An Optimal Distinction of Reflexives and Logophors

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Ki-Sook Choi. 2000. An Optimal Distinction of Reflexives and Logophors. *Language and Information 4.1*, 83–96. In this paper, I investigate the different usage of a reflexive-anaphor or logophor. Some African languages which have a morphologically independent set of logophors give a clue to this dichotomy. English which does not have morphologically independent logophors employs a reflexive -*self* form to be used as a logophor. However, the logohors in English occur in restricted environments. On the other hand, Korean is freer than English in that it allows areflexive to be interchanged with a logophor. With this assumption, I deal with the binding in Optimality Theory. I set up the constraints-$\text{MAX}^{log},{}^{ana}$,$\text{MIN}^{log},{}^{ana}$, and $\emptyset^{log},{}^{ana}$. With these constraints, the binding in various languages are explained through constraint ranking. In addition, the long-distance binding in English is dealt with properly if we assume the dichotomy and constraint-ranking in Optimality Theory. Furthermore, this gives an explanation to reflexive and pronoun alternation in English. Also, I borrow from phonology the idea of Obligatory Contour Principle to explain the similar phenomenon in syntax. I compare English with Korean in dealing with the possessive reflexive with the recourse to *The Emergence of the Unmarked Pronoun* Bresnan1997. Finally, the reconstruction phenomenon is accounted for with the same device. (**Seoul National University**)

1. Introduction

Chomsky (1981) proposes the Binding Theory which includes a restriction on the use of reflexives. The Binding Theory says that a reflexive appears in the governing category like the following example;

(1) a. Tom_i likes him_{*i}/himself_i.

     b. John_j says that Tom_i likes him_{*i}/$\text{himself}_{i/*j}$

As we see in the above example (1), the reflexives must be bound in the governing category by the antecedents. However, this expectation fails in some examples which implicate a discourse principle. Let us consider the following example from Kuno (1987);

(2) a. John$_i$ hid the book behind him$_i$.

　　b. John$_i$ hid the book behind himself$_i$.

In (2a), the pronoun him[1] has no implication of physical contact, whereas (2b) implies that John hid the book right behind him, touching his body. The pure syntactic approaches do not explain this difference, so that we need more comprehensive theory that deals with this alternation failing to explain the complementary distribution of reflexive and pronoun.

In this paper, I argue that Optimality Theory is proper to deal with the binding among other things, criticizing Chomsky (1981) and suggest a comprehensive theory based on Chomsky (1981) in Optimality Theory. Then, I try to explain the reflexive and the pronoun alternation which we observed above. Second, I borrow from phonology the idea of Obligatory Contour Principle which blocks the appearance of a reflexive and a pronoun together like *him himself. Third, I investigate why Korean allows the possessive reflexives, whereas English does not, using the concept of The Emergence of Unmarked Pronoun proposed by Bresnan (1997). Finally, I consider the binding in reconstructed sentences.

2. Binding in Optimality Theory

In this section, I criticize Chomsky (1981) which fails to explain the discourse binding and propose that Optimality Theory (OT) is adequate to explain the binding phenomena. Then, I set up the binding constraints in the framework of OT.

2.1 Previous Analysis: Chomsky (1981)
Chomsky (1981) subdivides nominal expressions into three basic categories: (I) anaphors (II) pronominals (III) R-expressions. He proposes the Binding Theory based on this division.

(3)　　Binding Theory Chomsky (1981)

　　a. An anaphor must be bound in its governing category.

　　b. A pronoun must be free in its governing category.

　　c. An R-expression must be free.

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1. As the anonymous reviewer comments, notall long-distance reflexives are accounted for by the logophoric approach. In this paper, I deal with the cases which contain the logophoric reflexives.

An anaphor is bound in the local domain and a pronoun is free in the local domain. This theory predicts the complementary distribution of an anaphor and a pronoun holds. But as the following examples show, the complementary distributionfails in some sentences.

(4) a. John$_i$ pulled the blanket over him$_i$/himself$_i$.

    b. John$_i$ saw the snake next to him$_i$/himself$_i$. (Kuno (1987))

In these examples, both *him* and *himself* are allowed, thus the complementary distribution fails between anaphors and pronouns. The non-complementary distribution is not explained according to this theory.

Second, the long-distance reflexives (LDR) are not accounted for in that they show the property of violating the locality condition. LDRs are typical examples of reflexives which are not bound in the local domain.

