Preface

In "The Surface Verb 'Remind'," Postal observes about English Psych Movement verbs as follows:

"All the relevant verbals which undergo Psych Movement must, in nonhabitual, nonmodal, present-tense, declarative contexts have an Experiencer NP which is a coreferent of the 'subject' NP of the next highest verb of saying/thinking. In superficially unembedded declarative clauses this means coreference to the 'subject' of the deleted performative verb. Such coreference requires the Experiencer NP to be first person" (p. 160).

Now, compare his observation with Hideo Teramura's on some of Japanese 'emotive adjectives' in "Emotive Sentences in Japanese."

"It has often been noted and discussed by Japanese grammarians that there are a fairly large number of adjectives in Japanese, all expressing some kind of emotion or feeling, which, in the present indicative form, can be used as predicates for only first person subjects in independent clauses" (p. 7).

Also compare Postal's remark:

"It is not immediately obvious how this account explains the permissibility of sentences like:

It struck Harry that you were a vampire, which are in the past tense" (Underlining Postal's). (p. 164).

with Teramura's:

"More perplexing is the fact that a sentence which is unnatural because of its non-first person subject predicated by an emotive adjective turns out to be perfectly acceptable when we change the form of adjective into past tense form" (Underlining mine).

The observations quoted above present striking similarities, both semantic and syntactic, between English Psych Movement verbs and a
particular class of Japanese adjectives. An interesting question immediately arises: Are these similarities purely accidental? I shall argue in this paper that the similarities are far from accidental but rather they imply that the so-called Japanese emotive adjectives are indeed Psych Movement verbs.

Throughout the paper a Fillmorean analysis will be adopted for the description of the deep structure. However, I shall use a non-Fillmorean framework for the surface structure for the following reason. Fillmore maintains that the subject must be Chomsky-adjoined to the original S node. Therefore, in his framework the subject and the object of the surface structure do not command each other. I am in serious trouble now. For Langacker's notion of 'precede' and 'command' cannot be used for the conditioning of Pronominalization and Reflexivization in Japanese, which is crucial for my argument below.

(1) Fillmorean S.S.  Non-Fillmorean S.S.

I. Is the Rule of Experiencer Shunting Well-Motivated?

Consider the following sentences. For the sake of convenience I will treat tense as a feature of the verb in the deep structure.

(2) Alice-ga Bill-niwa osoroshikatta.
"... to was fearful.
"Alice was fearful to Bill."

S.S.  D.S.

(3) Alice-ga Bill-niwa urayamashikatta.
"... to was enviable
"Alice was enviable to Bill."
(4) Ongaku-ga Alice-niwa tanoshikatta.
music "-to was enjoyable
"Music was enjoyable to Alice."

(5) Alice-ga Bill-niwa awaredatta.
"-to was pitiful
"Alice was pitiful to Bill."

(6) Alice-ga Bill-niwa nikukatta.
"-to was hateful
"Alice was hateful to Bill."
(7) (Zibun-no) tsumi-ga Alice-niwa hazukashikatta.

self Crime -to was shameful
"Her own crime was shameful to Alice."

(8) Chichi-no shi-ga Alice-niwa kanashikatta.

Father's death -to was sad
"Father's death was sad to Alice."
As the Fillmorean deep case analysis reveals, in each sentence the Experiencer NP is 'shunted' and the Instrument NP, 'the stimulus of an event', has become the subject of the surface structure. Thus, it seems that the General Experiencer Shunting Rule operates here. However, I would like to claim that this is not what happens. I shall argue below that what is operating here is the Psych Movement rule and not the Experiencer Shunting rule.

Let us examine the English Experiencer Shunting Rule formulated by Fillmore.

\[(9) \text{General Experiencer Shunting Rule}\]

\[
\begin{array}{c}
\text{(C)}_1 \quad \text{omissible) (C)}^* \\
\text{X} \\
\end{array}
\]

\[
\begin{array}{c}
1 \\
2 \\
3
\end{array}
\]

In "The Case for Case" Fillmore maintained that there was no linear order relationship among the deep cases. However, he has since then revised his theory in such a way that there exists a strict hierarchical order among the deep cases and that such rules as Subject Formation, Psych Movement, Object Formation, etc., are sensitive to this order. The Fillmorean deep case hierarchy is as shown below.

\[(10)\]

The function of the General Experiencer Shunting rule is to shunt the Experiencer NP so that it will not get involved in the operations of the rules which follow it. Fillmore has given the following examples in his syntax class in the 1970 Summer Linguistic Institute at Ohio State.

\[(11) \text{To me, John is tall.}\]
(12) To me, John resembles Mary.

