should-PRES-DECL-CMP persuade-PAST-DECL
'Chelswu persuaded Yenghi that Swuyeng should go to the store.'

b. Chelswu-nun pwumo-eykey [kakkak-uy ai-ka swukcey-lul
C.-TOP parents-DAT each-GEN child-NOM homework-ACC
ha-tolok] seltukhay-ss-ta.
do-CMP persuade-PAST-DECL
'Chelswu persuaded the parents to make each child do the homework.' (Cormack & Smith 2004:68, ftn. 23)

In analyzing these examples, I will follow Cormack & Smith (2004) who assume that they are instances of causative coercion, i.e., they are interpreted by implicitly causativizing the embedded verb. The unexpressed causer, then, is understood to be coreferential with the matrix object, which renders the examples above as special cases of object control.

Backward control

Korean has been characterized as a language with backward object control based on evidence such as in (40). (40a) shows 'forward' control with the controller expressed as matrix object and the embedded subject, i.e. the controllee, being unrealized. In contrast, in (40b) the nominative marked *Yenghi* is the controller whereas the unrealized matrix object is the controllee. Since the controller is realized inside the complement clause and positioned below the unexpressed controllee in the matrix clause, (40b) can be considered as backward control as opposed to 'ordinary' forward control with the controller in a syntactically higher position.

(40) a. Chelswu-nun Yenghi-lul$_i$ [_$_i$ kakey-ey ka-tolok] seltukhay-ss-ta.
C.-TOP Y.-ACC store-to go-CMP persuade-PAST-DECL
'Chelswu persuaded Yenghi to go to the store.' (forward control)

b. Chelswu-nun _$_i$[Yenghi-ka$_i$ kakey-ey ka-tolok] seltukhay-ss-ta.
C.-TOP Y.-NOM store-to go-CMP persuade -PAST-DECL
'Chelswu persuaded Yenghi to go to the store.' (backward control)
(Monahan 2003:357)

Monahan has taken backward control in Korean as evidence for a movement analysis of control in the sense of Hornstein (1999). In Monahan's approach the

overt subject inside the *tolok*-clause is raised to the position of the unexpressed matrix object to receive accusative case and get theta-marked by *seltukhata*. Contrary to Monahan, Cormack & Smith (2004) assume a *pro* as matrix object. However, in order to avoid a Condition C violation they have to stipulate that the *tolok*-clause is scrambled in front of *pro*. But also the raising account cannot explain instances of object control such as (36) above where both the controller and the controllee are overt. I will discuss this point in more detail in section 7.

Since all object control verbs that show backward control are instances of semantic control, the presence of backward control seems to be closely tied to semantic control. However, this relation is neglected in Monahan's syntactic approach.

4.3. Control shift

Generally, a control shift can hardly be triggered in Korean. Park (2001) cites the sentence in (41) as an instance of subject control. Since *seltukhata* 'persuade' is basically an object control verb, this can be considered as an instance of a shift from object to subject control, which is triggered by attaching the volitional suffix *-keyss* to the embedded verb (see next chapter for a discussion of volitional suffixes).

(41) C_i-ka Y_j-eykey [__$_i$ ttena-keyss-ta-ko] seltukhay-ss-ta.
C-TOP Y-DAT leave-VOL-CMP persuade-PAST-DECL
'C persuaded Y that he (=C) will leave.' (Park 2001:8)

However, the example above is not easily acceptable for native speakers. Moreover, in this case *seltukhata* rather seems to mean something like 'make believe'.

Additionally, a control shift cannot be triggered by passivizing the embedded verb. *Pwuthakhata*, e.g., translates into English as 'ask to do', which permits a control shift as well as German *bitten* 'ask to do' when the embedded verb is passivized. As (42) shows, passivizing the embedded verb renders the sentence ungrammatical.

(42) * Chelswu-nun$_i$ Yenghi-eykey$_j$ [_$_{i/j/k}$ phathi-ey chotay-toy-la-ko]
C.-TOP Y.-DAT party-to invite-PASS-IMP-CMP
puthakhay-ss-ta.
ask-PAST-DECL
intended: 'Chelswu asked Yenghi to be invited to the party.'

A reading similar in meaning to 'Chelswu asked Yenghi to be invited to the party.' is yielded by adding the so-called 'reflexive benefactive' (Sohn 1999:384) *-ta(l)* to the embedded verb. This reflexive entails that the benefaction is intended for the speaker. In (43) this means that the referent of the matrix sub-

ject (= the speaker) is interpreted as object argument of the embedded verb *cho-tayhata* 'invite'. Nevertheless, the example is not an instance of a shift from object to subject control but remains a case of object control.

(43) Chelswu-nun$_i$ Yenghi-eykey$_j$ [_$_{j/*i/*k}$ phathi-ey chotayhay-tal-la-ko]
C.-TOP Y.-DAT party-to invite-BEN-IMP-CMP
pwuthakhay-ss-ta.
ask-PAST-DECL
'Chelswu asked Yenghi to invite him to the party.'

