

DOUBLE (MULTIPLE) NOMINATIVE CONSTRUCTIONS AND PREDICATE SENTENCES IN KOREAN

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1. INTRODUCTION

The double (multiple) nominative constructions in Korean have been much of interest to grammarians, both in the structural and in the generative traditions; Since the two nominative NPs usually show the possessor-possessed relation, the usual treatments of this construction in modern linguistics have used some syntactic movements such as *Move-a* (GB: e.g. Y. Kang 1986) or *Possessor Ascension* (Relational Grammar: e.g. S. Park 1985). In a framework without transformations, this construction can be described in a different way. In this paper, I will analyze the double nominative constructions by means of a storage mechanism. Since my treatment will assume a kind of predicate sentential construction, I will briefly mention other cases of predicate sentences in Korean, i.e. relative clauses, control structures, and topic constructions.

2. TWO KINDS OF DOUBLE NOMINATIVE CONSTRUCTIONS

There are two kinds of double nominative constructions in Korean. The first class involves transitive verbs which require a nominative object, as *coh* in (1). The second class does not involve transitive verbs, and in this case two nominative nominals show the possessor-possessed relation, as shown in (2).

- (1) John-i Mary-ka coh- ϕ -ta.
J. -Nom M. -nom fond of-Pres-Dec
'John is fond of Mary.'
- (2) John-i nwun-i khu- ϕ -ta.
J.-Nom eye-Nom big-Pres-Dec
'John's eyes are big = John has big eyes.'

Regarding the first class, some psychological verbs in Korean such as *coh* in (1) select Theme (*Mary* in (1)) as nominative NPs, the second nominative in (1) is a kind of object. There are some lexical or syntactic regularities for this kind of verbs. For example,

- (3) a. i sinpal-i khu-ta. (Tense specification omitted)
this shoe-Nom big
'These shoes are big.'

- b. i *sinpal-i* *John-eykey* *khu-ta*.
 this shoe-Nom J.-Dat big
 'These shoes are (too) big for John.'
- c. *John-i* *i* *sinpal-i* *khu-ta*.
 J. -Nom this shoes-Nom big (Same meaning as b)
- (4) a. i *mulken-i* *coh-ta*.
 this thing-Nom good-Dec
 'This thing is good.'
- b. *Mary-ka* *John-eykey* *coh-ta*.
 M. -Nom J. -Dat fond-of- Dec
 'John is fond of Mary.'
- c. *John-i* *Mary-ka* *coh-ta*
 J. -Nom M. -Nom (Same meaning as b)

In the above examples, one-place predicates such as *khu* ('big') and *coh* ('good') become two-place predicates requiring Experiencer as a dative or as a nominative NP. The meaning has changed slightly in this process ('good' → 'fond of'). In other words, a VP, i.e. S\NP, has change to a TV, i.e. (S\NP[nom])\NP[nom] or (S\NP[nom])\NP[dat]. This process is lexical since, in addition to some change in meaning, some psychological one-place predicates such as *chakha* ('nice') do not have a two-place counterpart.

On the other hand, the double nominative constructions as in (2) are different. (2) does not mean that the eyes are (too) big for John. It simply means that John has big eyes. Syntactically, there is no counterpart sentence with *John-i* as a dative; e.g. **nwun-i John-eykey khu-ta*. Semantically, *John-nwun* ('eye') clearly shows the possessor–possessed relation. Also, there is a counterpart grammatical sentence with genitive NPs.

- (5) *John-uy* *nwun-i* *khu-ta*.
 J.-Gen eye-Nom big
 'John's eyes are big.'

Truth conditionally, (2) and (5) have the same meaning.¹⁾ Another crucial difference is that constructions of the second type, i.e. (2), may involve not only "double" but also "multiple" nominative NPs. For example,

- (6) *John-i* *apeci-ka* *nwun-i* *khuta*.
 J.-Nom father-Nom eye-Nom big
 'John's father's eyes are big. = John has a father who has big eyes.'

1) There are some differences in meaning, which will be discussed later.

Considering this fact, "Multiple Nominative Construction" seems to be a more appropriate term than "Double Nominative Construction"; however, I will continue to use the latter term since it has been used in traditional Korean grammars. In this paper, we will be concerned only with the double nominative constructions of the type in (2).

Before going into the analysis, I should make it clear that I am not going to treat the so-called Double Accusative (Object) Constructions of the following sentences.