S.S.

D.S.

(13) To me, it seems that John is a genius.

S.S.

D.S.

In each case, the Experiencer NP I has been 'shunted'. That is why it has not become the surface subject, so Fillmore explains.

Recall Fillmore's definition of Experiencer in "Types of Lexical Information" (p. 116).

Experiencer (E): the entity which receives or accepts or experiences or undergoes the effect of an action (earlier called by me Dative).

Although he does not explicitly say so, it is obvious that he means 'an action' to be 'an action identified by the verb' as it was defined in "The Case for Case." Observe the sentences (11) and (12) again. Please ignore (13) temporarily. Is the Experiencer NP I well-qualified to be called so in the defined sense of the word? I would like to claim that it is not. I does not receive or accept or experience or undergo the effect of an action identified by tall or resemble. Rather it is the Experiencer of a predicate of judgment/perception like think or seem. Compare (11) and (12) with (14) and (15) below.

(14) I fear the dog.
(15) I believe that John is a genius.

In (14) and (15) the Experiencer $I$ is clearly well-qualified to be called so, for it is $I$ who experiences or undergoes the effect of an action identified by the verb fear or believe. Thus the relationship between the Experiencer and its predicate is entirely different in (11), (12) and (14), (15). In the Japanese versions of (11) and (12) the predicate of judgment/perception is required for the Experiencer NP $I$. Otherwise, the sentences are ungrammatical. Thus they are analysed as the complex sentences as shown below.

(16) \{watashi-wa\} John-wa segatakai to \{omou \}
\{omowareru\}

"I think that John is tall."
"It seems to me that John is tall."
I would like to claim that English sentences like (11) and (12) too should be analysed in the same fashion and that the Experiencer in (11) and (12) has derived from the higher sentences. What English grammar needs, it seems to me, is an Experiencer Lowering rule and not an Experiencer Shunting rule. Obviously, the Experiencer Lowering rule has to be preceded by the Judgment/Perception Verb Deletion rule. Fillmore has another rule called the Shunted Indefinite Deletion rule for the following types of sentences.

(18) John is tall.
(19) John resembles Mary.
Ross's performative analysis seems to be more adequate in handling these sentences. My proposed analyses of the deep structure for the sentences (11) and (12) are as follows:

(20) To me, John is tall.

\[ S \]

\[ \text{V} \quad \text{E} \quad \text{O} \]

\[ [+\text{Judgment/Perception}] \quad I \]

\[ \text{John is tall} \]

(21) To me, John resembles Mary.

\[ S \]

\[ \text{V} \quad \text{E} \quad \text{O} \]

\[ [+\text{Judgment/Perception}] \quad I \]

\[ \text{John resembles Mary} \]

Now, let us go back to his example (13). I agree with Postal in analyzing the verb seem as Psych Movement verb. The reason why to me is fronted to the beginning of the sentence in (13) is because Ross's Topicalization rule has operated on the sentence (22) and yielded the sentence (13).

(22) It seems to me that John is a genius.

(13) To me, it seems that John is a genius.

II. Is the Combination of E, I, O possible in the Deep Structure?

Recall the sentence (12) and Fillmore's deep case analysis for it.

(12) To me, John resembles Mary.

\[ S \]

\[ \text{V} \quad \text{E} \quad \text{I} \quad \text{O} \]

\[ \text{resemble} \quad I \quad \text{John} \quad \text{Mary} \]
Fillmore's analysis claims that the combination of E, I, O is perfectly acceptable for the simple sentence at the deep structure level of human language. I would like to argue that this is wrong. I shall propose, as a deep structure constraint, that the combination of E, I, O cannot occur in the simple sentence. Let us examine the Fillmorean sense of the four cases. (from "Types of Lexical Information," p. 116)

Agent (A): the instigator of the event.
Experiencer (E): the entity which receives or accepts or experiences or undergoes the effect of an action (earlier called by me Dative).
Instrument (I): the stimulus or immediate physical cause of an event.
Object (O): the entity that moves or changes or whose position or existence is in consideration.