(5) Tom$_i$ believed that the paper was written by Ann and himself$_i$.

In (5), the reflexive *himself* is not bound in the governing category, but the sentence is grammatical. *Tom*, the long-distance binder, constitutes a legitimate antecedent of *himself*. The long-distance binding should be accounted properly.

Third, the c-command violation cases are not properly accounted for. As stated in the Binding Theory, the notion of the c-command plays a crucial role in the binding theory. A reflexive is c-commanded in the local domain by its antecedent, whereas a pronoun is free from the c-commanding antecedent in the local domain. As the following example indicates, however, the c-command is not efficient in explaining all the binding data.

(6) The picture of himself$_i$ pleases John$_i$.

As the indices show, the reflexive *himself* is not c-commanded by its antecedent *John*. Thus, the Binding Theory should be expanded to involve other conditions or principles that improve the c-command condition.

The above-mentioned problems make the Binding Theory (Chomsky (1981)) inadequate to deal with the English binding data by which the Binding Theory is motivated. This fails to explain the long-distance reflexives which are not bound in the local domain and the non-complementary distribution of an anaphor and a pronoun. Moreover,the c-command violation is not properly accounted for.

In the following, I propose that the binding constraints in Optimality Theory which solves the above-mentioned problems. I assume that an anaphor and a logophor co-exist in Universal Grammar. As evidence, I take African languages which have the logophoric pronouns.

2.2 Binding Constraints in Optimality Theory

Optimality Theory explains linguistic phenomena through the complex interaction of violable constraints. The thrust of Optimality Theory is that Universal

Grammar consists of a set of constraints on representational well-formedness, out of which individual grammar are constructed (Prince and Smolensky (1993)). The grammar consists of the constraints together with a general means of resolving their conflict.

The architecture of OT is as follows: an input goes to the Gen(erator) to produce candidates. The candidates which have undergone the Gen compete among themselves according to the constraints in the evaluation. The candidate which satisfies the constraints optimally wins over the other candidates and is derived as the optimal output.

The previous analyses of binding in Optimality Theory have the arbitrary input and the optionality problems. The input was not set up uniformly, so that any lexical item can fill the input. These problems can be dispensed with if I posit the f-structure input[2] where the universally independent morpho-syntactic features are marked and binding constraints function to check whether these features are reflected in the output.

Turning to binding, I propose the following constraints MAX^{log} and MIN^{log}. Many African languages employ the morphologically independent logophoric pronoun. The logophoric pronoun will be marked with the morpho-syntactic [+log] feature in the input. I propose the following logophoric constraints based on this assumption.

(7) MAX^{log}: Maximize the morphological independence of the logophoric feature [+log] of the input in the output.

This constraint requires that the logophoric feature in the input should be represented by the logophoric pronouns which have the distinct form. Let us see the example of the logophoric pronoun.

(8) Logophoric Pronoun and Regular Pronoun in Donno S

a. Oumar Anta inyemeñ waa be gi.

Oumar Anta LOG-ACC seen AUX said

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2. The f-structure input is specified all the features. For example, the anaphoric binding is like the following.

(I) John$_i$ likes himself$_i$.

$$\begin{bmatrix} \text{PRED} & \text{'like(x,y)'} \\ \text{GF1} & \begin{bmatrix} \text{PRED} & \text{'NAMED-John'} \\ \text{GEND} & \text{MASC} \\ \text{NUM} & \text{SG} \end{bmatrix} x \\ \text{GF2} & \begin{bmatrix} \text{GEN} & \text{MASC} \\ \text{PRED} & \text{'PRO'} \\ \text{NUM} & \text{SG} \\ \text{ANT} & + \end{bmatrix} y \\ \text{TNS} & \text{PRESENT} \end{bmatrix}$$

'Oumar$_i$ said that Anta had seen him$_i$.'

b. Oumar Anta woñ waa be gi.

Oumar Anta PRO-ACC seen AUX said

'Oumar$_i$ said that Anta had seen him$_{\neq I}$.' (Culy (1994))

Donno S has the morphologically independent set of logophoric pronouns. If the input has the [+log] feature, this language preserves this feature by the logophoric pronoun. Contrastively, the regular pronoun has the [-log] feature which satisfies log as defined in the following.

(9) $\emptyset^{log}$: Don't represent the logophoric feature of the input morphologically in the output.