- (7) a. John-i Mary-lul son-lul cap-ass-ta.
 J.-Nom M.-Acc hand-Acc catch-Past-Dec
 'John caught Mary's hand.' = 'John caught Mary by the hand.'
- b. John-i Mary-uy son-lul cap-ass-ta.
 J.-Nom M.-Gen hand-Acc catch-Past-Dec

It seems that the relation between (7a) and (7b) are the same as that of (2) and (5). So, some linguists such as Park (1985) treat double nominative constructions and double accusative constructions as instances of the same phenomenon, i.e. possessor ascension. But it seems to be the case that *son* ('hand') in (7) is just a locative realized as an accusative, as argued by Y. Kang (1986). For example,

- (8) a. John-i Mary-uy sonthop-lul kkakk-ass-ta.
 J.-Nom M.-Gen nail-Acc cut-Past-Dec
 'John cut Mary's nails.'
- b. *John-i Mary-lul kkakk-ass-ta.
 J.-Nom M.-Acc
 'John cut Mary.'
- c. ??John-i Mary-lul sonthop-lul kkakk-ass-ta.

Kkakk-('cut') requires as its object a specific body part (particularly nail or hair), not a person, as shown in (8b). Therefore, the assumption that the first accusative in the double accusative construction is the real object explains the awkwardness of (8c); *kkakk* does not allow a person as the object. Also, notice that (9b) is ungrammatical, while it would be grammatical if possessor ascension were involved here.

- (9) a. John-i Mary-uy apeci-lul manna-ass-ta.
 J.-Nom M.-Gen father-Acc meet-Past-Dec
 'John met Mary's father.'

b. *John-i Mary-lul apeci-lul manna-ass-ta.

In addition to the above fact, I can point out one more fact which clearly shows that double accusative constructions are different from double nominative constructions. Remember that the latter involves "multiple" nominative NPs rather than just "double". In contrast, the former may not involve more than two accusative NPs. For example,

- (10) a. *John-i Mary-lul son-lul sonkalak-lul capassta.
 J.-Nom M.-Acc hand-Acc finger-Acc caught
 'John caught Mary by a finger of her hand.'
- b. *John-i Mary-lul apeci-lul son-lul capassta.
 J.-Nom M.-Acc father-Acc hand-Acc caught
 'John caught Mary's father by the hand.'

Taking the above facts into account, I will not be concerned with double accusative constructions in connection with double nominative constructions.

3. POSSESSOR RAISING AND SEMANTIC CONSTRAINTS

For the sake of convenience, let us assume temporarily that the possessor–possessed relationship in double nominative constructions can be described as the result of some process called "Possessor Raising". Then the relationship between (5) and (2) and other pairs can be related by possessor raising.

- (11) (= (5) and (2))
- a. John-uy nwun-i khu-ta.
 J.-Gen eye-Nom big-Dec
 'John's eyes are big.'
- b. John-i nwun-i khu-ta.
 J.-Nom eye-Nom big-Dec
- (12) a. John-uy apeci-ka uysa-i-ta.
 J.-Gen father-Nom doctor-be-Dec
 'John's father is a doctor.'
- b. John-i apeci-ka uysa-i-ta.
 J.-Nom father-Nom doctor-be-Dec
- (13) a. John-uy khi-ka cak-ta.
 J.-Gen height-Nom short-Dec
 'John's height is short. = John is short.'

- b. John-i khi-ka cak-ta.
J.-Nom
- (14) a. ce path-uy phodo-ka masiss-ta.
that patch-Gen grape-Nom delicious-Dec
'That patch's grapes are delicious.'
- b. ce path-i phodo-ka masiss-ta.
that patch-Nom
- (15) a. John-uy kay-ka cic-ass-ta.
J.-Gen dog-Nom bark-Past-Dec
'John's dog barked.'
- b. *John-i kay-ka cic-ass-ta.
J.-Nom

No matter how we define possessor raising, it is not without restriction, as we see in (15). There should be some semantic (possibly pragmatic) restrictions in this kind of process. We might want to have the following constraints.

- (16) Double Nominative Construction is possible if the possessed is a relational noun such as *apeci* ('father'), *chinkwu* ('friend'), and *khi* ('height').
- (17) Possessor–possessed relation should be either the whole–part or producer–produced relation or the kin relation.

