On The Subject

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Caroline Heycock

Department of Computer and Information Science
School of Engineering and Applied Science
University of Pennsylvania
Philadelphia, PA 19104-6389

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1 Introduction

For some time now, generative grammarians have been committed to reducing the role of the phrase structure rules in the grammar in favor of general principles[1]. It has been observed that there is considerable redundancy in a grammar containing both phrase structure rules and subcategorization frames for lexical items or classes of lexical items. An attractive solution is to abandon the former in favor of the latter, together with a "Projection Principle" according to which the argument structure of lexical items is projected into the syntax. The single most serious problem with this approach is the apparent necessity for clauses, at least in English and many other languages, to have subjects—a requirement that is independent of the argument structure of the lexical items in the clause. The "Extended Projection Principle" reflects this problem very directly: although Chomsky claims that "[the] Projection Principle and the requirement that clauses have subjects are conceptually quite closely related" [Chomsky 82, p.10], it is not at all clear what the nature of the conceptual relation is.

A number of researchers have attempted to improve on the Extended Projection Principle. [Rothstein 83] argues that the Extended Projection Principle is too specific: the requirement that clauses must have subjects is in fact a special case of a more general principle, operating at the level of syntax, according to which all predicates must have subjects. The Projection Principle ensures the syntactic representation of the functor-argument structure; Rothstein's *Predicate-Linking* ensures the syntactic representation of a predicate-subject structure.

[Fukui 86] takes a different tack. He claims that there is no need for a syntactic principle of predication: the apparent necessity for the subject position in languages such as English can be derived from other, independently motivated, principles, in particular from a generalization of the Theta-Criterion which he terms the *Saturation Principle*.

In this paper I shall argue that the requirement for clauses to have a subject-predicate structure cannot be derived from other principles, but must be considered an independent principle of grammar, as Rothstein proposes. The bulk of the evidence that I shall introduce in support of this position is from Japanese, but first I shall discuss briefly the pleonastic "it" of English, arguing that its distribution cannot be derived from Case-theory, θ-theory, etc., but follows naturally from the principle that clauses must have a subject-predicate structure.

2 Pleonastic *it* in English

In [Fukui 86] it is claimed that overt subjects in English occupy a unique specifier position that is not in fact obligatory, but appears only when licensed by the assignment of *Kase*, defined as the union of *Case* assigned by Lexical Categories and *F-Features*, which include nominative Case, assigned by Tense/AGR, genitive Case, assigned by *'s*, and +WH, assigned by a WH-COMP (p.52). When a specifier position is licensed by the assignment of Kase, it must be filled so that the Kase-grid of the assigner can be saturated, in accordance with the *Saturation Principle* (p.57):

> *Saturation Principle*
>
> (a) Every grid position is discharged.
> (b) If X discharges a grid position in Y, then it discharges only one.

This principle ensures the existence of a specifier in tensed sentences and in the complements of ECM verbs. In the following type of sentence, however, there is no specifier position in the complement sentence: the external argument, PRO, occurs in its base-generated position within the projection of V:

(1) who(i) do you want [C' [I' to [V' PRO [V' visit t(i)]]]]

This structure is perfectly well-formed in Fukui's system: there is no specifier position in the complement because there is no Kase to license it: 'control' *want* is not an ECM verb and *to* does not assign nominative case.

Fukui states that his system is not incompatible with a general principle that predicates must have subjects, but that such a principle has nothing directly to do with the licensing of the specifier position of IP, since saturation of a predicate takes place within the projection of a Lexical head, so that both the external and the internal arguments are within a projection of a Lexical category at D-structure (p.55). Fukui's discussion of this issue is brief, and it remains unclear how he envisages a principle of predication such as Rothstein's fitting into his system. He appears to assume that the subject-predicate relationship would have to be established at D-structure, but this would raise serious problems for the treatment of raising verbs, unaccusatives, and other verbs which are generally assumed not to assign a subject θ-role.

It is possible that Fukui's main point here is that Rothstein's principle of predication does not by itself *license* the specifier position of IP—elements can appear in this position only when it is licensed by Kase. As I will argue below, however, Kase-assignment alone is not sufficient to explain the total distribution of specifiers of IP in English.

Fukui considers that the existence of pleonastics constitutes evidence for his analysis and against that of [Rothstein 83], or presumably any analysis that posits an independent requirement for subjects:

> This view of the "Extended" part of the Extended Projection Principle is further supported by the fact of *"There"*-insertion phenomenon and the cases of pleonastic *it*, since it can hardly be claimed that there is a predicational relation in any normal intuitive sense involved between these pleonastic elements and the predicate phrase. (p.55)

It is true that Rothstein weakens her position by claiming that subject and predicate are basic *semantic* notions and that the subject-predicate relation "must be fundamental in a semantic representation" [Rothstein 83, p.24]. Nevertheless, far more central to her analysis is the proposal that there is an independent *syntactic* notion of subject-predicate:

> The subject-predicate relations defined by the predicate-linking rule are strictly syntactic in nature ... (p.23).

The overwhelmingly more common situation is for the syntactic subject of a predication to be a semantic argument of the predicate, and presumably this is the basis of our "normal intuitive sense" of what the subject-predicate relation should be, but this does not invalidate the syntactic definition. Thus there is no basis for maintaining, as Fukui does, that the existence *per se* of pleonastics is an argument against the existence of an independent principle requiring that predicates have syntactic subjects.

Both Fukui's analysis and the sort of predication analysis exemplified by [Rothstein 83] give an account of the existence of pleonastics, but they make different predictions about their distribution, since in Fukui's system pleonastics are required only where Kase is assigned. Consider the following:

```
(2)a.  It is important that senators should be sincere.
   b.  It is important for it to appear that senators are sincere.
   c.  It is important for senators to appear to be sincere.
   d.  It is important to appear to be sincere.
   e. *It is important to appear that senators are sincere.
```

A requirement that all clauses have syntactic subjects accounts straightforwardly for the pattern of grammaticality in (2). In b., c., and d., the subject of "appear" is a pleonastic, the raised subject of the complement clause, and PRO, respectively. In e., the subject position is empty: it cannot be occupied by PRO, since there is no theta-role assigned to it, and it cannot be occupied by the trace of the pleonastic that appears in matrix subject position, since "be important" is not a raising predicate. The complement clause is therefore subjectless, and the sentence is ungrammatical. In Fukui's system, the complement clause in b. and c. has a specifier position that must be filled since "for" is a Kase-assigner. In d. there is no specifier position, since there is no Kase-assigner, but the sentence is fully grammatical because the Saturation Principle is obeyed: the theta-role assigned by "sincere" is assigned to PRO, which presumably appears in its base-generated position within the most deeply embedded V projection:

```
(2)d'.  it is important [C' [I' to [V' appear [I' to
                                        [V' PRO be sincere]]]]]
```

I assume that the structure that would be assigned to e. under Fukui's analysis is as follows:

```
(2)e'. *it is important [C' [I' to [V' appear that senators
                                        are sincere]]]
```

Here, as in d., there is no specifier position in the complement to "important," since no F-features are available to license it. It then remains to be explained why the sentence is

3

ungrammatical. The only possible explanation would seem to be that "important" requires that there be a PRO within its complement. The same type of requirement would apply to rule out similar sentences with control verbs:

(3)a. I want [C' [I' to [V' PRO [V' rest my weary head]]]]
    b. *I want [C' [I' to [V' appear that there was no
                                ballot-stuffing]]]
    c. *I want [C' [I' to [V' rain]]]

However, while such a requirement is perhaps plausible in the case of a control verb like "want," it seems very ad hoc as an explanation for the ungrammaticality of sentences like (2)d. In order to capture the contrast between (2)d. on the one hand and (2)a., b., and c. on the other, the requirement would have to be that lexical items like "important" require an otherwise uncontrolled PRO within their complement unless the complement is tensed or introduced by "for." But note that, given the contraints on the positions in which PRO can appear, this amounts to saying that lexical items like "important" require that their complements have subjects[2].