The following table shows how the optimal form is derived when the input is specified [+log] in Donno S .[3]

input=[+log]	MAX^{log}	MIN^{log}	$\emptyset^{log}$
☞ a.$\langle$Oumar$_i$, inyemeñ$_i\rangle$		*	*
b.$\langle$Oumar$_i$, woñ$_i\rangle$	*!	*	

Table1. $MAX^{log}\rangle$ $MIN^{log}\rangle\emptyset^{log}$ in Donno Sō [45]

In table 1, the logophoric pronoun inyemeñ has the [+log] which parses the logophoric feature in the input and thus satisfies MAX^{log} with the morphologically independent logophoric pronoun. However, the logophoric pronoun inyemeñ violates MIN^{log} and $\emptyset^{log}$. On the other hand, the regular pronoun wo which is marked by [-log] fails to parse the logophoric feature in the input, which violates MAX^{log} constraint. Even though it satisfies $\emptyset^{log}$, it is irrelevant to the evaluation, because it is ranked lower than MAX^{log} which is crucial to the evaluation. When it comes to MIN^{log}, both the logophoric pronoun and the regular pronoun violate this constraint. The logophoric pronoun does not satisfy this constraint, because it fails to minimize [+log] feature morphologically. On the other hand, the regular pronoun fails this constraint due to its empty feature concerning logophoricity.

On the other hand, English fails MAX^{log}, because it lacks the logophoric pronoun which has the logophoric function exclusively. However, English observes the MIN^{log} constraint which is defined as the following.

(10) MIN^{log}: Minimize the morphological independence of the logophoric feature of the input in the output.

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3. I will return to the definition of MIN^{log} shortly.
4. Seung-Chul Moon commented that MAX^{log} and MIN^{log} are tie-ranked, because the optimal candidate comes out with the reverse ranking of the constraints. However, MIN^{log} is irrelevant to the constraint ranking, such that it is cancelled by 'Mark Cancellation'.
5. As for the linguistic marking in Optimality Theory, * means violation of the constraint and ! indicates crucial violation in deciding the optimal candidate.

The English reflexives are not exclusively for logophoric function, violating MAX^{log}. Let us consider the above example (5) to see how MIN^{log} is observed.

(11) Tom_i believed that the paper was written by Ann and himself_i.

This sentence is delivered from *Tom*'s point of view and consequently the long-distance reflexive *himself* bears [+log] feature. Thus, it satisfies the logophoric feature by the economic form - *himself*. The table below shows how the constraints are obeyed or violated by each candidate.[6]

Input=[+log]	LEX	MAX^{log}	MIN^{log}	$\emptyset^{log}$
a.$\langle \text{Tom}_i, \emptyset i \rangle$	*!	*	*	
b.$\langle \text{Tom}_i, \text{him}_i \rangle$		*	*!	*
☞c.$\langle \text{Tom}_i, \text{himself}_i \rangle$		*		**

Table 2. The Long-Distance Binding in English[7]

The input is specified by the [+log] feature along with φ-features. All other candidates such as *herself, themselves* and *myself* do not appear in the table, because they mismatch the higher-ranked PARSE-φ.[8] *Him* is not specified with respect to logophoricity, whereas *himself* has the underspecified [+log] specification. Although the Candidate c. $\langle \text{Tom}_i$, $\text{himself}_i \rangle$ violates MAX^{log}, it satisfies the MIN^{log} constraint and wins the competition against $\langle \text{Tom}_i$, $\text{him}_i \rangle$ which satisfies neither MAX^{log} nor MIN^{log}. The null structure violates the highest ranked constraint LEX and is ruled out.

In the above, I have investigated the logophoric binding in the logophoric language which have a morphologically distinct set. The following definition shows how the constraints explain the anaphoric binding. In the following, the relevant constraints are presented.

(12) MAX^{ana}:Maximize the morphological independence of the anaphoric feature of the input in the output.

When the reflexive is used for the anaphor[9], this satisfies MAX^{ana}. The *-self* reflexive in English which has a distinct feature as an anaphor, parses [+ana] feature in the input. Consider the following example. First, let us consider MAX^{ana} in English.

(13) a. John_i likes himself_i.

     b. *John_i likes him_i.