As the definition clearly shows, Instrument can be subcategorized into Instrument₁ and Instrument₂. These subcategories are not only semantic but also syntactic. For example, in Japanese except for the figurative speech, Instrument₁ cannot become the subject of the sentence. Instrument₂ can, as shown in the sentences (2) through (6). Therefore, English sentences (23) through (25) have their ungrammatical Japanese counterparts (26) through (28) respectively.

(23) This key opened that door.
(24) That hammer broke this vase.
(25) The fire burnt that house.
(26) *Kono kagi-ga ano to-o aketa.
(27) *Ano hammas-ga kono kabin-o watta.
(28) *Kaji-ga ano ie-o yaita.

If the hierarchical order of A, E, I, O proposed by Fillmore is a universal claim, then it is violated by Japanese as shown by the above examples. For it is not the Instrument but the Object which is the subject of the sentences.

There are certain selectional restrictions among deep cases. For example;

Instrument₁: 1. Only possibility for Experiencer to co-occur with Instrument₁ at deep level is together with Agent. Otherwise, they are mutually exclusive.
2. When Agent and Experiencer co-occur, Experiencer is always destined to become the surface object. It implies that there is no such verb whose case feature is +[ _ A E I O . ]
Observe the following examples.

(29) Alice \{killed\} \{*hated\} John with the knife.

\[ S \]

\[ S \]

\[ S \]

\[ S \]

\[ S \]

\[ S \]

\[ S \]

\[ S \]

(30) John gave Mary cookies.

\[ S \]

(31) *John hated Mary cookies.
As above examples show, there seems to be no possible way to get the deep level combination of E, I, O in the simple sentence. Recall Postal's strike/similar analysis for the verb remind. He argues quite convincingly that by decomposing the verb remind into the two underlying semantic verbs whose semantic properties are quite similar to the lexical verbs strike and similar, the seemingly idiosyncratic behaviors of this verb can well be accounted for by the independently motivated transformational rules and the derivational constraints and with the inherent properties of these underlying verbs. Thus, this abstract analysis, he claims, makes it possible to capture significant generalizations of English syntax. It is quite remarkable that we are forced to arrive at the same conclusion by our claim that the combination of W, I, O is impossible for the simple sentence at the base structure.

Consider the following sentence.

(33) John reminds me of Mary.

Fillmore would suggest the following deep case analysis.

However, if we assume this combination is unacceptable, we are forced to find another way of explaining the sentence. Compare this sentence with the sentence (34).

(34) To me, John resembles Mary.
The native speaker of English knows that the two are very closely related. Observe that the status of Experiencer I in the two sentences are entirely different, for in (33) I is the one who 'experiences the effect of an action identified by the verb remind', but in (34) it is not the case. We know the latter is the 'lowered' Experiencer. It is obvious that the Experiencer Lowering rule does not operate in (33). The fact that the true Experiencer of the predicate is the surface object indicates that it has been downgraded by Psych Movement rule. Thus we may conclude that instead of Experiencer Lowering, Subject Raising has taken place in (33). John, which has started out in the lower sentence, has been raised into the main sentence by Subject Raising and then after the application of Psych Movement, Subject Formation has moved John to the subject position. The predicate of the lower sentence must have been a semantic verb whose feature composition is quite similar to that of lexical item resemble. The restructuring of the tree has yielded the present surface structure. This analysis explains beautifully why the native speaker of English intuitively knows that the two sentences (33) and (34) are essential paraphrases. My proposed analysis of the sentence (33) is as follows.

(35)

This analysis claims that the verb remind cannot be inserted at the deep structure level. Therefore, it seems to me that a Fillmorean deep case analysis forces us to admit that the lexical insertion cannot be done in a block at the deep structure level and that the transformational rule can operate on the semantic verbs as well as on the actual lexical items.