3 *Ga*-marking in Japanese

In the previous section I argued that the distribution of pleonastics in English supports the position that there is an independent principle of grammar according to which clauses must have a subject-predicate structure. In this section I shall argue that this principle allows us to account for the nature of *ga*-marking in Japanese.

3.1 The independence of *ga*-marking from INFL

Ga is often thought of as a marker of nominative case. However, this case cannot be assigned in the same way as nominative case in Germanic and Romance languages. In [Kroch Santorini & Heycock 87] it was argued that external θ-role assignment in Germanic and Romance languages occurs in two steps. First, the verb assigns its external θ-role to the pronominal AGR element in INFL; and then, by the same type of predication that occurs in copular sentences and relative clauses, AGR is coindexed with the subject. It is

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[2]A further problem that may be caused by the lack of a specifier position in infinitival complements of non-ECM verbs is that of identifying the controlled element. The structure given in (ii) follows Fukui's analysis of the passive, according to which the external theta-role is not absorbed, but assigned to another PRO.

(i) I_i wanted [$_{C'}$ [$_{I'}$ to [$_{V'}$ PRO$_i$ [$_{V'}$ love my neighbor as myself]]]]
(ii) I_i wanted [$_{C'}$ [$_{I'}$ to [$_{V'}$ PRO$_i$ [$_{V'}$ be [$_{V'}$ PRO$_j$ [$_{V'}$ loved t_i for my money]]]]]]

The generalization that it is always subjects that are controlled has to be abandoned, whatever interpretation we put on the term "subject:" PRO can never appear in the specifier position, so it can never be a subject in this configurational sense, and it is clear from examples like (ii), with passive complements, that the controlled PRO is not always assigned the "subject" θ-role. In the active complement in (i) the controlled PRO occurs in its base-generated position as a sister to the innermost V', and in the passive complement in (ii) it appears adjoined to the outermost V'.

further argued that it is this coindexation, rather than government, that is responsible for the nominative case appearing on overt subjects in tensed sentences: subjects, like predicate nominals, receive case by agreement with a coindexed element rather than through government by a case assigner.

Although in English nominative case on subjects is associated only with tensed verbs—tense and agreement never occurring independently—, evidence from Portuguese suggests that the essential condition for the assignment of nominative case is indeed co-indexation with AGR, rather than the presence of TENSE: Portuguese has inflected infinitives, which take lexical subjects in the nominative case ([Perini 87]):

(4) Para eles ganharem muito, devem trabalhar muito.
    'In order for them to make+3rd pl. a lot, (they) have
    to work a lot.'   .

In Japanese there is no subject-verb agreement and hence no evidence for the existence of AGR. In fact it is argued in [Fiengo & Haruna 86] that there are no true pronouns of any kind in Japanese, which would entail the non-existence of AGR in this language. The lexical items *kare* and *kanozyo* can be translated as "he/him" and "she/her," but Fiengo and Haruna claim that "historically, the forms are deictic and are still considered to be so ... Japanese speakers frequently report the intuition that somehow *kare/kanozyo* give sentences the flavor of having been translated from an Indo-European language" (p116). It is worth noting that they cannot function as bound variables. Further, there is no pronoun with neuter gender. *Sore* may be translated as "it," but it is clearly deictic rather than a pronoun. The status of these forms in the contemporary language is an interesting topic in itself, but one that unfortunately cannot be pursued here.

The analysis of nominative case-assignment in [Kroch Santorini & Heycock 87] outlined above predicts that in a language without subject-verb agreement the subject will be ungoverned, as a result of the absence of an antecedent governor in INFL. This prediction appears to be borne out in Japanese, thus providing further evidence that *ga* is not a marker of nominative case assigned through coindexation with AGR. As argued in [Saito 82, p.21] (and see also [Kuroda 83]), PRO—which according to standard assumptions must be ungoverned—may appear in subject position in tensed sentences. The following example from [Saito 82] contains a complement clause with a tensed verb and an empty category in subject position[3]:

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[3]The following abbreviations are used in the glosses:

NOM:	nominative	ACC:	accusative
DAT:	dative	GEN:	genetive
NMZ:	nominalizer	CLSF:	classifier
PRES:	present	PST:	past
PASS:	passive	DEC:	declarative
POT:	potential	CS:	causative
NEG:	negative	QU:	question
HON:	honorific		

```
(5) John-wa   mukasi   0/*kare-ga /*zibun-ga  kono mondai -o
    John-TOP in past   0/*he  -NOM/*self -NOM this problem-ACC
         tok  -u    koto -o    kokoromi-ta
         solve-PRES thing-ACC attempt -PST
    'John attempted to solve this problem in the past.'
```

Since Japanese allows null pronouns so freely it is hard to show that a particular empty category is in fact PRO, but the contrast between (5) above, where the complement subject must be an empty category, and (6) below, where a pronoun or reflexive is equally possible, does suggest that it is in fact control that is involved in (5), rather than an "avoid overt pronoun" strategy.

```
(6) John-wa  0/kare-ga /zibun-ga   erab -are -ru   koto -o
    John-TOP 0/he  -NOM/self -NOM elect-PASS-PRES thing-ACC
                  kitaisi-te  i -ta
                  expect -GER be-PST
    'John was expecting that he would be elected.'
```

Similarly, (7) shows that an empty category with an "arbitrary" interpretation is in some cases heavily preferred over a lexical NP in subject position:

```
(7) (?*boku-ga) tyuukaryoori-o    tabe-ta ato -no
    I    -NOM Chinese food-ACC eat -PST after-GEN
              manpukukan   -wa  subarasi -i
              full feeling-TOP wonderful-PRES
    'The feeling of fullness that comes after eating Chinese
    food is wonderful.'
```

It is ordinarily assumed that only PRO can have this arbitrary interpretation.

Further evidence that *ga* cannot be a marker of nominative case assigned through coindexation with some non-overt AGR is supplied by the "multiple subject" construction[4]:

```
(8)a. amerikazin-ga   me -ga  ao  -i    koto
      Americans -NOM eyes-NOM blue-PRES fact
      'the fact that Americans have blue eyes'

   b. L.A.-ga  nihonzin-ga  oo  -i    koto
      L.A.-NOM Japanese-NOM many-PRES fact
      'the fact that there are many Japanese in L.A.'
```

Since there can only be one AGR in each of these sentences, both NPs would have to be coindexed with it, if this was how nominative case were assigned. But then they would be coindexed with each other, which would entail that they were co-referential. This is clearly incorrect. There have been proposals to derive such sentences from deep structures with a

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[4]In matrix sentences the subject is most commonly the topic, and is marked with the topic marker *wa*, rather than with *ga*. In order to avoid this problem, I follow the common practice of using complement clauses in many of the following examples.

sentence-initial possessive phrase (this would account for (8)a.) or a sentence-initial locative (this would account for (8)b.). However, there do appear to be grammatical sentences with non-argument *ga*-phrases that do not bind any empty position at all. The following is an example from [Kuroda 86, p.258], adapted from [Kuno73b]:

```
(9) tokyoo-wan-no   sakana-ga  kyoozyoo-haisui -ni-yoru
    Toyko  bay-GEN fish  -NOM factory-effluent due to
         kaisui-no       osen-de       moo-sudeni sisya-ga
         sea-water-GEN pollution-by already     dead person-NOM
         san-mei     dete-iru
         three-CLSF come out
```

```
'Fish of Tokyo Bay (are such that) three people have
already died from (eating the fish contaminated by)
sea water polluted by factory effluent'
```

For further examples and discussion, see [Kuroda 86, pp256–263]. The most economical analysis is to treat all these cases in the same way, and to assume that a complete sentence can be used as a predicate in Japanese. The tendency for the initial *ga*-phrases in such sentences to alternate with possessives and locatives I assume to be a semantic or pragmatic effect: it seems relatively easy, for example, to take a description of a possession as an attribute of the possessor.