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6. I consider the candidates $\langle \text{Tom}_i, ..., \emptyset_i \rangle$, $\langle \text{Tom}_i, ..., \text{him}_i \rangle$ and $\langle \text{Tom}_i, ..., \text{himself}_i \rangle$. I later include the candidate $\langle \text{Tom}_i, ..., \text{him himself}_i \rangle$ which is blocked by the Obligatory Contour Principle.
7. This table is equivalent to Logophoric Binding in English.
8. They are not parsed along with himself, because they mismatch the person agreement.
9. Here I clarify that the reflexive is ambiguous between anaphor and logophor. Thus, I criticize and reinforce Chomsky (1981) which deals only with the anaphor.

In (13a), *himself* satisfies [+ana] feature in the input, but *him* in (13b) which is marked [-ana] violates MAX^{ana}. The following table shows the contrast between *him* and *himself*.

Input=[+ana]	LEX	MAX^{ana}	MIN^{ana}	$\emptyset^{ana}$
a. $\langle$John$_i$, $\emptyset_i\rangle$	*!	*	*	
b. $\langle$John$_i$, him$_i\rangle$		*!		*
☞ c. $\langle$John$_i$, himself$_i\rangle$			*	**

Table 3. Anaphoric Binding in English [10]

The logophoric binding constraints are irrelevant here and the constraints relevant for the anaphoric binding, that is, LEX and MAX^{ana}, are satisfied by *himself*, which comes out as the optimal form. Turning to MIN^{ana}, we can see that Old English, French, and Romance languages like Italian and Spanish use the clitics to represent the anaphoric relation. They are ambiguous between reflexives and pronouns. Thus, they violate MAX^{ana} which calls for the reflexive used only in the anaphoric function. However, these languages satisfy the MIN^{ana} constraint.

(14) MIN^{ana}: Minimize the morphological independence of the anaphoric feature of the input in the output.

Let us consider the following example in Old English.

(15)   Ic$_i$ me$_i$ cloensie. (Old English)

I me clean

'I clean myself.'

As the glossary indicates, Old English lacks the non-emphatice reflexive *-self* form to mark exclusively for the anaphoric binding. Even though there existed *-self* form, it was used in the emphatic context Instead of the anaphor, Old English uses a clitic which is ambiguous between a reflexive and a pronoun. Therefore, the clitic does not satisfy MAX^{ana}. Instead, it satisfies MIN^{ana}. The below evaluation table shows this clearly.

Input=[+ana]	LEX	MAX^{ana}	MIN^{ana}	$\emptyset^{ana}$
a. $\langle Ic_i$, $\emptyset_i\rangle$	*!	*	*	
☞ b. $\langle Ic_i$, me$_i\rangle$		*		*

Table 4. Anaphoric Binding in Old English

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10. The definition of LEX is as follows:

LEX: Represent the feature of the input lexically in the output.

In the normal context where the emphatic meaning is excluded[11]. the sentence (15) is used to refer to the anaphoric relation. Old English lacks the reflexive form and therefore, violates MAX^{ana}. However, the clitic form carries out the reflexive function, which satisfies MIN^{ana}. The ranking of MAX^{ana} and MIN^{ana} are tie-ranked. Old English lacks the anaphoric independent -*self* reflexive, making MAX^{ana} null unlike Modern English.

In the above section, we considered the binding constraints in Optimality Theory - $MAX^{log}, MIN^{log}, \emptyset^{log}, MAX^{ana}, MIN^{ana}, \emptyset^{ana}$. In the following, I investigate the reflexive/pronoun alternation, the ban on the reflexive/pronoun, the emergence of the unmarked pronoun and reconstruction.

3. Reflexive/Pronoun Alternation

Kuno (1987) shows that reflexives with clause-mate antecedents requirethat their referents be the targets of the actions or mental states represented by the verb phrase.

(16) a. John$_i$ pulled the blanket over him$_i$.

   b. John$_i$ pulled the blanket over himself$_i$.

(17) a. John$_i$ hid the book behind him$_i$.

   b. John$_i$ hid the book behind himself$_i$.

These examples are problematic in Chomsky's Binding Theory (1981), because the complementary distribution between an anaphor and a pronoun is violated. Kuno (1987), on the other hand, takes a functional approach. He notes that (16b) implies that John tried to cover himself up with the blanket to hide under it, while no such implication is made by (16a). He goes on to say that (17a) need not have this implication of physical contact, while (17b) implies that John held the book in his hand, and put it behind his back. What distinguished the alternation is that when the reflexive is used, it is overtly asserted that the referent of the reflexive is the target of the action or mental state represented by the sentence. Noting the meaning difference, we can say that the reflexive bears [+log] feature. This contrasts with him which hasthe [-log] feature.