Finally, it seems that a control shift is not induced by world knowledge. In (44), it is most likely that the referent of the matrix object and not the referent of the matrix subject will come out of prison. Therefore, the intended English translation involves a shift from subject to object control. However, such a shift is excluded in the example in (44). In addition, the unlikely subject control reading is not accessible, either, even under the assumption that the lawyer is a prisoner himself. Presumably this can be explained by the fact that the embedded event 'come out of jail' cannot be brought about by the referent of the matrix subject, which yields a violation of the condition for subject control given in (26) above.

(44) * Pyenhosa-nun$_i$ ku coyswu-eykey$_j$ [_$_{j/i/k}$ kamok-eyse kot
lawyer-TOP the prisoner-DAT jail-from soon
nao-l kes-ul] yaksokhay-ss-ta.
come.out-FUT.REL NML-ACC promise-PAST-DECL
intended: 'The lawyer promised the prisoner to come out of jail soon.'

5. Control triggered by modal affixes

5.1. Volitional, imperative, and propositive

As stated above, verbs that involve some speech act can select complements marked by the quotative particle *ko*. The particle can follow the full range of tense and modal affixes. If a verb like *malhata* 'say' selects a *ko*-complement containing the volitional suffix *-keyss*, the imperative *-la*, or the propositive *-ca*, subject control, object control, or split control result. This is illustrated by the following examples. In (45) no modal affix is attached to the subordinate verb *hata* 'do'. The unexpressed subject in (45a) is preferably interpreted as coreferential with the matrix subject though this is not necessarily the case. In addition, (45b) shows that the embedded verb can realize a disjoint subject.

(45) a. Chelswu-nun$_i$ Yenghi-eykey$_j$ [_$_{i/j/k}$ caknyen-ey safari-yehayng-ul
C.-TOP Y.-DAT last.year-in safari-trip-ACC
hay-ss-ta-ko] malhay-ss-ta.
do-PAST-DECL-CMP say-PAST-DECL
'Chelswu told Yenghi that he/she/s.o. did a safari trip last year.'

b. Chelswu-nun Yenghi-eykey [Ilkyun-i caknyen-ey safari-yehayng-ul
C.-TOP Y.-DAT I.-NOM last.year-in safari-trip-ACC
hay-ss-ta-ko] malhay-ss-ta.
do-PAST-DECL-CMP say-PAST-DECL
'Chelswu told Yenghi that Ilkyun did a safari trip last year.'

If, however, the volitional suffix *-keyss* is attached to *hata* as in (46), subject control results. Hence, if an embedded subject is realized that is distinct in reference from the matrix subject, the resulting sentence is ungrammatical, as example (46b) illustrates.

(46) a. Chelswu-nun$_i$ Yenghi-eykey$_j$ [_$_{i/*j/*k}$ naynyen-ey safari-yehayng-ul
C.-TOP Y.-DAT next.year-in safari-trip-ACC
ha-keyss-ta-ko] malhay-ss-ta.
do-VOL-DECL-CMP say-PAST-DECL
'Chelswu told Yenghi that he wants to go on a safari next year.'

b. * Chelswu-nun Yenghi-eykey [Ilkyun-i naynyen-ey
C.-TOP Y.-DAT I.-NOM next.year-in
safari-yehayng-ul ha-keyss-ta-ko] malhay-ss-ta.
safari-trip-ACC do-VOL-DECL-CMP say-PAST-DECL
intended: 'Chelswu told Yenghi that Ilkyun wants to go on a safari trip next year.'

Replacing *-keyss* with the imperative suffix *-la* as in (47) yields object control. Again, no independent subject is allowed to be realized inside the *ko*-complement.

(47) a. Chelswu-nun$_i$ Yenghi-eykey$_j$ [_$_{j/*i/*k}$ naynyen-ey safari-yehayng-ul
C.-TOP Y.-DAT next.year-in safari-trip-ACC
ha-la-ko] malhay-ss-ta.
do-IMP-CMP say-PAST-DECL
'Chelswu told Yenghi to go on a safari trip next year.'

b. * Chelswu-nun Yenghi-eykey [Ilkyun-i naynyen-ey
C.-TOP Y.-DAT I.-NOM next.year-in
safari-yehayng-ul ha-la-ko] malhay-ss-ta.
safari-trip-ACC do-IMP-CMP say-PAST-DECL
intended: 'Chelswu told Yenghi that Ilkyun should go on a safari trip next year.'

Finally, adding the propositive affix *-ca* to the embedded verbs results in a split control reading as in (48).

(48) Chelswu-nun$_i$ Yenghi-eykey$_j$ [_$_{i+j/*i/*j/*k}$ naynyen-ey safari-yehayng-ul
C.-TOP Y.-DAT next.year-in safari-trip-ACC
ha-ca-ko] malhay-ss-ta.
do-PROP-CMP say-PAST-DECL
'Chelswu told Yenghi to go on a Safari together next year.'

It should be mentioned that not all expressions of modality trigger control. As (49) illustrates, using the modal suffix *-yaha* 'must' instead of *-la* does not yield object control.

