HOW TO USE PRONOUNS CORRECTLY*

SATORU NAKAI

I

Introduction

Japanese has three kinds of pronouns: the ϕ-pronoun (phonetically unspecified anaphor indicated by the symbol ϕ in this paper), the full-pronoun (*kare* 'he' and *kanozyo* 'she'), and the reflexive (*zibun*). These pronouns cannot always be used interchangeably as the following examples show:

(1)

a. *John$_i$-wa* [ϕ_i *sinda toki*]$_{ADV}$ *issen-mo* *motte* *i-na-katta*
       Top   die-Past when   penny-even having be-not-Past
John$_i$, when ϕ_i died, did not have even a penny.'

b. **John$_i$-wa* [*kare$_i$-ga sin-da toki*]$_{ADV}$ *issen-mo* *motte* *i-na-katta*

c. **John$_i$-wa* [*zibun$_i$-ga sinda toki*]$_{ADV}$ *issen-mo* *motte* *i-na-katta*[1]

(2)

a. *John$_i$-wa* [ϕ_i *sensei-ni*   *home-rare-ta*   *node*]$_{ADV}$ *uresi-katta*
       Top   teacher-by praise-Passive-Past because glad-Past
'John$_i$, because ϕ_i was praised by the teacher, was glad.'

b. **John$_i$-wa* [*kare$_i$-ga sensei-ni home-rare-ta node*]$_{ADV}$ *uresi-katta*

c. *John$_i$-wa* [*zibun$_i$-ga sensei-ni home-rare-ta node*]$_{ADV}$ *uresi-katta*

(3)

a. **John$_i$-wa* [ϕ_i *tate-ta*   *ie-ni*]$_{ADV}$ *sunde* *iru*
       Top   build-Past house-in living is

'John$_i$ is living in the house which ϕ_i built.'

b. *John$_i$-wa* *[kare$_i$-ga tate-ta ie-ni]$_{ADV}$ sunde iru*

c. *John$_i$-wa* *[zibun$_i$-ga tate-ta ie-ni]$_{ADV}$ sunde iru*

The purpose of this paper is to clarify the conditions that determine which type of pronominalization is to be used in sentences which involve only one subordinate clause.[2] First I will discuss conditions in terms of *command-precede* relations, and then functional conditions.

II

Command-Precede Conditions

1. Kuroda (1965)

As far as I know, Kuroda (1965) is the first attempt to clarify the conditions. Kuroda gives the following syntactic conditions on the use of the ϕ-pronoun and the reflexive:[3]

(4)

(i) When the subject of the constituent sentence is coreferential with the matrix sentence subject, it may either be reflexivized or zero pronominalized (restatement by Ohso (1976: p. 4)).

Example:

   John$_i$-wa *[zibun$_i$-ga/ϕ_i hirotte ki-ta]$_S$ koinu-o* *daizini*

      Top   self-Subj   picked up   puppy-Obj carefully

sodate-ta

bring up-Past

'John$_i$ carefully brought up the puppy which he$_i$/ϕ_i had picked up on the road.'

(ii) When the object of the constituent sentence is coreferential with

the matrix sentence subject, it is

(a) reflexivized if it is dominated by the node Verb Phrase of the matrix sentence, and

(b) zero pronominalized otherwise (restatement by Ohso (1976: p. 4)).

Examples:

(iia) *John$_i$-wa* [[[*Bill-ga* *ϕ_i/*zibun$_i$-o oinuku*]$_S$ *koto-o*]$_{NP}$
    Top Subj self-Obj outdo Nom-Obj
  kitaisite iru]$_{VP}$ (Ohso's (10))
  expecting is
  'John$_i$ expects Bill to outdo ϕ_i/him$_i$.'

(iib) *John$_i$-wa* [[[*Bill-ga* ϕ_i/?*zibun$_i$-o sikat-ta*]$_S$ *heya-de*]$_{ADV}$
    Top Subj self-Obj scold-Past room-in
  [*naite iru*]$_{VP}$ (Ohso's (13))
  crying is
  'John$_i$/ is crying in the room where Bill scolded ϕ_i/him$_i$.'