In the context where the reflexive carries logophoric meaning, *himself* satisfies MIN_{log} in spite of the violation of MAX_{log} constraint.

Input=[+log]	LEX	MAX^{log}	MIN^{log}	$\emptyset^{log}$
a.$\langle John_i, \emptyset_i \rangle$	*!	*	*	
b.$\langle John_i, him_i \rangle$		*	*!	*
☞c.$\langle John_i, himself_i \rangle$		*		*

Table 5. him/himself Alternation in English

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11. That is why I exclude $\langle Ic_i$, me selfne$_i \rangle$ from the candidate set.

Table 5 shows that *himself* wins the competition in the evaluation because of the satisfaction of MIN^{log}, although this candidate violates MAX^{log} and $\emptyset^{log}$. On the other hand, *him* satisfies neither MAX^{log} nor MIN^{log} which is crucial for deciding the optimal output. Thus, we conclude that the pure syntactic approach should be supplemented with the discourse approach such as Kuno (1987).

4. Obligatory Contour Principle in Syntax

The Obligatory Contour Principle (OCP) prohibits duplication in the phonological template. Combinations of identical elements violate this principle. This principle can be applied to binding also. First, let us state this principle.

(18) *XX:Sequences of identical functional heads are ill-formed.

When the faithfulness constraints dominate *XX, then a faithful parse of the input is the result and the output form is the one that would be found in isolation, even though it violates *XX. When *XX dominates a faithfulness constraint, then one of the two elements will change or disappear in order to satisfy *XX. This constraint explains how the logophor can appear in the argument position. This is a problem in Reinhart and Reuland (1993) and Pollard and Sag (1992). They argue that long-distance reflexives cannot be in the argument positions that are assigned the θ-role by the predicates. However, Baker (1995) gives many examples that do not agree with this prediction. Moreover, the literature shows that the logophors come in the argument position.

The long-distance reflexives occur in both the argument position and the adjunct position. Therefore, I attribute this asymmetry not to the argument/adjunct dichotomy but to some other factor. I assume that Obligatory Contour Principle (OCP) plays a crucial role here. Let us consider the English examples to see how OCP works.

(19) a. Tom_i believed that the paper was written by Ann and $himself_i$.

b. *Tom_i believed that the paper was written by Ann and him $himself_i$.

The OCP rules out (19b): *him* and *himself* are both accusative-Case marked. Thus, only one of the two can appear, in accordance with the OCP. The OCP is higher-ranked than the binding-relevant constraints, so that the principle rules out the candidates before applying the binding constraints. The following table shows how the OCP applies to (19).

Input=[+log]	LEX	*XX	MAX^{log}	MIN^{log}	$\emptyset^{log}$
a. $\langle Tom_i, \emptyset_i \rangle$	*!		*	*.	
b. $\langle Tom_i, him_i \rangle$			*	*!	*
☞ c. $\langle Tom_i, himself_i \rangle$			*		**
d. $\langle Tom_i, him\ himself_i \rangle$		*!	*		**

Table 6. Obligatory Contour Principle in English

The Candidate c. wins over the Candidate d., because the latter violates the OCP constraint. *XX constraint is crucial here, so that it rules out the candidates which violate OCP.

This phenomenon regarding the OCP constraint is related to the possible expression *he himself*. As Bickerton (1987) notes, *himself* cannot occur as the complement of a pronoun if that pronoun is accusative-Case marked. However, the expression *he himself* does not violate the OCP, because the two elements carry out different functions. [12]

(20) a. John$_i$ says that he himself$_i$ saw Mary yesterday.

     b. *John$_i$ says that Mary saw him himself$_i$ yesterday.

In terms of the OCP, *he* and *himself* in (20a) are nominative-Case and accusative-Case marked respectively, observing the OCP. This contrasts with (20b) in which pronominal forms violate the OCP. Let us view the following evaluation to compare the grammaticality.