(16) seems to be a good approximation except for (14), because grapes, potatoes, or any other produced items are difficult to be regarded as relational nouns. (17) states the restriction on the semantic relation between the possessor and the possessed, and it seems to be the right generalization from the above examples. However, there are cases where the semantic relation between the possessor and the possessed is not enough to characterize Possessor Raising.

- (18) a. ce path-uy phodo-ka ssek-ass-ta.
that patch-Gen grape-Nom rotten-Past-Dec
'That patch's grapes were rotten.'
- b. *ce path-i phodo-ka ssek-ass-ta.
that patch-Nom
- (19) a. John-uy apeci-ka swuyeng-lul ha-ass-ta.
J.-Gen father-Nom swim-Acc do-Past-Dec
'John's father swam.'

- b. *John-i apeci-ka swuyeng-lul ha-ass-ta.
J.-Nom

Although the possessor–possessed relation in (18) and (19) is in accordance with (17), (18b) and (19b) are awkward.

The appropriate conclusion would be that there should be some semantic constraint on the whole predicate phrase. For example, *phodo-ka masiss-ta* ('be one whose grapes are delicious') vs. *phodo-ka ssek-ass-ta*, ('be one whose grapes were rotten') and *apeci-ka uysa-i-ta* ('be one whose father is a doctor') vs. *apeci-ka swuyeng-lul hay-ass-ta* ('be one whose father swam'). My claim is that there is some predicate sentences involved, as was assumed in traditional Korean grammars,²⁾ and the property expressed by that sentential predicate should denote a kind of inherent (possibly pragmatically determined) property.

(20) Inherent Property Requirement (IPR)

In Double Nominative Constructions of the form:
NP₁ -nom [NP₂ -nom VP] S[pred]

the property denoted by S[pred] should be some
inherent property for NP₁.

The properties such as being one whose eyes are big (11), being one whose father is a doctor (12), being one whose height is short (13), and being one whose produced items are delicious (14) are inherent for the predicated NP; in contrast, properties such as being one whose dog barked (15); being one whose produced items were rotten (18), and being one whose father swam (19) cannot be inherent properties. It is interesting to note that in (19), if we interpret the sentence in the sense that John's father was a professional swimmer, double nominative construction is perfectly acceptable because the property of being one whose father was a swimmer seems to be an inherent property; the son might swim well because his father was a good swimmer. In a sense, an inherent property of an individual is one that characterizes him.

The semantic requirement of (20) is also relevant to the sentences with more than two nominative NPs. Compare the following sentences.

- (21) a. Johnson-ssi-ka atul-i nwun-i khuta.
J.-Mr.-Nom son-Nom eye-Nom big
'Mr. Johnson is such a person that his son has big eyes.'

2) Cf. Hyun Bae Choe's *Wuli Malpon*. In recognizing predicate sentences in this construction, I am also in agreement with B. Park (1973), although the specific syntactic analyses may differ.

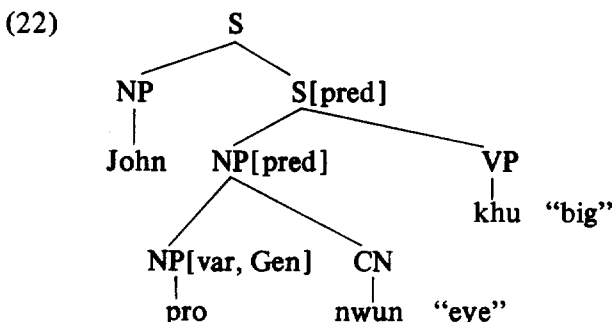
- b. *Johnson-ssi-ka kay-ka nwun-i khuta.
 J.-Mr.-Nom dog-Nom eye-Nom big
 'Mr. Johnson is such a person that his dog has big eyes.'
- c. *Johnson-ssi-ka atul-i kay-ka khuta.
 J.-Mr.-Nom son-Nom dog-Nom big
 'Mr. Johnson is such a person that his son's dog is big.'

The property of being one whose son's eyes are big may be an inherent property, but neither the property of being one whose dog's eyes are big nor the property of being one whose son's dog is big is an inherent property. The analysis to be presented below aims at handling this fact correctly.