There are some problems with Kuroda's conditions. First, the existence of the VP node is doubtful. It has been argued by many linguists that the VP node is unnecessary in Japanese.[4] Secondly, there are counter-examples. Kuroda himself (Kuroda (1973)) provides one.

(5)

Oedipus$_i$-wa [[*Jocasta-ga zibun$_i$-o un-de*]$_S$ *ie-de*]$_{ADV}$ *ima-wa*
  Top   Subj self-Obj bear-Past house-in now
kodomotati-to koohuku-soo-ni kurasite imasu (Kuroda's (5))
children-with happily living is

'Oedipus$_i$ is living happily with the children in the house where Jocasta gave birth to self$_i$.'

According to (4ii), the ϕ-pronoun should be used instead of *zibun* in (5) because reflexivization should not go into the adverbial clause.[5]   (4) is violated in (5).[6]
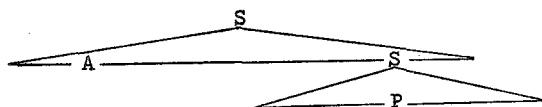
2.   *Command-Precede* Conditions

Next, I would like to discuss the problem from the point of view of the relative positions of a pronoun and its antecedent.
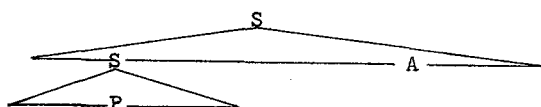
There are four combinations according to the relative positions of the pronoun and its antecedent, as illustrated below:
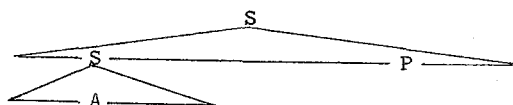
(6)

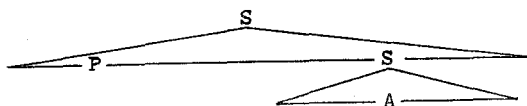(i)   The antecedent (A) commands the pronoun (P). The antecedent precedes the pronoun.

(ii) The antecedent commands the pronoun. The pronoun precedes the antecedent.

(iii) The pronoun commands the antecedent. The antecedent precedes the pronoun.

(iv) The pronoun commands the antecedent. The pronoun precedes the antecedent.

And each of the pronominalizations is subject to the following conditions:

(7)

a. *Condition on φ-Pronominalization*   (cf. Nakai (1978))

Given a complex sentence, where NP_1 is in the matrix clause and NP_2 is in an embedded clause:

If NP_1 is a φ-pronoun and NP_2 is a full noun, then NP_1 and NP_2 are noncoreferential. (That is, upward-φ-pronominalization is not favored in Japanese.)

b. *Condition on Full-Pronominalization*   (cf. Nakai (1974, 1977), Y. Nakai (1974), Ohso (1976))

A full-pronoun can be coreferential with an NP if the NP precedes the full-pronoun. (That is, full-pronominalization works only forward in Japanese.)

c. *Condition on Reflexivization*   (cf. N. McCawley (1972), Oyakawa (1973, 1974), Inoue (1976))

The antecedent of the reflexive must be the subject of a sentence and command the coreferential NP to be reflexivized (Oyakawa's formulation).

(6) and (7) taken together give the following table:

(8)

	A precedes P.	P precedes A.
A commands P.	(i) (OK) ϕ-Pronominalization (OK) Full-Pronominalization (OK) Reflexivization	(ii) (OK) ϕ-Pronominalization (NO) Full-Pronominalization (NO) Reflexivization
P commands A.	(iii) (NO) ϕ-Pronominalization (OK) Full-Pronominalization (NO) Reflexivization	(iv) (NO) ϕ-Pronominalization (NO) Full-Pronominalization (NO) Reflexivization

(Notes: OK=allowed   NO=not allowed)

The examples are given below:

(9)

(i) *John$_i$-wa* [ϕ_i/*kare$_i$-ga*/*zibun$_i$-ga kinoo mita*]$_S$ *eiga-no*

　　　Top　　he-Subj self-Subj yesterday see-Past movie-of

koto-o hanasi-ta

Nom-Obj talk-Past

'John$_i$ talked about the movie which ϕ_i/he$_i$/self$_i$ saw yesterday.'