[Takezawa 87] argues that while *ga*-marking in Japanese is different from nominative case-assignment in the European languages in that it does not involve co-indexation with AGR, it is still dependent on INFL. Noting that the subjects of non-tensed clausal complements are never marked with *ga*, Takezawa proposes that nominative case in Japanese is assigned under government by the tense element in INFL, and suggests that "a parametric difference is allowed between languages in which Tense is responsible for Nominative assignment (Japanese), on the one hand, and those in which AGR is responsible for it (Portuguese, Turkish), on the other" (p.79). The "multiple subject" construction is taken care of by saying that INFL in Japanese has the potential to assign Nominative Case to more than one NP, provided that the government relationship holds.

Takezawa's analysis faces a number of problems within Japanese. As he himself points out, ECM verbs in Japanese may take either tensed or tenseless complements. Only when the complement is tensed is *ga*-marking of the complement subject grammatical, as shown by the following examples from [Takezawa 87, p.74] (I shall assume, following Takezawa, that the form *utukusiku* (beautiful) in (10)a. is tenseless):

.

7

```
(10)a.   John-wa [ Mary-no -yokogao-o  /*-ga   totemo utukusiku ]
         John-TOP  Mary-GEN-profile-ACC/*-NOM very    beautiful
         omot-ta          .
         think-PST
         'John thought Mary's profile to be very beautiful.'

     b.  John-wa [[ Mary-no -yokogao-ga  totemo utukusi  -i ]  to ]
         John-TOP   Mary-GEN-profile-NOM very   beautiful-PRES that
         omot-ta
         think-PST
         'John thought that Mary's profile was very beautiful.'
```

The ungrammaticality of (10)a. when the complement subject of the untensed complement clause is marked with *ga*, is of course predicted by Takezawa's analysis. The correlation of *ga*-marking with tense is not perfect, however, since when the complement clause does contain tense, the complement subject may be marked either with *ga* or the accusative marker *o*. That is to say, alongside (10)b. we also find (11):

```
(11)    John-wa [[ Mary-no -yokogao-o   totemo utukusi  -i ]  to ]
        John-TOP   Mary-GEN-profile-ACC very   beautiful-PRES that
        omot-ta
        think-PST          .
        'John thought that Mary's profile was very beautiful.'
```

Under Takezawa's assumptions about the obligatoriness of nominative case assignment by tense, (11) should be ungrammatical.

Possibly the greatest drawback of Takezawa's analysis of nominative case-marking in Japanese, however, is that it cannot be extended to Korean, despite the striking similarities in the distribution of nominative case in the two languages. As Takezawa points out, Korean allows "multiple subjects" just as Japanese does; it also exhibits the "ergative" case-marking pattern that will be discussed below. The arguments showing that nominative case-assignment in Japanese does not involve co-indexation with AGR hold also for Korean. However, there is good evidence that nominative case (marked by *ka/i*) cannot be assigned by tense, as nominative-marked NPs occur in tenseless clauses in a number of constructions, as illustrated in the examples in (12), where the verbs *ka* (to go) and *mek* (to eat) are clearly untensed[5]:

8

```
(12) a. Na-nun [John-i    party-e    ka-tolok]  seltukha-yess-ta.
         I -TOP      -NOM party-LOC go-as to   persuade-PST -DEC

    'I persuaded John to go to the party.'

     b. Na-nun [aki -ka   pap         -ul  mek-ke] ha-yess-ta.
        I -TO   baby-NOM steamed-rice-ACC eat-CE  do-PST -DEC.
        'I caused the baby to eat steamed rice.'
```

Since nominative case in Korean is assigned neither by co-indexation with AGR nor by tense, if Takezawa's analysis were adopted for Japanese it would be necessary to propose a third mechanism for nominative case-assignment in Korean. On the other hand, the analysis of *ga*-marking that I shall give in this paper can, I think, be extended in a natural way to Korean (see [Lee 88]), and is thus strongly favored by considerations of economy.

3.2 *Ga* as a default case-marker

In the previous section I have argued that *ga* cannot be considered as a marker of nominative case assigned through coindexation with AGR. The reader is referred also to [Saito 82] and [Kuroda 83]. [Fukui 86] also assumes no association between *ga* and AGR. Fukui draws a parallel between the "multiple subject" construction and the possibility for multiple *no*-phrases in NPs:

```
(13) watasi-no  kinoo-no       nihongo -no  benkyoo
     I      -GEN yesterday-GEN Japanese-GEN study
     'my study of Japanese yesterday'
```

Fukui argues that Japanese has no functional categories—or only extremely "deficient" ones—and consequently no specifier positions, since he proposes that specifiers close off projections at the double bar level, and that only functional categories may project to this level. In English the subject of a sentence and the phrase that occurs before the 's genetive marker in an NP are both in the unique specifier position:

```
(14)a. *It there was a cat.
    b. *John's yesterday's study
```

In Japanese, however, the *ga*-phrase and the *no*-phrase do not occupy a unique structural position: verbs and nouns project up to a single bar level which can iterate indefinitely, creating an indefinite number of positions where these phrases can appear. Fukui proposes that *ga*-marking takes place as a default process, assigning *ga* to any noun phrase which is a sister of $\bar{V}$, and that this accounts for the possibility of multiple *ga*-phrases:

> Roughly speaking, once every position of the verb's Case-grid has been discharged, *ga* marking takes place as a default process, assigning *ga* to any noun phrase which is a sister of $\bar{V}$, hence the possibility of "multiple *ga*" ... (p.209).

Pursuing the analogy between *ga*-phrases in sentences and *no*-phrases in NPs, he argues that the assignment of the two markers can be unified, and proposes the following schema (p.260):

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In the environment $\{\bar{\text{N}}/\bar{\text{P}}\}$__ $\bar{\text{X}}$,

(i) insert *ga* if X = V

(ii) insert *no* if X = N

While the parallel drawn by Fukui is of considerable interest, there are difficulties with his proposal. Firstly, note that while in the text quoted above Fukui appears to be proposing that *ga* is a default case-marker for $\bar{\text{N}}$s that do not get case by any other means, in the schema given for assignment of *no* and *ga* the environment is given in terms of both $\bar{\text{N}}$s and $\bar{\text{P}}$s. Presumably the motivation for this generalization of the environment is the necessity for *no*-marking of all $\bar{\text{N}}$ and $\bar{\text{P}}$[6] modifiers of N[7]:

(15)a. tomodati-to *(-no) wakare
        friend -with*(-of) parting
        'parting with a friend'

   b. watasi-no mai -niti*(-no) benkyoo
      I   -GEN every-day   -GEN study
      'my daily study'

It is also possible that Fukui wants to avoid ruling out grammatical sentences like (16) (from [Kuroda 86, p.237]), where the *ga*-phrase *sono yubinkyoku-kara-ga* is a $\bar{\text{P}}$:

(16) Masao-ga kozutumi-o   okuru-no -(ni) -wa
     Masao-NOM packets -ACC send -NMZ-(for)-TOP
                           sono yuubinkyoku-kara-ga yo -i
                           that post office-from-NOM good-PRES
     'The post office would be a good place for Masao
     to send packages from.'