Input=[+log]	LEX	*XX	MAX^{ana}	MIN^{ana}	$\emptyset^{ana}$
a.$\langle$he$_i$, $\emptyset_i\rangle$	*!				
b.$\langle$he$_i$, him$_i\rangle$		*!			
☞c.$\langle$he$_i$,himself$_i\rangle$				*	*
d.$\langle$he$_i$, him himself$_i\rangle$		*!		*	*

Table 7. Obligatory Contour Principle in English

I conclude that the OCP plays a crucial role not just in phonology but in syntax as well. Thus, *him* and *himself* which have the same function cannot appear in a row. However, in dialects where *him himself* is allowed, OCP constraint is irrelevant to the competition. Therefore, both forms are derived as the optimal forms.

Input=[+log]	LEX	*XX	MAX^{log}	MIN^{log}	$\emptyset^{log}$
a. $\langle$Tom$_i$, $\emptyset_i\rangle$	*!		*	*	
b. $\langle$Tom$_i$, him$_i\rangle$			*!	*	*
☞c.$\langle$Tom$_i$, himself$_i\rangle$			*		**
☞d.$\langle$Tom$_i$, him himself$_i\rangle$			*		**

Table 8. OCP Irrelevant in Some Dialects in English (19)

If OCP does not take effect, both candidates - $\langle$Tom$_i$, himself$_i\rangle$ and $\langle$Tom$_i$, him himself$_i\rangle$-are equal in the evaluation, so that they are derived as the optimal forms.

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12. This sentence observes the OCP constraint, since one form is nominative and the other is the accusative. Moreover, this sentence is irrelevant to the anaphoric or logophoric binding, carrying only the emphatic meaning of the reflexive. I omit the evaluation here.

5. Possessive Reflexive:The Emergence of the Unmarked Pronoun(TETU)

In English, the possessive reflexive form does not exist. In place of this, the regular possessive pronoun is used. Chomsky (1986) posits a different domain from that of a reflexive.

(21) a. Bill$_i$ likes himself$_i$.

b. Bill$_i$ likes [CFC his$_i$ picture].

Noting that (21b) should register ungrammaticality, given that the binding domain is same as in the reflexive, Chomsky proposes that *his picture* constitutes Complete Functional Complex (CFC). This means that the binding conditions are satisfied in this domain, so that his does not violate the Binding Theory(B).

On the other hand, Reinhart argues that only anaphors are dealt with by syntax and pronouns are under the control of pragmatics. Neither approach explains about the organisation of the lexicon or how the lexical items are arranged in the lexicon. Bresnan (1997) proposes that the lexicon is derived from the re-rankings of universal constraints. Systematic differences in the lexical inventories of languages cannot simply be derived from language-particular constraints on lexical features or morphology. She argues in support of this conclusion by showing how different inventories of personal pronouns across languages may be formally derived by the prioritizing of motivated constraints in Optimality Theory. The lexical gaps are not idiosyncratic, but systematic ineffabilities. The inventory of pronominals of each language is selected from the possible pairings byevaluating them against universal constraints as prioritized by the language.

The English pronominal inventory is derived by a different constraint ranking from Korean. The lack of the possessive reflexive is derived by the following constraint ranking. The relevant constraints are stated below.

(22) a. $\emptyset^{ana}$: Don't represent the anaphoric feature of the input in the output.

b. MAX^{ana}: Maximize the morphological independence of the anaphoric feature of the input in the output.

The reason that English lacks the possessive reflexive is explained by theconstraint ranking. The languages which have the possessive reflexives have the MAX^{ana} constraint higher than the $\emptyset^{ana}$ constraint. The following evaluation table shows the lexical gap of the possessive reflexive in English.

Input=[+ana]	$\emptyset^{ana}$	MAX^{ana}
a. hisself	*!	
☞b. his		*

Table 9. The Emergence of his in English[13]

The above table shows why *hisself* is blocked. In place of this, *his* appears as the unmarked form. Let us turn to Korean where the possessive reflexive exists. We can account for the Korean reflexive form by converse constraint ranking with that of English.

(23) a. Chelswu$_i$-nun caki$_i$-(uy) kulim-ul salanghan-ta.

     Chelswu$_i$-Nom selfi$_i$-Poss picture-Acc love-Decl

     'Chelswu$_i$ loves his$_i$ picture.'

    b. Chelswu$_i$-nun ku$_i$-uy kulim-ul salanghan-ta.

     Chelswu$_i$-Nom he$_i$-Poss picture-Acc love-Decl

     'Chelswu$_i$ loves his$_i$ picture.'

Caki is used not only as in the accusative, but also in the possessive Case. The possessive Case-marked reflexive is illustrated in (23a). When *caki* is used in the accusative, it is an anaphor or a logophor such as in the following example.