(49) Chelswu-nun Yenghi-eykey [Ilkyun-i safari-yehayng-ul
C.-TOP Y.-DAT I.-NOM safari-trip-ACC
hay-yaha-n-ta-ko] malhay-ss-ta.
do-should-PRES-DECL-CMP say-PAST-DECL
'Chelswu told Yenghi that Ilkyun should go on a safari trip.'

5.2. Properties of the embedded imperative

There has been some debate if *-la* in structures like (47a) is a "true" imperative suffix or rather a modal marker with a different meaning (cf. Han 2004 as an exponent of the pseudo-imperative hypothesis and Pak 2004 as a representative of the embedded imperative hypothesis). One argument in favor of the pseudo-imperative hypothesis is that only a special neutral speech level form of the imperative can be embedded as in (50b). Embedding the formal imperative as in (50c) yields an ungrammatical sentence. Yet, in direct speech as in (50a) the formal imperative can be freely used. This contrast apparently indicates that the embedded form in (50b) is not a real imperative but something else, for example an optative or irrealis marker.

(50) a. Chelswu-nun Hansol-eykey "Cey oytwu-lul ip-usipsio!" lako
C.-TOP H.-DAT my coat-ACC put.on-IMP.FORM CMP
malhay-ss-ta.
say-PAST-DECL
'Chelswu said to Hansol, "Put on my coat!"'

b. Chelswu-nun Hansol-eykey [ku-uy oytwu-lul ip-ula-ko]
C.-TOP H.-DAT he-GEN coat-ACC put.on-IMP-CMP
malhay-ss-ta.
say-PAST-DECL
'Chelswu told Hansol to put on his coat.'

c. * Chelswu-nun Hansol-eykey [ku-uy oytwu-lul
C.-TOP H.-DAT he-GEN coat-ACC
ip-usipsio-ko] malhay-ss-ta.
put.on-IMP.FORM-CMP say-PAST-DECL
intended: 'Chelswu told Hansol to put on his coat.'

However, the same restriction also applies to the propositive and the declarative. As (51a) shows, the formal speech level form of the propositive can appear in direct speech. If the propositive is embedded as in (51b/c), only the neutral propositive marker *-ca* can be used.

(51) a. Na-nun Chelswu-eykey "Sinay-eyse Hansol-ul mana-sipsita!" lako
I-TOP C.-DAT city.center-in H.-ACC meet-PROP.FORM CMP
malhay-ss-ta.
say-PAST-DECL
'I said to Chelswu, "Let's meet Hansol in the city center!"'

b. Na-nun Chelswu-eykey [sinay-eyse Hansol-ul mana-ca-ko]
I-TOP C.-DAT city.center-in H.-ACC meet-PROP-CMP
malhay-ss-ta.
say-PAST-DECL
'I told Chelswu to meet Hansol in the city center.'

c. * Na-nun Chelswu-eykey [sinay-eyse Hansol-ul mana-sipsita-ko]
I-TOP C.-DAT city.c.-in H.-ACC meet-PROP.FORM-CMP
malhay-ss-ta.
say-PAST-DECL
intended: 'I told Chelswu to meet Hansol in the city center.'

The same picture holds with the declarative in (52). Only the neutral speech level form of the declarative can be embedded as in (52a), but not the formal speech level form as in (52b).

(52) a. Yuha-nun Chelswu-eykey [sinay-eyse Hansol-ul manna-n-ta-ko]
Y.-TOP C-DAT city.center-in H.-ACC meet-PRES-DECL-CMP
malhay-ss-ta.
say-PAST-DECL
'Yuha told Chelswu that Yuha/s.o. will meet Hansol in the city center.'

b. * Yuha-nun Chelswu-eykey [sinay-eyse Hansol-ul
Y.-TOP C-DAT city.center-in H.-ACC
manna-pnita-ko] malhay-ss-ta.
meet-DECL.FORM-CMP say-PAST-DECL
intended: 'Yuha told Chelswu that Yuha/s.o. will meet Hansol in the city center.'

The examples in (51) and (52) clearly show that the restriction on the embedding of speech level markers is not peculiar to the imperative. Therefore, the prohibition of speech style markers on embedded imperatives cannot be regarded as an argument in favor of the pseudo-imperative hypothesis.

A further argument in favor of the pseudo-imperative hypothesis might be that *ko*-clauses could be instances of direct speech. However, as already shown by (50a) and (51a) above, with direct speech, the particle *lako* (or *hako*) is used instead of *ko*.

Moreover, contrary to the direct speech in (53a), deictic expressions such as *nayil* 'tomorrow' or *i* 'this' are adapted to the situational context of the utterance in indirect speech as in (53b):

(53) a. Mia-nun ku ai-eykey 'ne nayil i kos ulo o-nela!' hako/lako
M.-TOP the kid-to you tomorrow this place to come-IMP CMP/CMP
solichy-ess-ta.
shout-PAST-DECL
'Mia shouted to the kid, "Come here tomorrow!"'

b. Mia-nun$_i$ ku ai-eykey$_j$ [_$_{j/*i/*k}$ taum nal ku kos-ulo o-la-ko]
M.-TOP the kid-to next day that place-to come-IMP-CMP
solichy-ess-ta.
shout-PAST-DECL
'Mia shouted to the kid to go to that place the next day.'
(Sohn 1999:324f)

In addition, *ko*-clauses cannot be characterized as embedded roots in the sense of Hooper and Thompson (1973). For example, a matrix verb selecting a *ko*-clause can be negated, which should not be admissible with embedded roots.