(ii) *sensei-wa* [ϕ_i/*kare$_i$-ga*/*zibun$_i$-ga kanningu-o si-ta*]$_S$

teacher-Top　　　he-Subj self-Subj cheated in the exam

node John$_i$-ni reiten-o atae-ta

because　　to grade of zero-Obj give-Past

'The teacher, because ϕ_i/he$_i$/self$_i$ had cheated in the exam, gave a grade of zero to John$_i$.'

(iii) *sensei-wa* [*John$_i$-ga kanningu-o si-ta*]$_S$ *node*

teacher-Top　　Subj cheated in the exam　because

?ϕ_i/*kare$_i$-ni$_i$*/*zibun$_i$-ni reiten-o atae-ta*

　　he-to　self-to　grade of zero-Obj give-Past

'The teacher, because John$_i$ had cheated in the exam, gave a grade of zero to ϕ_i/him$_i$/self$_i$.'

(iv) *ϕ_i/*$kare_i$-wa/*$zibun_i$-wa　[$John_i$-ga　$hirotte$　ki-ta]$_S$　$koinu$-o
　　　　　he-Top　self-Top　　　Subj　picked up　　　puppy-Obj
$daizini$　　$sodate$-ta[7]
carefully　bring up-Past
'ϕ_i/he$_i$/self$_i$ carefully brought up the puppy which John$_i$ had picked up on the road.'

III

Functional Conditions

According to (4) and (8), when the antecedent is the subject of the matrix sentence and the pronoun is also the subject of an embedded sentence, and the matrix subject precedes the embedded sentence, all of the three types of pronominalization are theoretically possible, because the antecedent both commands and precedes the pronoun. Actually, however, it is not the case that all types of pronominalization can be used, as shown in examples (1), (2), and (3). There must be other conditions besides those given in (4) and (7) governing Japanese pronominalization.

Several nonsyntactic conditions, called functional conditions, have been proposed by Kuno and others. (For example, Kuno (1972a, 1972b), Kuno and Kaburaki (1975), Ohso (1976)) In this section, I will briefly introduce Kuno's conditions first, and then propose a hypothesis to redeem the deficiencies of Kuno's conditions.

1. Reflexivization and Full-Pronominalization

According to Kuno (1972a), Japanese reflexivization is subject to the "awareness" condition, which is stated below:

(10)

(i)　*zibun* in a simple sentence must be coreferential with the subject

of the sentence;

(ii) *zibun* in a constituent caluse (A) is coreferential with a noun phrase (B) of the matrix sentence

(a) if A represents an action or state that the referent of B is aware of at the time it takes place (in the reportive style and the nonrecollective nonreportive style); or

(b) if A represents an action or state that the referent of B has later come to be aware of, and is now reflecting upon (in the recollective nonreportive style) (Kuno (1972a: pp. 191–92)).

Some of the examples Kuno gives are shown in (11) and (12).

(11)

a. *John$_i$-wa* [*zibun$_i$-o korosooto site iru*]$_S$ *otoko-o sitte*
   Top   self-Obj try to kill doing is   man-Obj knowing
   imasu-ka   (Kuno's (98a))
   is-Question

   'Does John$_i$ know the man who is trying to kill self$_i$?'

b. *John$_i$-wa* [*kare$_i$-o korosooto site iru*]$_S$ *otoko-o sitte imasu-ka* (Kuno's (98b))

   'Does John$_i$ know the man who is trying to kill him$_i$?'