4. AN ANALYSIS: FUNCTIONAL COMPOSITION AND STORAGE

With (20) in mind, I will first try an analysis using functional composition³⁾ and then replace it with a better analysis, namely one using storage. I think that syntactic theories which treat Possessor Raising as a real syntactic movement (Possessor Ascension or Move-*a*) may have difficulty in expressing the semantic constraint of (20). It is because, at no level, there can be any predicate S which denotes a property.

The analysis using functional composition would go as follows. (i) Assume that, in Korean, an empty pronoun *pro* serves as a variable. (ii) Syntactic rules and feature instantiation principles (in the similar fashion as in GPSG) give the following configuration as a legitimate tree.⁴⁾



3) Functional composition is a notion provided by Generalized Categorical Grammar (cf. B. Kang 1988: Chapter 2). In the latter system, language expressions are assumed to denote functions and arguments. A function may take an argument (functional application) or two functions can combine by functional composition.

4) In the following example, and throughout this section, I sometimes represent nodes in abbreviations. For example, NP[Gen] = NP/CN, VP = S\NP, etc.

Here, [pred] is a semantic feature (in the sense of Gazdar, et al. 1985) which changes the type of the bearer of this feature in such a way that $TYP(S[pred]) = TYP(S \setminus NP)$ and $TYP(NP[pred]) = TYP(NP/NP)$.⁵⁾ (iii) Lambda abstraction occurs at NP[pred] to bind the variable expressed by *pro*. Therefore, at the NP[pred] node, we get $\lambda x[x's\ eyes']$. (iv) When NP[pred] ($\lambda x[x's\ eyes']$) and VP (*big'*) combine, functional composition happens to give the meaning of $\lambda x[big'(x's\ eyes')]$ to the S[pred] node. (v) The final subject (*John*) works as an argument for S[pred] by functional application to give [*big'(j's\ eyes')*].

Before giving motivations for each step of the analysis, let me mention some theoretical advantages of the above analysis. (i) It gives the right truth-conditional meaning, as in other syntactic movement approaches, even without such syntactic operations. (ii) It explains why the second NP should be nominative; namely, it is also a subject of the predicate clause. In a Relational Grammar approach, it is not clear why the *Chômeur* left behind after Possessor Ascension should bear the same case. (Cf. In Passive, the *Chômeur* is expressed by a different case marker or postposition.)⁶⁾ (iii) The meaning is calculated compositionally, and we get the meaning for S[pred]. This means that we can consider it when we try to apply semantic constraints such as (20). To implement the Inherent Property Requirement, we may provide a contextual relational variable R at an appropriate step to give $\lambda y[big'(y's\ eyes') \& R(\lambda x[big'(x's\ eyes')]) (y)]$ as the meaning of S[pred], where $R(P)(x)$ means that P is an inherent property of x. Then, [pred] at S can be regarded as $\lambda P \lambda y [P(y) \& R(P)(y)]$. I mentioned above that syntactic movement approaches may have difficulty in this respect.

In spite of the above-mentioned merits, there are some problems with this analysis. That is, the category NP[pred] of type $\langle TYP(NP), TYP(NP) \rangle$ is not found in any other parts of the Korean grammar. Also the reason why the first NP gets a nominative case is not so clear. Rather, using storage mechanism will avoid these problems while keeping the advantages of the analysis men-

5) Semantic features changing semantic types of expressions may not be wholly in the spirit of Categorical Grammar. Such features prevent us from having the uniform relation of $TYP(A/B) = \langle TYP(B), TYP(A) \rangle$ in a simple way. Tentatively, I should assume that a syntactic S, and particularly this category, in natural language can have the property meaning.

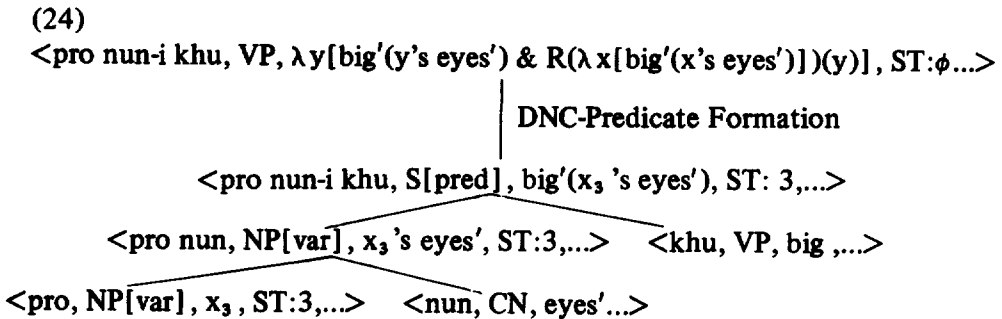
6) This point may not be so decisive because my analysis also needs a stipulation that the first NP, i.e. NP of $[NP\ S[pred]]_S$, should be nominative. It is not clear whether this stipulation is needed in the syntactic movement approaches.

tioned above.⁷⁾ That is, the introduced variable is kept track of up to the sentential level (S[pred]) and by the following DNC-Predicate Formation Rule, it is bound by the lambda operator.