I would like to interpret the impossibility of the E, I, O combination to mean simply that this is not the way human beings conceive the world. Fillmorean deep cases are the semantic 'distinctive features' with which humans perceive and understand the outer world. Basically, I believe this approach to the syntax is the correct one. A linguistic theory is an empirical claim about the nature of human language which is very tightly connected with the organism of human cognition. I believe that 'deep cases' should be incorporated into the theory of language as semantic primitives, if it aims to attain the goal of explanatory adequacy.

Let me give you another example that some transformational rules are really sensitive to the semantic case roles of the NP in the sentence. In his "An Interpretive Theory of Pronouns and Reflexives," Jackendoff observes quite 'startling' phenomena, which he fails to account for (p. 19).
"Exploring more data, we notice the startling fact that the choice of verbs in the main clause and the relative clause affects the acceptability of reflexives in the relativized noun phrase. We get paradigms like these:

\[
\begin{align*}
(36) & \quad \text{I hate the story about } \{ \text{him} \} \text{ that John always tells.} \\
(37) & \quad \text{I told the story about } \{ \text{him} \} \text{ that John likes to hear.}
\end{align*}
\]

(36) and (37) look the same as far as noun phrase relationships are concerned:

\[
\begin{align*}
(38) & \quad S \\
& \quad \text{NP} \quad \text{VP} \\
& \quad \text{I} \quad \text{Y} \\
& \quad \{ \text{hate} \} \quad \text{Det} \quad \text{NN} \\
& \quad \{ \text{told} \} \quad \text{the} \quad \text{PP} \\
& \quad \text{the story about } \{ \text{him} \} \text{ that John always tells likes to hear}
\end{align*}
\]

Observe that in (36) backward reflexivization takes place, while in (37) forward reflexivization takes place. Jackendoff’s interpretive rule is quite helpless in predicting which NP in the sentence the reflexivized form is coreferent with. Jackendoff assumes that "there is an optional semantic rule that duplicates the subject of a sentence in the determiner of the object." However, he is quite at a loss how to formulate the conditioning of this rule. He goes as far as to suspect that "this rule depends on some semantic property of the verb" and "the property in question is related to the subject’s performing some sort of direct action on the object." Jackendoff intuitively feels that the above phenomenon must be very closely related to the following data.

(39) Today I shot my first lion.  
*Today I was scared of my first lion.

(40) Yesterday I told my first Polish joke.  
*Yesterday I heard my first Polish joke.
(41) Today I performed my first Mozart symphony.
   *Today I hated my first Mozart symphony.

Observe that the my here has no connection whatever with possession. He again deplores that "its semantic relation to the head noun is extremely unclear to me." So far as observation goes, he is quite correct. However, since the deep case notion is not available in his linguistic theory, he fails to capture the important generalization of what is really going on in the two closely related phenomena. The verbs such as hate, hear, be scared of, are Experiencer verbs. They are not associated with Agent. On the contrary, the verbs such as tell, shoot, perform are Agent verbs. Now, observe the sentences (36) and (37) again. The NP the story about + REFLEXIVE is associated with two verbs, one in the major clause and the other in the relative clause. In both cases one is the Agent verb and the other is the Experiencer verb. Notice that it is always the Agent of the sentence which the reflexivized form is coreferent with! (40) and (41) clearly show that Agent copying rule takes place in English. Thus our analysis of the 'puzzling' phenomena is as simple as follows:

First, Agent copying rule applies. This rule duplicates Agent in the determiner of the Object. Then pronominalization and reflexivization takes place.

III. Justification of Psych Movement

3.1. Paraphrase argument.

Compare the following pairs of sentences. The native speaker of Japanese knows that each member of a pair is a true paraphrase of the other. Group (a) are the same sentences as (2) through (8).

(42) a. Alice-ga Bill-niwa osoroshikatta.
    " -to was fearful
    "Alice was fearful to Bill."