(12)

a. **John$_i$-wa* [*zibun$_i$-ga sin-da toki*]$_{ADV}$ *issen-mo motte*
   Top   self-Subj die-Past when   penny-even having
   i-na-katta (Kuno's (105))
   be-not-Past

   'John$_i$, when self$_i$ died, did not have even a penny.'

b. **John$_i$-wa* [*zibun$_i$-ga sissinsi-ta toki*]$_{ADV}$ *boku-no oyazi-no*
   Top   self-Subj faint-Past when   I-of   father-of

byooin-ni   *katugikom-are-ta*   (Kuno's (95a))

hospital-to   take-Passive-Past

'John$_i$, when self$_i$ fainted, was taken to my father's hospital.'

According to Kuno's theory ,(11a) implies that John is aware that somebody is trying to kill him, but (11b) does not have such an implication. (12a) is ungrammatical because it is impossible that John was aware that he had died. (12b) is also ungrammatical because it is impossible that John was aware that he fainted.

Kuroda (1973) criticizes Kuno's "awareness" condition, giving the following counter-example:

(13)

Oedipus$_i$-wa   [*Jocasta-ga* *zibun$_i$-o*   *un-da*]$_S$ *ie-de*

       Top   Subj self-Obj   bear-Past house-in

ima-wa kodomotati-to koohuku-soo-ni kurasite imasu (Kuroda's (5))

now   children-with   happily   living   is

'Oedipus$_i$ is living happily with the children in the house where Jocasta gave birth to self$_i$.'

Zibun can be used even though Oedipus does not know that Jocasta is his mother. The "awareness" condition is violated.

In response to Kuroda's criticism, Kuno and Kaburaki (1975) propose to account for the reflexivization phenomenon in terms of "empathy." Though it is not always clear what Kuno and Kaburaki mean by "empathy," "empathy" can be replaced by "point of view." When the speaker of a sentence describes the event from the point of view of a referent of an NP in the sentence, the speaker is said to be *empathizing* with the referent.

According to Kuno and Kaburaki, Japanese reflexivization is an

empathy-controlled phenomenon and Kuno's "awareness" condition on *zibun* is a special case of the empathy constraint. They claim that "*zibun* can be used only when the speaker is empathizing with its referent." (Kuno and Kaburaki (1975: p. 13)) For example, in (11a), where *John* and *zibun* are coreferential, the speaker empathizes with John, who is the referent of *John* and *zibun*. But in (12a), where *zibun* cannot be coreferential with *John*, the speaker cannot empathize with John, that is, the speaker cannot describe the event from John's point of view because John is dead. Therefore, *zibun* cannot be used.

2. ϕ-Pronominalization and Full-Pronominalization

2.1 Next let us consider ϕ-pronominalization and full-pronominalization. First consider the following examples:

(14)

a. **John$_i$-wa [zibun$_i$-ga sissinsi-ta toki]$_{ADV}$ boku-no*
    Top self-Subj faint-Past when I-of
   oyazi-no byooin-ni katugikom-are-ta (Kuno's (95a))
    father-of hospital-to take-Passive-Past
    'John$_i$, when self$_i$ fainted, was taken to my father's hospital.'

b. **John$_i$-wa [kare$_i$-ga sissinsi-ta toki]$_{ADV}$ boku-no*
   oyazi-no byooin-ni katugikom-are-ta

c. *John$_i$-wa [ϕ_i sissinsi-ta toki]$_{ADV}$ boku-no oyazi-no*
   byooin-ni katugikom-are-ta

(15)

a. **John$_i$-wa [zibun$_i$-ga yopparat-ta toki dake]$_{ADV}$*
    Top self-Subj drunk-Past when only
   watakusi-ni yasasiku narimasu (Kuno's (95c))
    I-to tender become
    'John$_i$, only when self$_i$ gets drunk, becomes tender toward me.'