(54) Chelswu-nun$_i$ Yenghi-eykey$_j$ [_$_{j/*i/*k}$ naynyen-ey safari-yehayng-ul
C.-TOP Y.-DAT next.year-in safari-trip-ACC
ha-la-ko] malha-ci#anha-ss-ta.
do-IMP-CMP say-NEG-PAST-DECL
'Chelswu did not tell Yenghi to go on a safari trip next year.'

5.3. Restrictions on the use of modal affixes in *ko*-complements

Not every verb subcategorizing for a *ko*-complement permits the modal suffixes to be attached to the embedded verb. A verb like *cwucanghata* 'claim', for instance, excludes any of the three modal suffixes. This is immediately evident for *-la* and *-ca* since *cwucanghata* does not provide a matrix verb object, but also the subject-oriented *-keyss* cannot be used as shown by the example in (55).

(55) ??/* Chelswu-nun$_i$ [_$_{i/j}$ Yenghi-lul top-keyss-ta-ko]
C.-TOP Y.-ACC help-VOL-DECL-CMP
cwucangha-n-ta.
claim-PRES-DECL
intended: 'Chelswu claims that he wants to help Yenghi.'

Moreover, the mere presence of an object argument in the argument structure of the matrix verb is not sufficient to license the use of the imperative suffix *-la* as a trigger for object control. As can be seen from (56a) and (b), attaching the imperative *-la* to a verb embedded below *hyeppakhata* 'threaten' is admissible only if the embedded verb refers to a self-controllable action such as *il-ul kumantwuta* 'quit one's job'. *Cikep-ul ilhta* 'loose one's job' in (56b), on the other hand, cannot be combined with the imperative, since it denotes an event which cannot be brought about by the object referent.[8]

(56) a. Sacang-un$_i$ na-eykey$_j$ [_$_{*i/j/*k}$ il-ul kumantwu-la-ko]
boss-NOM I-DAT job-ACC quit-IMP-CMP
hyeppakhay-ss-ta.
threaten-PAST-DECL
literally: 'The boss threatened that I will quit my job.'

b. * Sacang-un$_i$ na-eykey$_j$ [_$_{i/j/k}$ cikep-ul ilh-ula-ko]
boss-NOM I-DAT job-ACC loose-IMP-CMP
hyeppakhay-ss-ta.
threaten-PAST-DECL
intended: 'The boss threatened that I will loose my job.'

Additionally, the propositive affix is excluded if it is incompatible with the illocution of the matrix verb. In (57), the matrix verb *myenglyenghata* 'order' is a highly directive verb, which is not compatible with the propositive meaning of *-ca*.

(57) ??Na-nun$_i$ Mary-eykey$_j$ [_$_{i+j}$ ttena-ca-ko] myenglyenghay-ss-ta.
I-TOP M.-DAT leave-PROP-CMP order-PAST-DECL
intended: 'I ordered Mary to leave together.'

Object control verbs seem to obligatorily require the imperative suffix to appear when a *ko*-complement is chosen. All of these verbs exhibit inherent control as discussed in the previous section. With *kangyohata* 'force', for instance, *-la* must be attached to the embedded verb if a *ko*-complement is chosen. This is illustrated in (58).

8 I owe this observation to Nayoung Kwon (p.c.)

(58) a. Theylelisuthu-nun$_i$ incil-tul-eykey$_j$ [_$_{j/*i/*k}$ nwuwu-la-ko]
terrorist-TOP hostage-PL-DAT lie.down -IMP-CMP
kangyohay-ss-ta.
force-PAST-DECL
'The terrorists forced the hostages to lie down.'

b. * Theylelisuthu-nun$_i$ incil-tul-eykey$_j$ [_$_{j/i/k}$ nwuwu-ta-ko]
terrorist-TOP hostage-PL-DAT lie.down -DECL-CMP
kangyohay-ss-ta.
force-PAST-DECL
intended: 'The terrorists forced the hostages to lie down.'

So far, I have shown the control effects of modal affixes when selected by utterance verbs such as *malhata* 'say'. Moreover, it has become evident that a specific modal affix can only appear if compatible with the meaning of the matrix verb. Additionally, verbs that exhibit semantic object control such as *kangyohata* 'force' obligatorily require the imperative suffix on the embedded verb. In the next section, I will present a lexical approach to the data outlined above.

6. An approach to control in Korean

In this section, I will first discuss a lexical treatment of control determined solely by the meaning of the matrix verb. Then I will proceed to a treatment of the control effect of modal affixes.

6.1. Lexically determined semantic control

The conditions on semantic subject and object control repeated below are sufficient to predict instances of control determined by the matrix verb.

(59) Condition on Semantic Subject Control
A matrix verb exhibits semantic subject control if its meaning involves that the event denoted by the embedded verb is brought about by the referent of the matrix subject.