   S.S.                          D.S.
   /    \                      /    \
   S    S
   / \   / \                / \   / \ 
  WP  WP  V     osoroshii Bill Alice
   |          |        [+Adj]
  Alice Bill osoroshikatta

   b. Bill-ga Alice-o osoreta.
      " feared
      "Bill feared Alice."
(43) a. Alice-ga Bill-niwa urayamashikatta.
   "-to was enviable
   "Alice was enviable to Bill."

b. Bill-ga Alice-o urayanda.
   "-to envied
   "Bill envied Alice."

(44) a. Ongaku-ga Alice-niwa tanoshikatta.
   music -to was enjoyable
   "Music was enjoyable to Alice."
b. Alice-ga ongaku-o tanoshinda.
"music. enjoyed"
"Alice enjoyed the music."

(45) a. Alice-ga Bill-niwa awaredatta.
""-to was pitiful
"Alice was pitiful to Bill."

b. Bill-ga Alice-o awarenda.
"Bill pitied Alice."

""-to was hateful
"Alice was hateful to Bill."
\[(47)\]
a. \(\text{Zibun}_{1}\text{-no tsumi}-\text{ga Alice}_{1}\text{-niwa hazukashikatta.}\)
self crime was shameful to Alice.

b. \(\text{Alice}_{1}\text{-ga zibun}_{1}\text{-no tsumi-o hazita.}\)
self's crime was ashamed of Alice.

"Bill hated Alice."

"Her own crime was shameful to Alice."

"Alice was ashamed of her own crime."
The syntactic differences between group (a) and group (b) are quite systematic: 1) The subject in group (a) shows up as the direct object in group (b). 2) The Indirect object in group (a) shows up as the subject in group (b). 3) Group (a) takes the adjective as its predicate, while group (b) takes the verb. Superficially speaking, Subject-Object Inversion has taken place in the corresponding pair. It is obvious that the postulation of Experiencer Shunting is of no help in accounting for this phenomenon. Incidentally, please don't be misled by the English translations. The Japanese verbs given here are all basic forms, not derived ones. For example, be ashamed of, and be sad about are full-fledged verbs in Japanese.

An adequate grammar of Japanese has to account for the fact that the native speaker of Japanese feels that each pair of sentences from
(42) through (48) means the same thing, regardless of the syntactic differences in the surface structure. If we postulate Psych Movement, it can explain why in group (a) the Experiencer NP is downgraded to non-subject position. However, notice that this rule cannot explain why the native speaker of Japanese feels that the member of each pair are true paraphrases of each other, regardless of the fact that one takes verb as predicate, while the other takes adjective. We might say that semantic properties of each pair adjective/verb are essentially alike and one of their differences is in the rule feature [+Psych Movement]. According to this analysis they are already in the deep structure at the time when Psych Movement applies. I would like to propose an alternative. That is, when Psych Movement applies, the above-mentioned predicates are semantic verbs, with the rule feature [+Psych Movement]. If it applies, then the lexical transformation inserts adjectives. If not, then the same lexical transformation inserts verbs. The Passive rule has to follow lexical insertion, for the inserted verbs in question can undergo Passive as shown below.

(49) a. Bill-ga Alice-o osoreteita.
    "Bill feared Alice."

b. Alice-ga Bill-ni osorerareteita.
    "-by was feared
    "Alice was feared by Bill."

(50) a. Bill-ga Alice-o nikundeita.
    "Bill hated Alice."

b. Alice-ga Bill-ni nikumareteita
    "-by was hated
    "Alice was hated by Bill."

Passive marker re_(rare) is underlined. Thus correct ordering relations among those rules should be as follows:

1. Psych Movement
2. Adjective/Verb Insertion
3. Passive
4. Subject Formation

A few verbs in Japanese undergo the Psych Movement rule obligatorily. A pair of verbs, wakaru and satoru, mean about the same thing. Their meaning difference is quite a subtle one. One of the differences of the two is the rule feature [Psych Movement]. Compare the following sentences.

(51) a. Alice-wa (zibun-ga manonaku shinu koto)-o satotta.
    "self soon die that realized
    "Alice realized that she would die soon."
(50) b. (Zibun-ga mamenaku shinu koto)-ga Alice-niwa wakatta.  
    "Alice understood that she would die soon."