b. *$John_i$-wa [$kare_i$-ga yopparat-ta toki dake]$_{ADV}$ watakusi-ni yasasiku narimasu

c. $John_i$-wa [ϕ_i yopparat-ta toki-dake]$_{ADV}$ watakusi-ni yasasiku narimasu

Kuno's "awareness" condition predicts the ungrammaticalness of (14a) and (15a) because it is impossible that John was aware that he fainted or that he is aware that he is drunk. Kuno's theory, however, cannot explain why (14b) and (15b) are ungrammatical. Since full-pronominalization is not an empathy-controlled phenomenon and therefore is neutral to the "awareness" condition, (14b) and (15b) should be grammatical. Also notice that the ϕ-pronoun can be used in (14c) and (15c). There must be a condition that can explain why the *b* sentences are ungrammatical but the *c* sentences are grammatical in (14) and (15). Let us pursue this problem further.

Compare the following two sentences.

(16)

a. $John_i$-wa [$kare_i$-ga/$zibun_i$-ga/*ϕ_i tukut-ta]$_S$ puuru-de
    Top he-Subj self-Subj   make-Past pool-in
    mainiti   oyoide   iru
    every day swimming is
    'John$_i$ swims every day in the pool which he$_i$/self$_i$/ϕ_i built.'

b. $John_i$-wa [*$kare_i$-ga/?$zibun_i$-ga/ϕ_i eiga-o   mi-ru]$_S$
    Top he-Subj self-Subj   movie-Obj see-Pres
    tokini megane-o   kake-ru
    when glasses-Obj wear-Pres
    'John$_i$, when he$_i$/self$_i$/ϕ_i sees a movie, wears glasses.'

Let us consider (16a) first. In the world we are now living in,

the person who builds a swimming pool is generally different from the person who swims in the pool. We swim in a pool that someone else has built. How about (16b), then? Generally speaking, the person who sees a movie is the same person that wears glasses. Nobody wears glasses in order for someone else to see a movie.

Now this is the point. In (16a), the possibility is very strong that the person who does the action designated by the predicate of the embedded clause is different from the person who does the action designated by the predicate of the matrix clause.[8] In (16b), the possibility is very strong that the person who does the action designated by the predicate of the embedded clause is the same person who does the action designated by the predicate of the matrix clause. Based on this observation, I propose the following hypothetical (and speculative) condition on ϕ-pronominalization and full-pronominalization.

(17)

Given a complex sentence, where the subject of the matrix clause is a full NP and the subject of an embedded clause is a pronoun, and the NP and the pronoun are coreferential:

(i) the pronoun must be a ϕ-pronoun when the possibility is strong that the person who does the action designated by the predicateof the embedded clause is the same person who does the action designated by the predicate of the matrix clause; and

(ii) the pronoun must be a full-pronoun when the possibility is strong that the person who does the action designated by the predicate of the embedded clause is different from the person who does the action designated by the predicate of the matrix clause.[9]

Now let us see how (17) can account for the grammaticalness and ungrammaticalness of the sentences in (14) and (15). In (14), the ϕ-pronoun, but not the full-pronoun, should be used because in general a person who faints is the same person who is taken to the hospital. In our world, a person is not taken to the hospital when someone else has fainted. Also in (15), the ϕ-pronoun, but not the full-pronoun, should be used because in general a person who gets drunk is the same person who becomes tender toward others. The person who gets drunk becomes tender toward others because of the alcohol.

Condition (17) can also explain cases where both the ϕ-pronoun and the full-pronoun can be used. Consider the following example:

(18)

John$_i$-wa [kare$_i$-ga/zibun$_i$-ga/ϕ_i sono eiga-o   mita]$_S$
　　　Top he-Subj self-Subj   the movie-Obj see-Past
toki-no   koto-o Mary-ni hanasi-ta
time-of event-Obj to   talk-Past
'John$_i$ talked to Mary about the time when he$_i$/self$_i$/ϕ_i saw the movie.'

This is not a counter-example to the condition. In the world in which we are now living, one may talk about one's seeing a movie, or one may talk about someone else's seeing a movie. For example, John can talk about his own seeing a movie and he can also talk about Tom's seeing a movie. So the person who sees a movie is not necessarily the same person who talks to someone else about seeing it. Nor is the person who sees a movie is necessarily different from the person who talks to someone else about it. Since both possibilities exist, both the ϕ-pronoun and the full-pronoun can be used.