(23) DNC-Predicate Formation Rule

$$\begin{array}{l}
 S[\text{pred}] \rightarrow VP \\
 n \in ST \quad n \notin ST \\
 0 \quad \quad 1 \\
 \\
 l' = \lambda y[\lambda x_n l'(y) \ \& \ R(\lambda x_n l')(y)]
 \end{array}$$

By this rule, the predicate S of [*nun-i khu*] ('be one whose eyes are big') will be given the translation of $\lambda y[\text{big}'(y\text{'s eyes}') \ \& \ R(\lambda x[\text{big}'(x\text{'s eyes}')])(y)]$, being changed into a new category, VP. The analysis tree will be as follows.



Here, the storage is crucially used for the proper treatment of the double nominative constructions. Considering the above-mentioned points as real advantages, I will take the solution using the storage device as the best that I can provide.

There are some points to be defended or made clearer. The assumption that *pro* can be a variable is unproblematic because in many constructions in Korean, it works just in that way. For example,

- (25) motun namca-ka [pro Mary-lul salanghantako] malhaassta
 every man-Nom M.-Acc love said
 'Every man said that he loved Mary.'

In this sentence, the subject of the embedded sentence is an empty pronoun

7) Storage was used by Cooper (1983) as a purely interpretive mechanism. This mechanism was modified by Bach & Partee (1980) and Chierchia (1985) to handle binding facts. I use the mechanism in the latter way. Cf. B. Kang (1988: Chapter 5).

which works as a bound variable. As for having a predicate sentence by lambda abstraction, there are other constructions such as relative clauses and control structures in Korean which need that kind of treatment. The next section will briefly describe those constructions of the abstraction mechanism.

Before discussing those constructions, I will present the following sentences as supporting evidence. In these sentences, instead of *pro*, an overt pronoun *ku* or *caki* is used as a variable.

- (26) John-i ku-uy nwun-i khu-ta
 J.-Nom he-Gen eye-Nom big-Dec
 'John's eyes are big.'
- (27) John-i caki-uy nwun-i khu-ta.
 J.-Nom self-Gen

5. OTHER PREDICATE SENTENCES

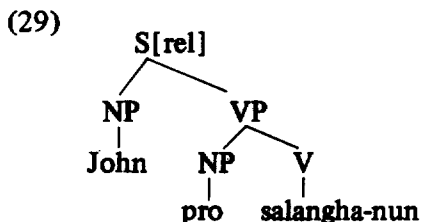
There are at least three other predicate sentences in Korean—relative clauses, topic constructions and, possibly, control structures.

5.1. Relative Clauses

There are no relative pronouns in Korea. Relative clauses are of the same construction as NP complementation except that a variable expression is involved. The relative clause and the head NP is connected by a relativizer, which is a kind of verbal ending.

- (28) [John-i pro salangha-nun] motun yeca
 J.-Nom love-Rel every woman
 'every woman that John loves'

The relevant structure for this will be as follows.



Lambda abstraction occurs at S[Rel] to give $\lambda x[\text{love}'(x)(j)]$. Cooper and Bach's (1978) NP-S analysis of relative clauses would give (30) as the whole meaning of

(28). 8)

(30) $\lambda P[\forall x[[\text{woman}'(x) \ \& \ \text{love}'(x)(j)] \rightarrow P(x)]]$

Again, the variable expression *pro* can sometimes be substituted by overt pronouns (i.e. resumptive pronouns).

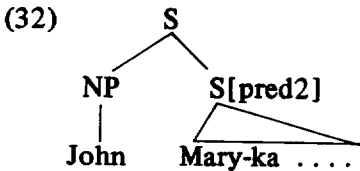
5.2. Topic Constructions

In Korean, topic constructions seem to be one of the basic syntactic constructions, since Korean, along with Japanese and Chinese, is a so-called “topic-prominent” language. Korean allows the following topic construction.