It is clear, however, that the proposed rule of *ga*-insertion will have to be heavily constrained, since despite examples like (16), the distribution of *ga*-phrases in sentences is much more restricted than that of *no*-phrases in NPs. (17)a. and (17)b. are clauses corresponding to the nominals in (15), but the substitution of *ga* for *no* results in ungrammaticality:

(17)a. watasi-ga tomodati-to (*-ga) wakare-ta koto
       I   -NOM friend -with(*-NOM) part -PST fact
       'the fact that I parted with my friend'

   b. watasi-ga mai -niti(*-ga) benkyoo-suru koto
      I   -NOM every-day   NOM study -do   that
      'the fact that I study daily.'

---

[6]For some reason *ni*, whether used as a dative marker or as a postposition of location etc., cannot co-occur with *no* (see [Kuno 80]). The result is that $\bar{\text{P}}$s with *ni* cannot occur as modifiers of N:

(i) *tookyo-ni(-no) biru* "a building in Tokyo"
                    .

[7]Here I am not discussing nominalizations in *-sa*, where the derived nominal appears to retain the ability to assign case, suggesting that what is nominalized is a larger constituent than the V: e.g. *mitiko-ni hana-o ageta-sa-ni* okane-o karita: "*Out of a desire to give Mitiko flowers*, I borrowed money.

Note further the ungrammaticality of *ga* in the following example:

```
(18) mitiko-ga   sono yuubinkyoku-kara(*-ga)  kozutumi-o   okut-ta
     Mitiko-NOM that post·office-from(*-NOM) packet  -ACC send-PST
             koto-o    sira-nakat-ta
             fact-ACC know-NEG  -PST
     'I didn't know that Mitiko had sent a packet from that
     post office.'
```

Intuitively, the contrast between (16) and (18) is that in (16) the *ga*-phrase is the subject of the sentence. To employ the notion of "subject" in explaining the distribution of *ga* would, however, be entirely contrary to the spirit of Fukui's proposal.

3.3   *Ga* as a marker for subjects of predication

In the previous section I have attempted to show that Fukui's proposal to treat *ga*-marking as a simple default procedure immediately encounters difficulties. In this section I shall show how an analysis of *ga* as a marker for subjects of predication avoids these difficulties and, coupled with our assumption that there is an independent principle of grammar requiring that clauses have a subject-predicate structure, allows for an interesting account of Japanese verbs with the "ergative" case array.

3.3.1 $\bar{\text{P}}$ subjects

One immediate advantage of an analysis of *ga* as a marker for subjects of predication is that we can account for its occurrence with $\bar{\text{P}}$s, as in (16) above. The generalization about $\bar{\text{P}}$ *ga*-phrases seems to be that they can be the subjects of adjectival predicates—as in (16)—and sentential predicates:

```
(19) nyuu-yooku-made -ga   miti -ga   waru-i
     New -York -until-NOM roads-NOM bad -PRES
     'It's up to New York that the roads are bad.'
```

The ungrammaticality of the *ga*-marked $\bar{\text{P}}$ in (18) above follows from two reasonable assumptions. The first is that all the arguments of a verb must occur within the minimal predication structure containing that verb. The second is that there cannot be two different subjects for the same predicate. For convenience, I repeat (18) as (20):

```
(20) mitiko-ga   sono yuubinkyoku-kara(*-ga)  kozutumi-o   okut-ta
     Mitiko-NOM that post office-from(*-NOM) packet  -ACC send-PST
             koto-o    sira-nakat-ta
             fact-ACC know-NEG  -PST
     'I didn't know that Mitiko had sent a package from that
     post office.'
```

Assuming for the moment that no scrambling has taken place, *yuubinkyoku-kara* must be the subject of the predicate *oku-*; since there cannot be two different subjects for the same

predicate, the other *ga*-phrase, *mitiko*, must be the subject of the predicate formed by the entire embedded clause and therefore cannot be contained within that clause. But in this case the agent argument of *oku-* is not contained within the minimal predication structure containing the verb, and the sentence is accordingly ruled out[8]. Note that in the sentences where $\bar{\text{P}}$ *ga*-phrases are grammatical there are no other arguments competing for subject status or requiring case.

3.3.2 The "ergative" case array

General: The most common types of case array in Japanese are as follows: When a verb has only one argument, it is marked with *ga*. When a verb has two arguments, one is marked *ga* and the other *o*. When a verb has three arguments, one is marked *ga*, one *o*, and one—the goal argument—*ni*. Although scrambling can result in different word orders, the unmarked order appears to be *ga* before *ni* before *o* (see [Whitman 86, pp359–360], [Kuno 73, pp358–362]). The restriction that the *ni*-phrase should precede the *o*-phrase seems to be much weaker than the restriction that the *ga*-phrase should precede the other two (but see [Hoji 86]).

There is, however, another type of case array, generally termed *ergative*, that is restricted to certain stative predicates. In this pattern, when there are two arguments of the verbal element, the inner argument is marked with *ga*, and the outer argument with either *ga* or *ni*[9]:

```
(21)a. mitiko-ga /-ni    eigo   -ga  wakar     -u    koto
       Mitiko-NOM/-DAT  English-NOM understand -PRES fact
       'the fact that Mitiko understands English'

    b. mitiko-ga /-ni    eigo   -ga  hanas-e   -ru   koto
       Mitiko-NOM/-DAT  English-NOM speak-POT-PRES fact
       'the fact that Mitiko can speak English.''
```

(21)a. contains a morphologically simple verb, *wakar-*, (21)b. a morphologically complex verb, *hanase-*, which consists of the verb *hanas-* "to speak" plus the "potential" morpheme *-re/rare-*.

---

[8]This line of argument leads to the expectation that (i) should be grammatical:

   (i) **sono yuubinkyoku-kara-ga mitiko-ga kozutumi-o okut-ta*

It seems that the ungrammaticality of this example may be due to the fact that non-argument *ga*-phrases are heavily disfavored when the predicate is not stative. Compare for example (16) above or (ii) below, (from [Kuroda 86]):

   (ii) *sono yuubinkyoku-kara-ga ookina kozutumi-ga okur-e-ru*
     "One can send big packages from that post office."

This is not a particular fact about this construction, or even about Japanese, however. Predicates which assign no θ-role to their subjects, but are related to them only via predication, are generally stative. Viewed in this light, parallels to (ii) in English and other languages include simple copular sentences.

[9]Some of the verbs classified as having an ergative case array do not allow *ni*-marking of the outermost argument. There is no obvious generalization to be made about which verbals fall into this category: for example, *heta* and *nigate* are nominal adjectives that can both be glossed "bad at:" *heta* does not licence *ni*, but *nigate* does.

This case array is most common with adjectives[10], but is also found with certain stative verbs. A list of verbs and adjectives[11] that occur with the ergative case array is given in [Kuno 73, pp90–91]. Kuno groups them into four semantic categories as follows (the categories and examples are Kuno's, but the comments are mine):

1. **Competence**: Adjectivals: *e.g. zyoozu* "good at," *nigate* "bad at." Verbs: *dekiru* "be capable of," *-re/rare* derivatives (*-re/rare* is the "potential" morpheme illustrated above in (+16)b.) It is possible that *dekiru* is in fact best considered syntactically complex, a suppletive form for the verb "to do" plus the potential morpheme.

2. **Feeling**: Adjectivals: *e.g. suki* "fond of," *hosii* "want." Falling under this same semantic heading, although Kuno puts them in a category by themselves, are *-tai* derivatives. *-tai* is a morpheme that is added to verb stems and that has the meaning of "want to;" the resulting form acts as a verbal adjective, in terms of the suffixes that can be added to it.