The reason wny (17) is necessary is very simple. When the

possibility is strong that the person who does the action designated by the predicate of the embedded clause is the same person who does the action designated by the predicate of the matrix clause, we do not have to specify the embedded subject. The subject of the embedded clause must be identical with the subject of the matrix clause. By contrast, we have to specify the embedded subject when the possibility is strong that the person who does the action designated by the predicate of the embedded clause is different from the person who does the action designated by the predicate of the matrix clause, because if the embedded subject is not specified, we cannot tell who it is. So an overt pronoun must be placed in the subject position.

2.2 Whether pronouns are introduced by transformations or by base rules, condition (17) must be stated somewhere in the grammar. I do not know where it is to be stated (my present guess is that it must be incorporated into the surface interpretation rules), but it is at least clear that the condition cannot be stated in terms of the selectional restrictions of the predicate verb of the matrix clause, because it is the combination of the predicates of the embedded and the matrix clauses that must be taken into account. The following two examples support the argument.

(19)

a. *John$_i$-wa* [*kare$_i$-ga/zibun$_i$-ga/*ϕ_i tate-ta*]$_S$
     Top   he-Subj Self-Subj   build-Past

ie-ni   sunde   iru
house-in living is

'John$_i$ is living in the house which he$_i$/self$_i$/ϕ_i built.'

b. *John$_i$-wa* [*$\ast$kare$_i$-ga/zibun$_i$-ga/ϕ_i syakkinsite*
     Top   he-Subj self-Subj   by borrowing money

tate-ta]$_S$ *ie-ni   sunde iru*

build-Past house-in living is

'John$_i$ is living in the house which he$_i$/self$_i$/ϕ_i got built by borrowing money.'

Both sentences have the same matrix predicate verb *sunde iru*, but (a) does not permit ϕ-pronominalization and (b) does not permit full-pronominalization.   So the difference between the two sentences must be attributed to the difference between the predicates of the embedded clauses.   And this difference consists of the presence or absence of the adverbial *syakkinsite* 'by borrowing money.'   *Tate* in (a) means "to build" but *tate* in (b) means "to get one's house built."   In (a), John himself built his own house.   In (b), John did not build the house; carpenters did.   At present in Japan, it rarely happens that people build their house for themselves.   Therefore the full-pronoun must be used in (a).   But it is common for people to borrow money and get their house built.   So the ϕ-pronoun can be used in (b).   It is clear from the examples that the proper use of ϕ-pronouns and full-pronouns depends not on the matrix predicate alone, but on the combination of the predicates of the matrix and the embedded clauses and what this combination implies.

The following example provides additional support for the argument that selectional restrictions cannot handle the choice of the proper type of pronoun.

(20)

> *John$_i$-wa [kare$_i$-ga/zibun$_i$-ga/ϕ_i zibun-de   tukut-ta]$_S$*
>
>   Top he-Subj self-Subj   for oneself make-Past
>
> *puuru-de mainiti   oyoide   iru*
>
> pool-in every day swimming is
>
> 'John$_i$ swims every day in the pool which he$_i$/self$_i$/ϕ_i built for

himself.'

(20) is the same as (16a) except that (20) contains the additional expression *zibun-de*, which means "for oneself." The insertion of *zibun-de* enables us to use the ϕ-pronoun. The reason is simple. One who builds a swimming pool *for oneself* is likely to be the same person who swims in the pool. Therefore the ϕ-pronoun can be used. And this proves that in choosing the proper type of pronoun we must consider both the matrix predicate and the embedded predicate.[10]

2.3 Though she does not formulate them precisely, Ohso (1976) also proposes constraints similar to (17). She says that an NP which carries crucial information cannot be ϕ-pronominalized, giving the following example:

(21)