(60) Condition on Semantic Object Control
A matrix verb exhibits semantic object control if its meaning involves the manipulation of the object referent to make him/her bring about the event denoted by the embedded verb.

Since a person who brings about an event is responsible for this event, both conditions can be captured in a more formal way by the responsibility relation RESP(i,s) proposed by Farkas (1988). According to Farkas (1988:36) the relation RESP(i,s) holds "between an individual i and a situation s just in case i brings about s". Farkas utilizes this relation to predict the controller choice in control

structures. For control verbs, Farkas assumes that one of the matrix verb participants stands in the responsibility relation with the situation denoted by the complement verb and consequently calls these control verbs 'RESP-inducing'. This participant, called *i*(V'm), with V'm being a projection of the matrix verb, then is chosen as controller of the infinitival complement by the Principle of Controller Choice in (61).

(61) Principle of Controller Choice (PCC, Farkas 1988:44)
For RESP-inducing V's, the controller of the infinitival complement is the argument linked to *i*(V'm).

Farkas' principle suffices to capture the controller choice of all the Korean matrix verbs that determine control solely because of their meaning. Therefore, the Korean data can be seen as evidence for this principle. Consequently, the conditions repeated above can be substituted by the more general principle in (61).

6.2. Control triggered by modal affixes

The control effect of modal affixes can be understood best by considering their use in main clauses. I will begin with the volitional affix *-keyss* and proceed with the imperative and propositive markers *-la* and *-ca*.

6.2.1. Volitional (-keyss)

The use of *-keyss* in main sentences is restricted to first person subjects in declarative sentences or second person subjects in interrogative sentences as in (62a) and (b), respectively. A third person subject as in (62c) is prohibited (Sohn 1999:361).

(62) a. Ce-nun an ka-keyss-eyo.
I-TOP NEG go-VOL-AHON
'I don't intend to go.'
b. Sensayng-nim-un ka-si-keyss-eyo?
teacher-HON-TOP go-SHON-VOL-AHON
'Do you intend to go?' (Sohn 1999:361)
c. * Chelswu-nun an ka-keyss-eyo.
C.-TOP NEG go-VOL-AHON
intended: 'Chelswu does not intend to go.'

The prohibition of third person subjects is not a peculiarity of *-keyss*: in general, predicates that refer to inner states, emotions or sensations such as *simsimhata* 'be bored' in (63) only permit first person subjects in declarative sentences. A second or third person subject is only allowed if an evidential marker as *hata* 'do, show signs of' is added to the main predicate as in (63c).

(63) a. Na-nun simsimha-ta.
I-TOP bored-DECL
'I am bored.'
b. ? Chelswu-nun simsimha-ta.
C.-TOP bored-DECL
intended: 'Chelswu is bored.'
c. Chelswu-nun simsimhay ha-n-ta.
C.-TOP bored.INF do-PRES-DECL
'Chelswu seems to be bored/shows signs of being bored.'

Such a restriction can be captured tentatively by the constraint in (64).

(64) **INNER STATE** (tentative)
Unobservable inner states (psychological or sensory) can only be asserted about the own person.

The restriction on first person subjects does not apply if *-keyss* is attached to a verb embedded in a *ko*-complement. This is illustrated by the example repeated below.

(65) Chelswu-nun$_i$ Yenghi-eykey$_j$ [_$_{i/*j/*k}$ naynyen-ey safari-yehayng-ul
C.-TOP Y.-DAT next.year-in safari-trip-ACC
ha-keyss-ta-ko] malhay-ss-ta.
do-VOL-DECL-CMP say-PAST-DECL
'Chelswu told Yenghi that he wants to go on a safari next year.'

The grammaticality of (65) with a third person subject can be explained if one takes into consideration that *-keyss* is embedded under the utterance verb *mal-hata*. As a result, the person who utters the embedded clause is the subject of the matrix sentence and not the person who utters the whole complex sentence. Therefore, the unexpressed subject of *ha-keyss-ta* can only be coreferential with the matrix subject. Any other reference would involve a violation of INNER STATE.

If subject control in (65) is due to INNER STATE, we expect the same effect when the embedded predicate is a psych or sensory adjective. As the examples in (66) show, this prediction is borne out. In (66) the embedded predicate is the psych adjective *simsimhata* 'bored'. Consequently, the unrealized subject in (66a) cannot be distinct in reference from the matrix subject. In (66b) an overt, disjoint subject is realized in the embedded clause. This yields an ungrammatical sentence due to a violation of INNER STATE.

(66) a. Chelswu-nun$_i$ Yuha-eykey$_j$ [_$_{i/*j*/k}$ simsimha-ta-ko] malhay-ss-ta.
C.-TOP Y.-DAT bored-DECL-CMP tell-PAST-DECL
'Chelswu told Yuha, that he/*Yuha/*s.o. is bored.'

b. * Chelswu-nun Yuha-eykey [Yenghi-ka simsimha-ta-ko]
C.-TOP Y.-DAT Y.-NOM bored-DECL-CMP
malhay-ss-ta.
tell-PAST-DECL
intended: 'Chelswu told Yuha that Yenghi is bored.'