(31) John-nun Mary-ka Europe-ulo ttena-ass-ta.
 J.-Top M.-Nom E.-to leave-Past-Dec
 ‘As for John, Mary left for Europe.’

Cf. *John-i Mary-ka Europe-ulo ttena-ass-ta.

(31) is best understood in a context where the fact that Mary left for Europe is relevant to John; for example, if Mary was John’s lover. The relevant structure for (31) will be:



[pred2] is different from [pred] of double nominative constructions since it does not restrict the place of a variable expression, just like the case of relative clauses. Lambda abstraction occurs at S[pred2] and the subsequent supply of contextual variable would be needed. The meaning of S[pred2] of (31) would be:

(33) $\lambda y[\lambda x[\text{leave-for-E}'(m)] \ \& \ R(\lambda x[\text{leave-for-E}'(m)])(y)]$
 $= \lambda y[\text{leave-for-E}'(m) \ \& \ R(\text{leave-for-E}'(m))(y)]$

8) Korean allows the order of Determiner + Relative Clause + N. For example,

motun [John-i pro salangha-nun] yeca
 every J.-Nom love-Rel woman
 ‘every woman that John loves’

In this case, the traditional Nom-S analysis of Montague Grammar will do.

This is the case where a variable is not given in the sentence. If a variable is given, either by *pro* or by overt expressions (pronouns), the topic NP would find the appropriate argument position. For example,

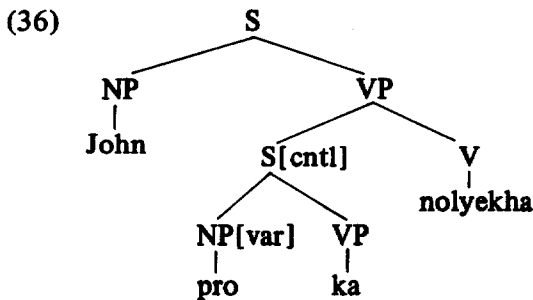
- (34) John-nun, Mary-ka [Bill-i pro/ku-uy tongsayang-i-m-lul] anta.
 J.-Top M.-Nom B.-Nom pro/he-Gen brother-be-Comp-Acc knows
 'As for John, Mary knows that Bill is his brother.'

5.3. Control Structures

A controlled phrase in Korean may be treated as a VP, as handled in B. Kang (1986). Another possibility is to treat it as syntactically an S but semantically a property as in Williams' (1980) Predication theory. By doing so, all the semantic arguments of Chierchia (1984) and Dowty (1985) for having a nominalized property for a controlled phrase can be maintained. For example,

- (35) John-i [pro ka-lyeko] nolyekha-ass-ta.
 J.-Nom go-Comp try-Past-Dec
 'John tried to go.'

(35) would be represented as follows.



In (36), lambda abstraction occurs at S[ctrl] to give the meaning $\lambda x[\text{go}(x)]$ (= go'). Again, overt pronouns or reflexives may act as variables.

- (37) a. ?John-i [ku-ka ka-lyeko] nolyekha-ass-ta.
 J.-Nom he-Nom go-Comp try-Past-Dec
 'John tried to go.'

- b. John-i [caki-ka ka-lyeko] nolyekha-ass-ta.
 J.-Nom self-Nom

- (38) a. ?ku-ka san-lul oluki-ka John-eykey elyep- ϕ -ta.
 he-Nom mountain-Acc climbing-Nom J.-Dat difficult
 'To climb a mountain is difficult for John.'

b. caki-ka san-lul oluki-ka John-eykey elyep- ϕ -ta.
 self-Nom mountain-Acc climbing-Nom J.-Dat difficult

The above analyses of relative clauses, topic constructions, and control structures are very sketchy. The point is that in many constructions in Korean, including these constructions and double nominative constructions, variable binding by the lambda operator, and thus giving the meaning of a property to a syntactic S is quite common. Usually, the variable is expressed by a phonologically null pronoun *pro* (cf. Korean is a pro drop language) but sometimes it is possible to use overt pronouns or reflexives (if not prohibited by other factors). Our next task would be to develop a theory for the instantiation of such features as [pred], [cntl], and [rel] in an appropriate way.

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