3. **Nonintentional Perception**: Verbs: *wakaru* "understand," *kikoeru* "hear," *mieru* "see." It seems to me that at least the last two could equally be classed under "competence:" they may reasonably be glossed "be able to hear" and "be able to see."

4. **Possession, Need**: Verbs: *aru* "have," *iru* "need."

It is worth noting that verbs and adjectives of these semantic classes participate in similar constructions in other languages. See, for example, [Perlmutter 79] for a detailed discussion of Italian.

Alternation of the ergative and regular case arrays: Derived verbals formed by the addition of the potential morpheme *-re/rare* or the desiderative morpheme *-tai* can appear either[12] with the regular or the ergative case array, although the latter is generally preferred[12]:

```
(22)a. dare-ni  nihongo -ga  hanas-e -ru   ka?
       who -DAT Japanese-NOM speak-POT-PRES Q
     ''Who can speak Japanese?''

    b. dare-ga  nihongo -ga  hanas-e -ru   ka?
       who -NOM Japanese-NOM speak-POT-PRES Q
     ''Who can speak Japanese?''

    c. dare-ga  nihongo -o   hanas-e -ru   ka?
       who -NOM Japanese-ACC speak-POT-PRES Q
     ''Who can speak Japanese?''
```

---

[10] Japanese has two types of adjectives, which I shall refer to as verbal and nominal. Verbal adjectives appear with tense morphemes, and function as predicates without any copular verb. Nominal adjectives cannot carry the tense morpheme, and require the copula in order to function as predicates: that is, they behave very much like predicate nominals.

[11] From now on I shall refer to the class consisting of verbs and both types of adjectives as the class of "verbals."

[12] Verbs with the *-tai* affix alternate between the regular *ga ...o* and the *ga ...ga* pattern, but do not allow the *ni ...ga* pattern.

13

It is pointed out in [Saito 82, p68] that this alternation is also found with some of the non-derived verbals, although it seems to be even more dependent on particular context:

```
(23)a. sono koto -o  /-ga. hontoo-ni wakat     -te   i -ru
       that thing-ACC/-NOM really    understand-ING be-PRES
           hito  -wa  sukuna-i
           people-TOP rare   -PRES
        ''People who really understand that matter are few in number.''


    b. boku-no  i -u    koto -o  /-*ga wakatte    kure
       I    -GEN say-PRES thing-ACC/-*NOM understand please
        ''Please understand what I say.''


    c. John-o  /-?ga  suki-ni natte  nani-ga  warui no?
       John-ACC/-?NOM like    become what-NOM bad    Q
        ''What's wrong with my falling in love with John?''
```

It was noted above that the ergative case array is found only with stative verbals. A natural account of examples like (23)a. and (23)b. above is that *wakaru* is not unequivocally stative, and that contexts that force a non-stative reading may permit, or even require the regular case array. For example, stative verbals do not generally appear in the *-te iru* form used in (23)a.; instead the "non-past" *-ru* form is used:

```
(24)a. *koko-wa  samu-sugi -te iru
        here-TOP cold-excess-ING be
        Intended reading: ''It is too cold here.''


    b.  koko-wa  samu-sugi -ru
        here-TOP cold-excess-PRES
         ''It is too cold here.''
```

The case-marking in (23)c. is clearly affected by the use of the *-ni naru* construction (*naru*, "become," may be added to any adverbial phrase X to result in a phrase with the meaning "to become X:" a nominal adjective is made into an adverbial phrase by the addition of *ni*). There is independent evidence indicating that the addition of *-ni naru* to a nominal adjective results in a non-stative verbal: such verbals may occur in adversity passives, which are ungrammatical with stative verbals ([Kuno 73, p144]):

```
(25)a.  john-wa, kodomo-ni byooki-ni nar     -are -te,
        John-TOP child -by sick       become-PASS-ING
                                          komat -ta
                                          suffer-PST
         ''John had a hard time because the child got sick (on him)''
                     .

    b. *john-wa, kodomo-ni okane-ga  ir    -are -te, komat -ta
        John-TOP child -by money-NOM need-PASS-GET suffer-PST
        Intended reading: ''John had a hard time
                            because his child needed money.''
```

14

Ga-marking in the ergative case array: In [Kuno 73] and a number of other studies, ergative verbals in Japanese are characterized as those that mark their object with *ga* and their subject with *ni* or *ga*. I have claimed, however, that *ga* is the marker for subjects of predication, which clearly entails that the *ga*-phrase in an "ergative" sentence is the subject, even though it may be assigned a θ-role typical of objects and is not generated in the leftmost position in the sentence.

For certain of the verbals we are considering, this analysis is fairly straightforward. For example, the following sentences are not necessarily elliptical: they may be read as having the speaker as the understood "subject," but they may also be read as simple intransitive constructions, with all the arguments lexically present ([Kuno 73, pp92–93]):

```
(26)a. kono-hon -no  suzi┌ga  omosiro    -i
         this book-GEN plot-NOM interesting-PRES
       ''It is the plot of this book that is interesting.''
                       as well as:
       ''It is the plot of this book that I find interesting.''


    b. hen     -na oto -ga   kikoe    -ru
         strange-be sound-NOM (can) hear-PRES
       ''A strange sound is audible.''
                       as well as:
       ''I hear a strange sound.''


    c. yama    -ga   mie     -ru
         mountain-NOM (can) see-PRES
       ''A mountain is visible.''
                       as well as:
       ''I see a mountain.''


    d. kono-inu-ga  kowa   .-i
         this dog-NOM fearful-PRES
       ''This dog is frightening.''
                       as well as:
       ''I am afraid of this dog.''
```

It is also clear that *aru*—glossed as "to have" in the list of ergative predicates on page 13—can function as an intransitive verb meaning "to exist, to be[13]:"

---

[13]It is argued in [Kuno 73, p87] that transitive *aru* "to have" and intransitive *aru* "to exist, to be" should not be conflated because when the intransitive *aru* is used, the phrase marked with *ga* must denote an inanimate entity (otherwise the verb *iru* is substituted) whereas there is no such restriction when the transitive *aru* is used. This is illustrated by the contrast between the grammatical (27)a. above, and the ungrammatical (i):

(i)* *heya -ni kodomo -ga   aru*
       room in children-NOM are
       Intended: "There are children in the room."

It is the ungrammaticality of (i) that seems to be the anomaly, however, since in a later chapter Kuno

```
(27)a.  mitiko-ni   imooto        -ga  hitori ar      -u   koto
        Mitiko-DAT little sister-NOM one    have/be-PRES fact
        ''the fact that Mitiko has one younger sister''

    b.  rondon-ni  kooen-ga  takusan ar-u    koto
        London-in  parks-NOM many    be-PRES fact
        ''the fact that there are many parks in London''
```

Rather different problems are posed by the potential construction, where the innermost N̄ appears to be an internal argument of the verb, and it is to this that we now turn.