Moreover, if the embedded predicate is a two-place adjective with a double nominative case frame like *twulyepta* 'be afraid', a nominative NP inside the *ko*-clause can only be interpreted as the non-subject argument of *twulyepta*. Therefore, (67b) is only acceptable with the interpretation that Chelswu told Yuha that he is afraid of Yenghi, whereas the interpretation that Chelswu told Yuha that Yenghi is afraid is not accessible.

(67) a. Chelswu-nun$_i$ Yuha-eykey$_j$ [_$_{i/*j/*/k}$ twulyep-ta-ko] malhay-ss-ta.
C.-TOP Y.-DAT afraid-DECL-CMP tell-PAST-DECL
'Chelswu told Yuha that he/*Yuha/*s.o. is afraid.'

b. Chelswu-nun$_i$ Yuha-eykey$_j$ [_$_{i/*j/*/k}$ Yenghi-ka twulyep-ta-ko]
C.-TOP Y.-DAT Y.-NOM afraid-DECL-CMP
malhay-ss-ta.
tell-PAST-DECL
'Chelswu told Yuha that he/*Yuha/*s.o. is afraid of Yenghi.'
*'Chelswu told Yuha that Yenghi is afraid.'

For the control effect of the imperative and the propositive, INNER STATE does not play a role. However, as in the case of *–keyss*, the embedding below an utterance verb is crucial. This will be shown in the following.

6.2.2. Imperative (-la)

In a main clause, the imperative subject can only be a second person singular or plural as in (68). This restriction does not apply if the imperative appears on a verb in a *ko*-complement: in (69) the imperative subject is coreferential with the third person singular matrix object.

(68) (Ne-nun/Nehuytul-un) ka-la!
you.SG-TOP/you.PL-TOP go-IMP
'(You) go!', '(You.pl) go!'

(69) Chelswu-nun$_i$ Yuha-eykey$_j$ [_$_{j/*i/*k}$ ka-la-ko] malhay-ss-ta.
C.-TOP Y.-DAT go-IMP-CMP tell-PAST-DECL
'Chelswu told Yuha to go.'

Obviously, the embedding below the utterance verb *malhata* 'say' leads to a shift: the imperative subject is not identified with the addressee of the overall utterance but is selected out of the participants in the matrix clause. Since the referent of the indirect object is the addressee of the utterance expressed by *mal-*

hata, it is identified with the imperative subject. As a consequence, object control results.

6.2.3. Propositive (-ca)

Like imperatives the subjects of propositives are restricted in person in main clauses. As (70) shows, the unrealized subject of a propositive is a first person plural, i.e., the referent of the propositive subject constitutes the join of speaker and addressee referent.

(70) Ka-ca!
go-PROP
'Let's go!'

Again, this restriction is lifted if the propositive is embedded as in (71). Here, the propositive subject is a third person plural.

(71) Chelswu-nun$_i$ Yuha-eykey$_j$ [_$_{i+j/*i/*j/*k}$ ka-ca-ko] malhay-ss-ta.
C.-TOP Y.-DAT go-PROP-CMP say-PAST-DECL
'Chelswu told Yuha that they should go together.'

In analogy to imperatives, this can be explained by the shift in the utterance context: as a result of the embedding, the speaker and the addressee are identified as the referents of the matrix subject and matrix object. Consequently, the subject referent of an embedded propositive always consists of the referents of the matrix subject and the matrix object which yields split control.

The determination of the imperative and the propositive subject in main and embedded clauses is summarized in (72).

(72) Determination of the Imperative and Propositive Subject

	imperative	propositive
in main clause	subject = addressee	subject = speaker+addressee
in embedded clause	subject = matrix object	subject = matrix subject + matrix object

These regularities can be formulated as in the generalization below:

(73) Subject of Imperatives and Propositives
The imperative/propositive subject is determined out of the next-higher context. The next higher context is the situation of the utterance if the imperative/propositive appears in the main clause, and the matrix clause if the imperative/propositive appears in a clause embedded below a verb involving an utterance.

7. Some theoretical consequences

I have shown above that control in Korean is not triggered by the inability of the dependent verb to realize its highest argument. On the contrary, control arises due to the meaning of the matrix predicate. Therefore, the data discussed in the preceding sections supports theories which emphasize the importance of semantics in the analysis of control phenomena. This fact, however, is not immediately evident in languages where verbs that involve control due to their meaning and verbs that do not, subcategorize for the same infinitival complement. In English, for instance, both *refuse* and *wish* select the infinitive of the dependent verb. Therefore, the subject of the dependent verb has to be identified with the matrix subject to be realized. However, only in the case of *wish* this is purely a structural matter. In the case of *refuse* the identification of the matrix verb subject and the dependent verb subject is forced not only by structure but also by meaning. Yet, this contrast is blurred by the fact that both verbs take an infinitival complement. In Korean, on the other hand, both verbs select a *ki*-nominalization, which does not suppress the subject of the nominalized clause, but only with *kepwuhata* 'refuse' the embedded subject has to be coreferential with the matrix subject. Because of the absence of structurally triggered control the semantic component of control becomes transparent in Korean.