(24)   Chelswu$_i$-nun Yengswu$_j$-ka caki$_{i/j}$-lul coahanta-ko

       Chelswu-Top Yengswu-Nom self-Acc like-Comp

       sayngkakhan-ta.

       think-Decl

    a. 'Chelswu thinks that Yengswu$_j$ loves himself$_j$'

    b. 'Chelswu$_i$ thinks that Yengswu loves him$_i$'

Caki is radically different from *himself* which is used only in accusative Case. We can account for this by constraint rankings. Moreover, the alternation between *caki-uy* and *ku-uy* is explained by a different ranking of constraints.

Input=[+log]	MAX^{log}	MIN^{log}	$emptyset^{log}$
a. ky-uy	*	*!	
☞ b. caki-uy	*		*

Table 10. Korean Possessive (Input = [+log])

As the table 10 shows, Korean employs two distinct pronominal forms in a possessive position. They differ with respect to logophoricity. When the input has [+log] feature, *caki-uy* emerges as the optimal form. On the other hand, if the input is [-log], *ku-uy* wins the competition.

Input=[-log]	$\emptyset^{log}$	MIN^{log}	MAX^{log}
☞a. ku-uy		*	*
b. caki-uy	*!		*

Table 11. Korean Possessive (Input = [-log])

When the input requires that the logophoric feature should not be represented inthe output, *ku-uy* satisfies $\emptyset^{log}$ and results in the optimal output, whereas *caki-uy* does not.

6. Reconstruction

Reconstruction refers to a phenomenon where a displaced element behaves as if occupying some position lower than the one in which it actually appears. See the following example.

(25) Which pictures of himself$_{i/j}$ does John$_i$ think t' that Bill$_j$ likes t?

Given that the phrase *which pictures of himself* has moved from the base position via movement, it behaves as if in the intermediate or in the base position.

There are two different accounts in explaining the reconstruction. First, the two candidates, one with the reflexive in the trace position, the other in the intermediate position compete with each other. The second account is that the two candidates target a different LF scope and do not compete. I take the second view, assuming that the two sentences target different LFs and therefore do not compete.

(26) a. does John$_i$ think which picture of himself$_i$ that Bill like t?

      b. does John think t that Bill$_j$ likes which pictures of himself$_j$?

In the reconstructed positions, the two sentences represent different LF scopes. In (26a), himself is read as if it is bound by John, whereas Bill is the binder in (26b). This is because the two candidates do not compete against each other, targeting different LFs. Let us take a look at the evaluation of (26a) and (26b).

Input=[+ana]	LEX	*XX	MAX^{ana}	MIN^{ana}	$\emptyset^{ana}$
a.⟨John$_i$, $\emptyset_i$⟩	*!		*	*	
b.⟨John$_i$, him$_i$⟩		*!		*	
☞c. ⟨John$_i$, himself$_i$⟩				*	**
d. ⟨John$_i$, him himself$_i$⟩		*!	*		**

Table 12. Binding in Reconstruction (26a)

This contrasts with (26b) where Bill is the antecedent of the anaphor.

Input=[+ana]	LEX	*XX	MAX^{ana}	MIN^{ana}	$\emptyset^{ana}$
a.$\langle$Bill$_i$, $\emptyset_i\rangle$	*!		*	*	
b.$\langle$Bill$_i$, him$_i\rangle$		*!		*	
☞c. $\langle$Bill$_i$, himself$_i\rangle$				*	**
d. $\langle$Bill$_i$, him himself$_i\rangle$		*!	*		**

Table 13. Binding in Reconstruction (26b)

The above examples are accounted for properly when the two reconstructed sentences are evaluated separately according to the binding constraints.

7. Summary

In this paper, we observed that the sentences (1, 2, 4, 5, 6, 16, 20) cannot be properly explained by Chomsky's BT (1981), thus we need to distinguish logophor from reflexive. I propose another theoretic device, OT, as an alternative to account for the data given in this paper. With these constraints, I try to explain (I) reflexive/pronoun alternation (II) the ban on the use of reflexive and pronoun by recourse to Obligatory Contour Principle (III) the possessive reflexives by using The Emergence of the Unmarked Pronoun (IV) reconstruction. I conclude that Optimality Theory opens a way to the grammatical phenomena which is not explained by pure syntactic approaches.

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