Potentials and other two-argument ergative verbs: As mentioned above, when the potential affix is attached to a transitive verb, there are three possible case arrays:

```
(28)a.  mitiko-ga  eigo    -ga  hanas-e -ru   koto
        Mitiko-NOM English-NOM speak-POT-PRES fact
        'the fact that Mitiko can speak English'

    b.  mitiko-ni  eigo    -ga  hanas-e -ru   koto
        Mitiko-DAT English-NOM speak-POT-PRES fact
        As above

    c.  mitiko-ga  eigo    -o   hanas-e -ru   koto
        Mitiko-NOM English-ACC speak-POT-PRES fact
        As above
```

When the verb to which the potential affix is attached is intransitive, only one case array is possible, the one with a *ga*-marked N̄:

```
(29)  mitiko-ga  ik-e -ru   koto
      Mitiko-NOM go-POT-PRES fact
      'the fact that Mitiko can go'
```

The case arrays in the following two sentences are impossible:

---

states that in existential sentences (of which one would assume (i) to be an example) *aru* may be used with animates, and he provides the following examples with *aru* [Kuno 73, pp354–355]:

```
(ii) sya -nai    -ni  inemuri-o site-iru    zyookyaku -ga     atta
     train-interior-in nap        are taking passengers-NOM were
     "There were passengers on the train who were dozing"

(iii) mukasi,  aru tokoro-ni oziisan  to   obaasan   -ga     arimasita
      long ago a   place -in  old man and old woman-NOM were
      "Once upon a time, there were in a certain place
      an old man and an old woman."
```

This suggests that there may be no crucial distinction between the "transitive" and "intransitive" *aru.*

16

```
(30)a. *mitiko-ni eigo    -o   hanas-e -ru koto
        Mitiko-DAT English-ACC speak-POT-PRES fact
        Intended reading: as above

     b. *mitiko-ni ik-e  -ru   koto
        Mitiko-DAT go-POT-PRES fact
        Intended reading: 'the fact that Mitiko can go'
```

Schematically, the situation is as follows:

$$
\begin{array}{ll}
ga\ldots & \ldots ga \\
ni\ldots & \ldots ga \\
ga\ldots & \ldots o \\
*\ ni\ldots & \ldots o \\
\end{array}
$$

$$
\begin{array}{l}
ga \\
*\ ni \\
*\ o \\
\end{array}
$$

The ungrammaticality of the arrays illustrated in (30) above follows immediately from the two proposals for which we are arguing: that *ga* marks subjects of predication, and that clauses must have a subject-predicate structure. If *ga* is analysed as an object marker in the ergative case array, or as a default case-marker, the above distribution could of course be captured by the stipulation that each sentence should contain one *ga*-marked element, but this stipulation would be completely *ad hoc* under either analysis.

The analysis I propose for the potential construction itself is that the affixation of the potential morpheme optionally results in an *ergative* or *unaccusative* verb, of the type described in [Perlmutter 78] or [Burzio 1981], [Burzio 1986].

Let us adopt the assumption of [Fukui 86, pp.106–107] that a θ-grid is a structured object that can be represented as an *ordered* list of θ-roles:

$$\theta\text{-grid} = <\theta_1, \ldots, \theta_i, \theta_{i+1}, \ldots, \theta_n>$$

The "discharge" of the θ-roles takes place sequentially from left to right. Let us further assume that the order imposed on the list is that of the Actor-Undergoer Hierarchy of Role and Reference Grammar (see [Foley & Van Valin 84], [Van Valin 88b] and references therein)

< Patient, Theme, Locative, Effector, Agent >

In Japanese it is this hierarchy of thematic roles that determines the "unmarked order" of consituents in a topicless clause. θ-roles are discharged sequentially from the beginning of the list, the first θ-role being assigned to the argument closest to the verb, the second to the next closest argument, and so on. Since Japanese is head-final, the argument closest to the verb, which receives the first θ-role, will follow all the other arguments. Thus, within each clause an Agent will precede an Effector, which will in turn preceede a Locative, and so on.

In the general case, the argument receiving the rightmost θ-role—the one that is discharged last—is designated the subject of the predication. The (optional) effect of the affixation of the potential morpheme is to produce an ergative verb, of which the defining

characteristic is that subject status is assigned instead to the argument receiving the *left-most* θ-role. If there is another argument this argument cannot be assigned accusative case, under the assumption that accusative case can only be assigned to the argument structurally closest to the verb at D-structure; it will therefore be assigned dative case, in exactly the same way as the goal argument of a ditransitive. Thus in (31) the *ga*-phrase is the subject of the predication, and the other argument is marked *ni*:

```
(31)   imooto           -ni doitugo-ga  hanas-e -na -i    koto
       little sister-DAT German-NOM  speak-POT-NEG-PRES fact
       'the fact that my little sister cannot speak German'
```

Note, however, that the argument marked with *ni* is further toward the Actor end of the Actor-Undergoer hierarchy of thematic roles. As suggested above, this accounts for its default position, preceding the other argument. I would also propose that this is also what is responsible for the other "subject-like" properties displayed by *ni*-phrases in sentences with ergative predicates, most notably their availability as antecedents for the reflexive *zibun*, as shown in the following example from [Shibatani 78] containing the verb *wakaru*, a morphologically simple ergative verb[14]:

```
(32)   taroo(i)-ni zibun(i)-no -ketten     -ga wakara    -na -i
       Taroo(i)-DAT self(i) -GEN-weak points-NOM understand-NEG-PRES
       'Taroo doesn't understand his own weak points.'
```

The behavior of *zibun* is of course extremely complex and much discussed. The reader is referred to [Kuno and Kaburaki 75] and [Kameyama 85] for detailed discussions and further references.

It is of considerable interest to note that this construction in Japanese is essentially identical to one found in Dutch and German, discussed in [Den Besten 85]. In certain sentence types in these languages the default word order is *DAT ... NOM*. These sentence types fall into two main groups: those containing certain active verbs or predicative adjectives, and those containing passives of ditransitive verbs [15]:

```
(33)a. dass meinem Bruder        deine Geschichten    nicht gefielen
        that my        brother(DAT) your   stories(NOM) not   pleased
        'that your stories didn't please my brother'

   b. dass dem Minister        die Sache       noch   nicht
        that the minister(DAT) the matter(NOM) still not
              ganz  klar war
              quite clear was
        'that the matter was still not quite clear to the minister'

(34)   dass dem Museum       die Urne     geschenkt worden ist
        that the museum(DAT) the urn(NOM) given     become is
        'that the museum was given the urn'
```

---

[14]See above for discussion of variability in the status of *wakaru* as an ergative or regularly transitive verb.

[15]German examples are given in the form of subordinate clauses in order to abstract away from the verb-second phenomenon in root clauses.

Den Besten proposes a Move-NP account, according to which the nominative NP is base-generated in object position—as a sister of V—and remains there at S-structure; the dative NP is base-generated in Indirect Object position—as a sister of $\bar{V}$—and moves to subject position at S-structure. Verbs that can appear in this construction without passive morphology are *ergative* verbs that subcategorize for two internal arguments but have no objective case to assign. The NP that is sister to V can obtain case either by moving to the non-theta-marked subject position, or by remaining in situ and being case-marked—by a COMP with the feature [+Tense]—via *Chain-Government*:

> If NP_i is governed by a category α which cannot or may not assign Case, NP_i will acquire its Case from the first Case-assigner up by which it is chain-governed.
>
> α *chain-governs* β iff α governs γ_1, γ_1 governs γ_2, ..., γ_{n-1} governs γ_n, and γ_n governs β ($n \geq 1$).

If the NP sister to V is case-marked via Chain-Government, the dative NP moves to subject position. In order to account for the absence of similar phenomena in languages such as English, Den Besten proposes that Chain-Government is parameterized.