As a consequence, all theories which tie the coreference of arguments to the suppression of the embedded subject and the resulting need to discharge the highest theta-role face problems in explaining the Korean data. Additionally, it seems questionable if control coincides with other grammatical properties assumed to be decisive in the determination of control. In his syntactic approach, Landau (2004) argues that tense plays a central role for control. As evidence, he discusses subjunctive complements in the Balkan languages. Here, certain matrix verbs such as *try* or *forget* exhibit control with a subjunctive complement while others such as *persuade* or *ask* do not. This contrast is explained by a difference in the temporal relation between matrix verb and embedded verb. Landau assumes that subjunctives selected by *persuade* or *ask* contain a tense operator since their tense can be distinct from the matrix tense operator. On the other hand, subjunctives selected by *try* or *forget* fall within the matrix tense domain and exhibit "anaphoric" tense. This apparent correlation between tense and control then is integrated as central component in Landau's "calculus of control". In contrast to tense, mood is considered "at best secondary" (Landau 2004:849) in determining control. However, the Korean data suggests that mood is a decisive factor while tense (in the sense of Landau) seems to be epiphenomenal. This is clearly shown by the example repeated in (74).

(74) Chelswu-nun$_i$ Yenghi-eykey$_j$ [_$_{j/*i/*k}$ naynyen-ey safari-yehayng-ul
C.-TOP Y.-DAT next.year-in safari-trip-ACC
ha-la-ko] malhay-ss-ta.
do-IMP-CMP say-PAST-DECL
'Chelswu told Yenghi to go on a safari trip next year.'

Here, the temporal adverb modifies the embedded verb alone. According to Landau this can be regarded as an indicator of the relative temporal independence of the embedded verb. However, contrary to his prediction, the example above exhibits object control due to the presence of imperative mood. Consequently, mood can be said to be of primary importance in determining control in Korean.

A further point to be addressed concerns Monahan's (2003) analysis of backward control in Korean. As already mentioned, the absence of argument suppression in the complements of SOA-argument-taking predicates allows the embedded subject to be realized. This is illustrated by the sentence repeated in (75), which is an instance of split object control.

(75) John-un$_i$ Bill-eykey$_j$ [ku$_{j/*i/*k}$-wa Mary-ka hamkkey ttena]-tolok
J.-TOP B.-DAT he-and Mary-NOM together leave-CMP
seltukhay-ss-ta.
persuade-PAST-DECL
'John persuaded Bill that he (= Bill) and Mary leave together.'
(Kim 1995:208)

Such instances of overt controllee plus overt controller pose a problem for the control mechanism proposed by Monahan (2003). Monahan focuses on instances of so-called backward control with overt controllees and unrealized controllers. To derive both forward and backward control, he assumes that nominative marking inside the embedded clause is optional: if the controllee is marked with nominative in the embedded clause, it does not have to raise into the matrix clause for case purposes and the backward control variant arises. If nominative marking does not apply, the controllee raises into the matrix clause to receive case. However, the overt realization of both the dative-marked controller and the nominative-marked controllee such as in (75) cannot be yielded by that mechanism. Moreover, the raising analysis requires strict identity between controller and controllee which is not compatible with instances of split control such as (75).

8. Conclusion

The aim of the present study was to add the profile of Korean to a typology of control. Therefore, a sample of approximately seventy complement taking

predicates was analyzed with respect to complement types and control. As a result, Korean was characterized as a language, in which semantic control, especially inherent control, is predominant. In contrast to semantic control, constructionally induced control is only peripheral in Korean. Though this characterization is based on a small sample, we expect large-scale surveys to confirm our results.

The absence of a designated type of constructional control makes it possible to easily identify inherent control verbs and verbs which exhibit control dependent on modal affixes in the complement clause. These predicates constitute 45% of the verbal predicates in the sample. Such a ratio shows the importance of the matrix predicate's meaning in the determination of control, a fact that is not evident in languages where syntactic control blurs the effects of semantic control.

The control effect of modal affixes inside *ko*-complements has been analyzed as interaction between matrix verb meaning and specific constraints on the subject choice of a verb marked by these modals. Again, control was seen to result solely from semantic properties.

The present survey of complement taking predicates in Korean has identified five different verb classes which can be distinguished by the types of complement they select. The table summarizing these classes is repeated in (76).

(76) Matrix verbs: complement types and control

			control-inducing	control-neutral			
				NML	QUOT (*ko*)	RESULT (*-tolok*)	
structural control	subj	4	√	*	*	*	I
	obj	0					
inherent control	subj	8	*	√	*	*	II
		1	*	√	√	*	III
	obj	10	*	√	√	√	V
control dependent on modal affixes	subj	7	*	√/*	√	*	IV
non-control	/	23	*	√	*	*	II
		5	*	√	√	*	III

As already mentioned, out of the nine combinatorial possibilities resulting from three complement types only four are attested in the sample. This can in part be motivated semantically. Since the verbs of class V are all manipulative/directive, they allow *tolok*-complements. In addition, their directive meaning involves a speech act which licenses the realization of a *ko*-complement. As a consequence, the admissibility of a *tolok*-complement implies the admissibility of a *ko*-complement so that a verb class whose members exclusively combine with

tolok-clauses seems to be ruled out. Nominalized complements are attested for this class, as well. This complement type, which is compatible with the verbs of four of the five classes, qualifies as the least specialized complement. As all of the verbs in class V are object control verbs, there is a correlation between complement selection and control type.