Thus, *wakaru* is [+Psych Movement], whereas *satori* is [-Psych Movement].

3.2. Evidence for Psych Movement from Reflexivization.

The Japanese Reflexivization rule behaves almost like the English Pronominalization rule except that Backward Reflexivization is prohibited. It goes down into the complement sentences, the relative clauses and sentences in apposition. Thus it can easily violate Ross's Complex NP constraint. Ross's Complex NP constraint says that except for Pronominalization, no feature-changing transformation may change features within the complex NP construction. He knows, however, that Japanese Reflexivization rule would be a counter-example, if it be a universal claim. It also violates the Conjoint Structure constraint. Indeed Japanese Reflexivization is quite deviant from the standard behavior. Observe the following examples.

(51) Alicei-wa kagami-no naka-no zibun1-o nagameta.  
     "mirror's inside's self watched
     "Alice1 watched herself in the mirror."

(52) Alicei-wa zibun1-o taumi-o hazita.  
     "self's crime was ashamed of
     "Alice1 was ashamed of herself's crime."

(53) Alicei-wa (zibun1-to imooto-ga kaita) e-o Bill-ni okutta.  
     "self and younger drew picture Bill-to sent
     sister
     "Alice1 sent the picture to Bill which herself1 and her younger sister drew."

(54) Alicei-wa (Bill-ga zibun1-o damashita koto)-o urandieru.  
     "self deceived that resents
     "Alice1 resents that Bill deceived herself1."

(55) Alicei-wa (zibun1-ga Bill-o koroshita) yume-o mita.  
     "senf killed dream saw
     "Alice1 dreamt a dream that herself1 killed Bill."

(56) Alicei-wa (zibun1-ga shitaitoki dake) benkyosuru.  
     Adv.S
     "self want to do only study
     "Alice1 studies only when herself1 want to do so."

(57) *(Alice-ga shitaitoki dake) zibun1-wa benkyosuru.*  
     "When Alice1 wants to do so, herself1 studies."

(58) *(Zibun1-o aishita ga) otoko-ga Alicei-o koroshita.  
     self loved man
     "The man who loved herself1 killed Alice1."
(59) "(Zibun-i-o aishiteita) otoko-ga (Alice_i-o nikundeita) otoko-o self loved man " hated man
koroshita.
killed
"The man who loved herself killed the man who hated Alice_i."

In the above sentences (51) through (56) the second occurrence of Alice cannot reflexivize the first one. The ungrammaticality of (57), (58) and (59) indicates that the antecedent should precede and command the NP to be reflexivized. Actually (57) and (58) and (59) reveals more about Japanese syntax. (57) has the grammatical version such as:

(60) (Zibun-i-ga shitaitoki dake) Alice_i-wa benkyosuru.
self wants to do only " study.
"Only when herself wants to do so, Alice_i studies."

(56) and (60) indicate that Reflexivization should precede Adverb Preposing. (58) and (59) have the following grammatical counterparts respectively.

(61) (Alice_i-o aishiteita) otoko-ga \{kanojo-o\} \{Alice-o\} koroshita.
'' loved man \{her\} \{Alice\} killed
"The man who loved Alice killed \{her\} \{Alice\}.

(62) (Alice_i-o aishiteita) otoko-ga \{kanojo-o\} nikundeita otoko \{Alice-o\} loved man hated
otoko-o koroshita.
man killed
"The man who loved Alice_i killed the man who hates \{her\} \{Alice\}.

(61') S.S.
(61') and (62') indicate that if the antecedent precedes but does not command the coreferential NP in the sentence, then Reflexivization is blocked and Pronominalization takes place. Also in Japanese the second occurrence of the coreferential NP can be repeated as the two sentences above show. They are perfectly good sentences of Japanese. Thus, in certain environments 'Pronominalization' in the sense of identity deletion is optional in Japanese.

Anyway, the above examples seem to convince us that Backward Reflexivization is not allowed in Japanese. Ross maintains in his dissertation that "the rule of Reflexivization can, in every language I know of, be formulated unidirectionally" (p. 479). However, we are in serious trouble. For there are a significant number of sentences in which Backward Reflexivization does seem to take place. Consider the following.