Den Besten's Move-NP account is also possible for the Japanese potential, and other verbs with the "ergative" case array, but there is a difference between the Japanese potential and the German and Dutch ergatives that brings us back to the question of subjects. Under Den Besten's analysis, as noted above, the defining characteristic of two-argument ergative verbs is that they have two internal arguments, but do not assign accusative case. The German and Dutch verbs are either underived (like *gefallen* (to please) in (33)) or passives of ditransitives (like *geschenkt werden* (to be given) in (34)). The Japanese potentials with the *ni ... ga* pattern, on the other hand, are derived from regular transitive verbs, which have one internal and one external argument. Thus it must be specified that one of the effects of affixation of the potential morpheme is the internalization of the external argument of the verb, so that it can receive dative case (*ni*-marking) in the same way as the indirect object of a ditransitive. The question that then arises is why this internalization is dependent on the non-assignment of accusative to the other argument of the verb. That is to say, what is the explanation for the the ungrammaticality of the *ni ... o* pattern with verbs that permit both *ga ... o* and *ni ... ga*? Clearly, this follows immediately from our principle that every clause must have a subject-predicate structure, and that *ga* is a marker for subjects of predication.

In German and Dutch, as in Japanese, there is no verb with arguments marked *DAT ... ACC*. This fact might escape notice, since German and Dutch two-argument ergative verbs exhibit no alternations of case. The parallel with Japanese, however, shows us clearly that this gap is not fortuitous, and must be accounted for.

A potential problem for this account of the impossibility of certain case-arrays in West Germanic and Japanese is the existence of clauses with no nominative arguments, as illustrated by the following examples from German and Japanese:

```
(35)a.  Ihm      ist kalt
        him(DAT) is  cold
        'He is feeling cold.'
```

```
b.  Er sagte, dass getanzt wurde.
    he said   that danced  was
    'He said that there was dancing.'

c.  aki  -ni  nat  -ta
    autumn-DAT become-PST
    'It became autumn.'
```

[Saito 85] shows, however, that apparently subjectless clauses in German must in fact have a null expletive subject. While tensed clauses such as those in (35)a. and b. are fully grammatical, their infinitival counterparts are unacceptable:

```
(36)a.  *Es ist moeglich, ihm      kalt zu sein.
         it is  possible  him(DAT) cold to be
         Intended: 'It is possible for him to feel cold.'

    b.  *Es ist moeglich, getanzt zu werden.
         it is  possible  danced  to be
         Intended: 'It is possible for there to be dancing.'
```

The ungrammaticality of the examples in (36) is exactly parallel to that of the English example given in (2)e. above, and Safir explains the German examples in essentially the same way: the sentences are ruled out because the infinitival clauses are subjectless. It follows that their tensed counterparts—the examples in (35)—must have subjects, and Safir therefore proposes that they contain a null expletive. This null expletive must be governed, which accounts for its failure to appear in infinitival contexts.

Safir thus shows that the German phenomena do not in fact constitute counterevidence to a requirement that clauses have subjects, and provides evidence for the existence of a phonetically null expletive. While I do not know of any independent evidence from Japanese for the existence of a null expletive in this language, since Safir shows that such an element exists in German, and since there is no evidence against its occurrence in Japanese, I shall assume the same analysis for the type of Japanese sentence exemplified by (35)c. as Safir proposes for the German cases.

Whether we take as the primary definition of ergatives the assignment of subject status to the argument receiving the innermost θ-role, or the non-assignment of accusative case to this argument, we have an explanation for the default order ni ... ga in the Japanese "ergative" case array. The ga-marked NP is the one receiving the θ-role that is discharged first, and is therefore generated closest to the verb. Since ga is not assigned by INFL, it is not necessary for this argument to move for it to be marked with ga and thus to become the subject.

This natural account of the word order in this construction is an advance on the analysis proposed in [Saito 82]. His analysis of the potential construction is that it involves binding of the object position by a base-generated ga-phrase in "focus position"—the extra-sentential position in which non-argument ga-phrases also appear. Saito notes that while PRO is not generally possible in subject position of a matrix clause, it does appear to be licensed by the existence of a "focus." In the potential construction, then, the presence of the extra-sentential ga-phrase binding the object position licenses a PRO in subject position, which

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may have its semantic content specified through coindexation either with another *ga*-phrase or a *ni*-phrase (p.84):

```
(37)a.  John(i)-ga rosiago(j)-ga [PRO(i) [e(j)] hanas-e -ru]
        John   -NOM Russian  -NOM               speak-POT-PRES
        'John can speak Russian'

     b. John(i)-ni  rosiago(j)-ga [PRO(i) [e(j)] hanas-e  -ru]
        John    -DAT Russian   -NOM              speak-POT-PRES
        'John can speak Russian'
```

In (37)a. *rosiago* occurs in "focus" position, binding a trace in object position, and licencing the occurrence of PRO in subject position, the semantic content of which is specified through coindexation with another adjoined *ga*-phrase, *John*. (37)b. is identical except that the semantic content of the PRO is specified by a *ni*-phrase.

In Saito's analysis both the subject and the object position are filled by empty categories co-indexed with phrases in adjoined positions. It follows that in a potential sentence involving a ditransitive verb, the goal argument of the ditransitive should follow the other two NPs, since only the goal NP would be in an argument position, rather than adjoined to the left. This prediction is, however, incorrect; the goal argument appears between the other two arguments, exactly as in a regular ditransitive sentence.

```
(38)a.  *watasi-ga /-ni kono puresento-ga   sensei -ni
        I       -NOM -DAT this present   -NOM teacher-DAT
                              age -rare-na -i   koto-wa   atarimae da
                              give-POT-NEG-PRES fact-TOP natural   is
        Intended reading:  'It is natural that I cannot give
                              this present to my teacher.'

     b. watasi-ga /?-ni  sensei -ni  kono puresento-ga
        I       -NOM ?-DAT teacher-DAT this present   -NOM
                              age -rare-na -i   koto-wa   atarimae da
                              give-POT-NEG-PRES fact-TOP natural   is
        As above
```

This example shows that the grammatical order is what would be expected under our analysis, which involves no movement at all.

Further, the ungrammatical (39) seems just as easy to derive in Saito's system as grammatical examples like (37):

```
(39)    *rosiago(i)-ga [John-ga [e(i)] hanas-e  -ru]
        Russian    -NOM John-NOM        speak-POT-PRES
        Intended reading:  'John can speak Russian.'
```

Although PRO is licensed in subject position of the lower clause, there seems no reason why it should be required.

Further evidence that the *ga*-phrase occurring closest to the verb is governed by the verb and is not in an adjoined position is presented in [Takezawa 87]. One additional piece

of evidence is provided by the distribution of head-internal relative clauses, as argued in [Ishii 88]. Head-internal relatives are extremely limited in their distribution: they cannot occur in subject or indirect object position, nor as adjuncts. They are grammatical only as direct objects and as *ga*-phrases of the following type in "ergative" sentences [Ishii 88]:

```
(40) kimi-ni [tori-ga sora-o   tondeiru no]-ga
     you-DAT  bird-NOM sky-ACC is flying  -NOM
          utiotos-e -ru   ka?
          shoot   -POT-PRES Q
     'Can you shoot a bird which is flying in the sky?'
```

This parallel between direct objects and the innermost *ga*-phrase in ergative sentences is expected under our analysis. It is however possible that binding a position governed by the verb is sufficient to licence a head-internal relative in an adjoined position, in which case these data are compatible also with Saito's analysis.