The remaining three classes characterized by semantic control do not exhibit a clear correlation between control and selected complement. First, all instances of control attested for class II and class III verbs are cases of inherent subject control. *Yaksokhata* 'promise' is the only verb in class III which exhibits control. The remaining verbs in this class are attitude verbs such as *cwucanghata* 'claim' or *sayngkakhata* 'think' which do not determine control. The verbs of class II, which can only combine with a nominalization, are mainly desiderative and phasal/aspectual verbs such as *huymanghata* 'hope' or *sicakhata* 'begin'. In this class, the verbs without control are about three times as frequent as the control verbs, which is explained by the fact that semantic control comes about only as the effect of a specific meaning such as in the case of *kepwuhata* 'refuse'.

Finally, the verbs in class IV, utterance verbs such as *malhata* 'say', combine with a *ko*-complement and in the majority of cases with a nominalization. They exhibit control only if the embedded verb is followed by a modal marker. The verbs of this class can be considered the most interesting ones since they allow for constructions which explicitly show the interaction between the matrix verb's meaning and the complement type in determining control. Therefore, this class especially suggests further research.

Abbreviations

ACC	accusative
AHON	addressee honorification
BEN	benefactive
CMP	complementizer
COP	copula
DAT	dative
DECL	declarative clause ender
DECL.FORM	declarative clause ender, formal speech level
FUT.REL	future tense plus relativizer
GEN	genitive
GER	gerundive
HON	honorative suffix attached to nouns
IMP	imperative
IMP.FORM	imperative, formal speech level
INF	infinitive
INT	intimate speech level
NML	nominalization
NEG	negation
NOM	nominative
NOM.HON	honorific form of nominative
PAST	past tense
PAST.REL	past tense plus relativizer
PL	plural
PRES	present tense
PRES.REL	present tense plus relativizer
PROG	progressive aspect
PROP	propositive
PROP.FORM	propositive, formal speech level
RES	resultative aspect
SHON	subject honorification
SG	singular
TOP	topic
VOL	volitional

The sign '#' connects morphemes which form a meaning/functional unit that cannot be derived compositionally by the meaning of the single morphemes.

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Appendix: Verb classes distinguished by complement selection

Control verbs are written in boldface.

Class I (subject control; infinitive (V-*e*), gerund (V-*ko*))
V-*e pelita* 'finish', **V-*e pota*** 'try', **V-*e tayta*** 'keep doing', **V-*ko siphta*** 'want'

Class II (subject control, nominalization)
cikhye-pota 'watch', *cohahata* 'prefer', *culkepkye hata* 'amuse', *hoyphihata* 'avoid', *huymanghata* 'hope', *icepelita* 'forget', ***hwuhoyhata*** 'regret', *kalmanghata* 'yearn', *kkaytatta* 'sense', ***kepwuhata*** 'refuse', *kiekhata* 'remember', *kitayhata* 'expect', ***kkuthmachita*** 'finish', *kyelcenghata* 'resolve', *kyeyhoykhata* 'plan', ***kyeysokhata*** 'continue', ***memchwuta*** 'stop', *nukkita* 'feel', *panghayhata* 'prevent', *pota* 'see', ***samkata*** 'refrain', *pwuinhata* 'deny', ***sicakhata*** 'begin', *palata* 'wish', ***soholhi hata*** 'neglect', *sulilisskey mantulta* 'thrill', *sulphukey hata* 'sadden', *tutta* 'hear', *wenhata* 'want', *yelmanghata* 'be eager', *yukamulo sayngkakhata* 'be sorry'

Class III (subject control, nominalization, and *ko*-complement)
chwuchukhata 'suppose', *cwucanghata* 'claim', *kacenghata* 'assume', *mitta* 'believe', *sayngkakhata* 'think', ***yaksokhata*** 'promise; agree'

Class IV (control dependent on modal affix, *ko*-complement, nominalized complement possible for all verbs except for *sinho-lul ponayta* 'signal' but only reluctantly accepted with ***soksakita*** 'whisper', ***solichita*** 'shout')
hyeppakhata 'threaten', ***iyakihata*** 'tell', ***malhata*** 'say', ***potohata*** 'report', ***sinho-lul ponayta*** 'signal', ***soksakita*** 'whisper', ***solichita*** 'shout'

Class V (object control, nominalization, *ko*-complement and *tolok*-complement)
chwungkohata 'advise', ***kangyohata*** 'force', ***kwenyuhata*** 'induce', ***myenglyenghata*** 'order', ***pwuchwukita*** 'encourage', ***pwuthakhata*** 'ask (as a favor)', ***seltukhata*** 'persuade', ***tokchokhata*** 'press', ***yochenghata*** 'request', ***yokwuhata*** 'demand'