(63) (Zibun1-ga okashita) tsumi-ga Alice1-niwa osoroshikatta.

self committed crime "to was fearful

*"The crime which herself had committed was fearful to Alice1."

S.S.

(64) (Helen-ga zibun1 yori utsukushii) koto-ga Alice-niwa

self more than beautiful "to was enviable

urayamashikatta.

was enviable

*"That Helen is more beautiful than herself was enviable to Alice1."

(62') S.S.
(65) (Zibun₁-ga ninkimono dearu koto)-ga Alice-niwa tanoshikatta.
self popular be that "-to enjoyabale
"That herself₁ was popular was enjoyable to Alice₁."

S.S.

(66) (Helen-ga zibun₁-yori utsukushikoto)-ga Alice-niwa nikukatta.
self more than beautiful that "-to hateful
"That Helen was more beautiful than herself₁ was hateful to Alice₁.

S.S.

(67) (Bill-ga zibun₁-o sittateiru koto)-ga Alice₁-niwa awaredatta.
self adored that "-to was pitiful
"That Bill adored herself₁ was pitiful to Alice₁.

S.S.

(68) (Zibun₁-ga okashita) tsumi-ga Alice₁-niwa hazukashikatta.
self's committed crime "-to was shameful
"The crime which herself₁ had committed was shameful to Alice₁."
Since in every sentence the first of the two coreferential NP's precedes but does not command the second one, it should be the case that Reflexivization be blocked and Pronominalization take place. However, mysteriously enough, Backward Reflexivization takes place. The grammaticality of the following sentences shows that Pronominalization operates in these constructions, as our principle predicts.

(69) (Zibun$_1$-ga Bill-ni nikumareteiru koto)-ga Alice$_1$-niwa kanashikatta

"That herself$_1$ was hated by bill was sad to Alice$_1$."
(74) (Bill-ga Alice₁-o sittatteiru koto) ga kanojo-niwa awaredatta.
"That Bill adored Alice₁ was pitiful to her₁."

(75) (Alice-ga okashita) tsumi-ga kanojo₁-niwa hazukashikatta.
"The crime that Alice₁ had committed was shameful to her₁."

(76) (Alice-ga Bill-ni nikumareteiru koto)-ga kanojo-niwa kanashikatta.
"That Alice was hated by Bill was sad to her.

Kanojo in the above sentences is ambiguous in that it has two readings. One refers to Alice. The other refers to some other human female identifiable to the speaker and the hearer. In my dialect the latter reading is more natural than the former one, but it is irrelevant to the present discussion.

The mystery of Backward Reflexivization still remains to be explained. Clearly there are only two possibilities to account for this peculiar phenomenon. The first explanation is to admit that there are true instances of Backward Reflexivization. In this case we have to add the following statement in the grammar.

Under the following environment, only backward reflexivization may take place; 1) the antecedent is either in the sentential subject or in the complex NP construction which is the subject of the sentence. 2) It is coreferential to some NP which is in the major clause. 3) The predicate is chosen among a group of psychological adjectives which is so marked in the lexicon that they may undergo Backward Reflexivization.

The second explanation is to say that first, forward reflexivization takes place, and then some transformational rule applies so that the NP which contains the reflexivized form is to be chosen by Subject Formation as the subject of the surface structure.

The first solution must be rejected for the following reasons: 1) It cannot be a mere accident that only those predicates which require their Experiencer NP to be in the non-subject position must undergo backward reflexivization. 2) This treatment cannot explain why ordinary forward reflexivization cannot operate in the very environment in question. 3) The grammar becomes more complex and less general without any convincing reasons.

If we postulate a Psych Movement rule in Japanese grammar and maintain the correct ordering relationship between it and a Reflexivization rule, then this phenomenon can be explained very simply and systematically. That is, Reflexivization precedes Psych Movement.

The grammar of a human language is a tightly organized system. An independently motivated rule often gives strong evidence for the existence of other rules. We have demonstrated that the relationship of Psych Movement and Reflexivization in Japanese is just one of those examples.
Bibliography