    Hanako$_i$-wa [ϕ_i *nut-ta*]$_S$ *yoohuku-o* *kite*   *ki-ta*

           Top   sew-Past dress-Obj wearing come-Past

    'Hanako$_i$ came in a dress ϕ_i sewed.' (Ohso's (120))

When the information is conveyed by the other parts of the sentence, ϕ-pronominalization is possible, as seen below:

(22)

    Hanako$_i$-wa [ϕ_i *yoosai-no*   *kurasu-de nu-ta*]$_S$ *yoohuku-o*

           Top   dress-making class-in sew-Past dress-Obj

    kite   *ki-ta* (Ohso's (123))

    wearing come-Past

    'Hanako came in a dress which ϕ_i sewed in her dress-making class.'

Ohso also points out that full-pronominalization is used instead of ϕ-pronominalization to avoid ambiguity. Consider the following

example:

(23)

    sono onna$_i$-wa   [*kanozyo$_i$-ga*/*ϕ_i *bikoosite ita*]$_S$

    that woman-Top she-Subj   tailing was

    otoko-ni korosareta (Ohso's (42))

    man-by was killed

    'That woman was killed by the man who she$_i$/ϕ_i was tailing.'

But Osho does not say anything about cases where full-pronominalization should not be used and ϕ-pronominalization should be used as in (14) and (15).

IV

Conclusion

In this paper, I have shown the conditions that determine which type of pronominalization is to be used in sentences which involve only one embedded caluse. In Section II I have discussed *command-precede* conditions, and in Section III I have discussed functional conditions (both Kuno's and mine).

NOTES

I will use the following symbols in this paper:

    Top   :   Topic Marker

    Subj :   Subject Case Marker

    Obj   :   Object Case Marker

    Past :   Past Tense

Pres   :   Present Tense

ADV   :   Adverbial

Nom   :   Nominalizer

S   :   Sentence

NP   :   Noun Phrase

1.   (1c) is the same as example (105) in Kuno (1972a).

2.   Hence, the examples given in this paper all contain only one subordinate clause.
It should also be borne in mind that in all the examples in this paper, the matrix subjects are topicalized (that is, the matrix subjects are followed by *wa*). Some examples may be ungrammatical if the matrix subjects are followed by *ga*.

3.   Kuroda does not use the term ϕ-*pronoun*. He uses the term *pronoun* and the term *pronominalization*, which he thinks of as a deletion operation.

4.   See Hinds (1974) for the status of the VP node in Japanese.

5.   Kuroda assumes the adverbial clause to be outside the dominance of the VP node.

6.   Since Kuroda's syntactic conditions could not explain pronominalizations correctly, Kuno (1972a) proposed a functional condition, which is called the " awareness condition. " Kuroda (1973) is a criticism of the " awareness condition. " (5) is also a counter-example to the " awareness condition. " In response to Kuroda's criticism, Kuno and Kaburaki (1975) proposed the Empathy Constraint. See Section III of this paper for more details.

7.   In (9iii) and (9iv), the position of the ϕ-pronoun is not known because the ϕ-pronoun is not realized by any overt morpheme. The ϕ-pronoun can be either before or after the subordinate clause. In either case, the ϕ-pronoun commands the antecedent.

8.   By " predicate " I mean the verb and its modifiers. By " predicate verb " I mean the verb only.

9.   This condition is valid only in non-Pseudo-Clefted sentences. See the following Pseudo-Clefted sentence, where both the ϕ-pronoun and the full-pronoun can be used.

    John$_i$-ga byooin-ni   *katugikom-are-ta*   *no-wa*

       Subj hospital-to take-Passive-Past   Nom-Top

    kare$_i$-ga/ϕ_i sissinsi-ta toki   *desu*

he-Subj　　faint-Past when is

'It is when he$_i$/ϕ_i fainted that John$_i$ was taken to hospital.'

10. If pronouns are introduced transformationally, it is quite difficult to apply condition (17) within the transformation. The transformation would then have to check the combination of the predicates of the matrix and the embedded clauses and decide which type of pronoun to choose.

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