We have still to account for the *ga* ... *ga* pattern for the potential construction. The most economical way to handle this is to assume that the outermost θ-role of the ergative verb is optional. This assumption is borne out by the existence of sentences like the following, from [Saito 82, p.83]:

```
(41)  rosiago-ga  hanas-e -ru
      Russian-NOM speak-POT-PRES
      '(Among languages) it is Russian that is speakable ...'
```

The first *ga*-phrase in the *ga* ... *ga* pattern is thus analyzed as the subject of the predicate formed by the entire embedded sentence, in the way described earlier in this paper. That is to say, in (42)a. *rosiago* is the subject of the predicate *hanaseru* and *John* is the subject of the predicate *rosiago-ga hanaseru*, just as in (42)b. *John* is the subject of the predicate *se-ga takai*:

```
(42)a. John-ga   rosiago-ga  hanas-e -ru    koto
       John-NOM Russian-NOM speak-POT-PRES fact
       'the fact that John can speak Russian'

   b. John-ga  se -ga taka-i   koto
      John-NOM back-NOM tall-PRES fact
      'the fact that John is tall'
```

3.3.3 Phonetically null arguments

As is well known, null arguments occur freely in Japanese. One consequence is that many sentences will not have an overt subject:

```
(43) A: nani yat-te  i -ru   no?
        what do -ing be-PRES QU
        'What are (you) doing?'
```

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```
B:  kutu -o    sagasi-te  i -ru.  doko -ni ar-u    ka na?
    shoes-ACC look   -ing be-PRES where-in be-PRES QU
    '(I)'m looking for my shoes. Where can (they) be?'
```

Even if the NP occurs on the surface, it may be marked as a topic rather than with *ga*.

```
(44)a. mitiko-ga  kinoo      siken-o   uke -ta
       Mitiko-NOM yesterday exam -ACC take-PST
       'It was Mitiko who took an exam yesterday.'

   b. mitiko-wa  kinoo      siken-o   uke -ta
      Mitiko-TOP yesterday exam -ACC take-PST
      'Mitiko took an exam yesterday.'
```

Clearly we would not want to conclude that there is no predication structure in (43) or in (44)b. It seem reasonable to say that *ga* is present in the underlying structure of the sentence, but that, as a clitic, it cannot be realized overtly when the NP to which it should attach is not phonetically null, as in (43). If we adopt the widely assumed analysis of Japanese topics according to which the *wa*-phrase binds an empty category, exactly the same assumption will take care of examples like (44)a. as well.

A potentially more serious problem for our analysis is posed by ECM verbs and causatives, both of which take a complement ·containing no *ga*-phrase[16]:

```
(45)a. watasi-wa  sono-hito-o   baka da to   omo  -u
       I     -TOP that-man -ACC fool is that think-PRES
       'I think that man is a fool.'

   b. watasi-wa  imooto       -o   ik-ase-ta
      I     -TOP little sister-ACC go-CS -PST
      'I made my little sister go.'
```

According to the argument we have been pursuing, these types of sentence should be ungrammatical, since they contain complement clauses—*sono-hito-o baka da* and *imooto-o ik*—that cannot have a subject-predicate structure, as they lack a *ga*-phrase.

It has been observed that in both of the constructions in (45), adverbials that occur within the embedded clause are ambiguous in their scope. Consider, for example, (46) (cited from [Kuno 76]) and the contrast between the ambiguous (47)a., which contains a syntactic causative, and the unambiguous (47)b., which contains a simple transitive (the examples in (47) are cited from [Miyagawa 80]):

```
(46) Yamada-wa Tanaka-o   mada  kodomo da to   sinzite i -ru
          -TOP       -ACC still child  is that believe be-PRES
     'Yamada believes that Tanaka is still a child.'
                      OR
     'Yamada still believes that Tanaka is a child.'
```

---

[16]The reader is referred to [Heycock 87] for arguments that the Japanese causative construction is biclausal.

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```
(47)a. Taroo-wa  Hanakao-o  /ni  san  -kai   tomar      -ase-ta
          TOP           ACC/DAT three times stop(intr)-CS -PST
       'Taroo told Hanako once to stop, but for her
          to do it three times.'
                         OR
       'On three occasions, Taroo told Hanako to stop.'

   b. Taroo-wa  Hanako-o   san  -kai   tome    -ta
         TOP          ACC three times stop(tr)-PST
       'Taroo stopped Hanako three times.'
```

As Miyagawa points out, the ambiguity in (47)a. cannot be attributed to uncertainty as to whether the adverbial is generated in the matrix or in the embedded clause: since it occurs *after* the "subject" of the embedded clause, it must be generated within this clause.

Taken together, the possibility for matrix scope of adverbials and the suspension of the requirement for *ga*-marking in the complement clause suggest that these constructions involve some type of clause-union: the complement clause is not a fully independent unit, and this is why it does not require a *ga*-marked subject. Note that the correlation between matrix scope and lack of *ga*-marking is extremely good. The verb *sinziru* that occurs in (46), and all other (non-causative) ECM verbs in Japanese, may also take a complement with a *ga*-marked subject:

```
(48) Yamada-wa Tanaka-ga   mada  kodomo da to   sinzite i -ru
         -TOP       -NOM still child  is that believe be-PRES
     'Yamada believes that Tanaka is still a child.'
```

In this case, as observed in [Kuno 76], there is no ambiguity of scope: adverbials within the complement have narrow scope only—compare (48) with (46).

There is an additional factor that may be involved in the type of ECM construction illustrated in (46) above. It is known that this construction is possible only when the predicate of the complement is an adjectival or a predicate nominal plus copula. There is no such restriction with the construction shown above in (48), where the complement contains a *ga*-phrase, as shown in (49)c. below:

```
(49)a.  watasi-wa  ume -no  -hana  -o    utukusi -i    to   omo -u
        I     -TOP plum-GEN flowers-ACC beautiful-PRES that think-PRES
       'I think plum blossom is beautiful'

   b. *watasi-wa  sono-hito-o   hatarai-te  i -ru   to   omo -u
        I     -TOP that-man -ACC work    -ing be-PRES that think-PRES
        Intended reading: 'I think that man is working.'

   c.  watasi-wa  sono-hito-ga  hatarai-te  i -ru   to   omo -u
        I     -TOP that man -NOM work    -ing be-PRES that think-PRES
       'I think that man is working.'
```

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This distinction between adjectives and predicate nominals on the one hand and verbs on the other is found in English in the passive of ECM verbs:

```
(50)a.  His experiences made him angry / a cynic.
    b.  He was made angry / a cynic.
    c.  His experiences made him reconsider.
    d. *He was made reconsider.
    e.  He was made to reconsider.
```

In [Kroch Santorini & Heycock 87] an explanation is given for the contrast between d. and e. above, under the assumption that passive in English is a lexical process. Very briefly, in e. the external theta-role of "reconsider" is assigned to the pronominal AGR in "to," which is co-indexed with the c-commanding AGR in the matrix clause and thus also with the matrix subject. Because the complement in d. contains a bare infinitive, the external theta-role of "reconsider" cannot be assigned, and the subject of the sentence, "he," consequently receives no theta-role, since the passive of "make" does not have one to assign. The grammaticality of the passive in b., however, is not explained by this analysis. It seems that copular and adjectival predicates can establish a link with their subjects independently of the normal mechanisms employed by the language: in English, co-indexation with AGR, and in Japanese, *ga*-marking. How this occurs remains a question for further research, but the parallel between English and Japanese in this regard is striking.

4   Conclusion

In this paper I have attempted to demonstrate that the requirement on independent clauses to have a subject-predicate structure cannot be reduced to other principles such as θ-theory, Case-theory, or Fukui's Saturation Principle, but must be taken to be an independent principle of grammar. I have argued that the distribution of English pleonastics cannot be accounted for in terms of Kase-assignment: while their appearance must always be licenced by Kase, a principle of predication must be invoked to explain the ungrammaticality of their absence when Kase is not assigned. Then, turning to data from a language of a very different type, I have explored the nature of Japanese *ga*-marking, showing that it cannot be analyzed as a simple default marker, but is a true "subject marker," and that the distribution of this element also supports the existence of a principle of predication for clauses.

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