

On the Distribution of who/whom

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On the Distribution of *who/whom**

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1. Introduction

Tanaka (1988, 1990, 1991) attempts to account for *who/whom* alternation observed in (1) in terms of his AgrP analysis of sentence structure, where *who* is assigned Nominative Case by Agr-s while *whom* receives Objective Case from Agr-o¹.

- (1) a. Who/Whom did you see?
b. the man who/whom I am sure is innocent

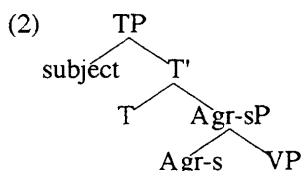
This way of explanation entails that the alternation in question is not a phonological accident and can be handled as an instance of structural Case-marking (i.e. either of the two forms in the alternation is licensed in a structural Case-marking configuration).

Suzuki (1992) presented several questions to this explanation. Tanaka (1995) is partly devoted to the discussion to nullify my arguments. The purpose of the present paper is to examine his counterarguments and to try to contrive an alternative methodology to deal with the alternation.

This article is organized as follows. Section 2 presents a brief outline of the part of Tanaka's theory of sentence structure that is relevant to *who/whom* alternation. Section 3 summarizes Tanaka's response to my counterarguments about his approach and reveals difficulties discernible in his response. Our own account of *who/whom* alternation will be given in section 4. Section 5 is a conclusion.

2. An Outline of Tanaka's AgrP Analysis

Tanaka adopts the basic concepts of a split-IP hypothesis (Cf. Pollock (1989), Chomsky (1989)) and proposes the articulated sentence structure shown in (2), where TP is located above Agr-sP and a subject is base-generated as the specifier of TP for some reason related to imperative sentences which we will ignore for the purpose of simplicity of argumentation:



The subject in (2) is assigned Nominative Case by Agr-s after the assigner moves from the head position of Agr-sP and is adjoined to T. Tanaka posits (3) as a (necessary) condition on Nominative Case assignment:²

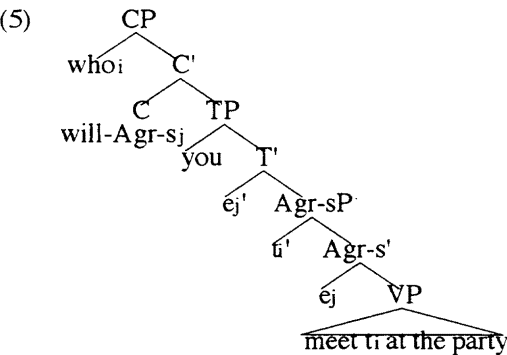
(3) NP is nominative if governed by Agr-s or its trace. Tanaka (1988: 169)

The simplest cases of *who/whom* alternation are the following:

- (4) a. Who/Whom will you meet at the party?
- b. Who/*Whom will come to the party?

2.1. Nominative Wh-Object

The Nominative Case of *who* in (4b) is licensed, because the tail member of the Chain (*who*, *t*) resulting from its movement is located in the specifier position of TP that is governed by Agr-s adjoined to T head in conformity with the condition in (3). The nominative wh-phrase in (4a), however, appears to pose a problem, since the subject *you* is also nominative. Tanaka's framework, though, is immune to this problem: the same Agr-s is allowed to assign Nominative Case twice in a single clause. In the structure (5) representing the nominative version of (4a),



the trace of Agr-s left in the head position of TP³, *e*_j'_i, governs, hence assigns Nominative Case to, the subject *you* and the trace of Agr-s left in the head position of Agr-sP, *e*_j, governs the intermediate trace of the wh-phrase (*t*_i') in the Spec of Agr-sP. The condition in (6) ensures that the Nominative Case assigned to this intermediate trace is realized on the wh-phrase:

(6) In an A'-Chain: (op, ... *t*ⁿ, *t*ⁿ⁻¹, ... *t*¹), the Case realized on op must match the

Case of t_i .

Massam (1985: 55)

A brief note on Objective Case is in order here, although we will turn to this issue later in 2.2. In (4a), the *wh*-phrase can also realize as objective. The condition on Objective Case assignment given in (7) (to be reinforced in (13)) allows the Case-assigning verb *meet* to assign Objective Case to the tail of the Chain of the *wh*-phrase and this Case can be realized on the *wh*-phrase in accordance with the condition in (6).

(7) NP is Objective if governed by Case-assigning verbs. Tanaka (1990: 244)

The objective realization of the *wh*-phrase in (4b), however, is not possible, there being no Case-assigning verb in the sentence.

Now we will explore other types of interrogative sentences. First, let us consider embedded infinitive clauses like (8):

(8) I don't know who to ask.

Agr-s is assumed to be present even in infinitives in Tanaka's theory, where (8) is ruled in with the same mechanism that licenses the nominative realization of the *wh*-phrase in (4a): Agr-s in the head position of Agr-sP in the embedded infinitive clause governs the intermediate trace of the *wh*-phrase residing in the Spec of the Agr-sP.

Agr-s, however, fails to license Nominative Case when it is adjoined to infinitive T unlike Agr-s adjoined to finite T that does assign Nominative Case to a subject NP. Otherwise, examples like (9), whose ungrammaticality ought to be ascribed to a violation of the Case-filter, would be wrongly predicted to be well-formed, Agr-s adjoined to infinitive T governing the lexical subjects:⁴

- (9) a. *I tried [Bill to win].
- b. *[Bill to leave] was expected.

Tanaka (1990: 229) suggests that infinitive T in English changes Agr-s adjoined to it into 'Agr' which does not Case-mark.

Next let us consider multiple-*wh*-questions like (10):

(10) What happened to who?

The fronting of the *wh*-in-situ in (10) is postponed until LF, as is usually assumed in most generative studies (Cf. May (1985)). If Case-assignment were fulfilled at S-structure, the *wh*-in-situ would fail to receive Nominative Case because it is not

governed by Agr-s in its S-structure position of the complement to the main verb. The nominative realization of the *wh*-in-situ, however, indicates that it is already marked as such by the S-structure, the stage of derivation where there is a bifurcation of the inputs to PF and LF. Thus, Tanaka formulates (11) based on Chomsky (1989: 64) to achieve the distinction between Case-marking and Case-checking:

- (11) Case-marking and Case-checking are dissociated; Case-marking applies at S-structure and Case-checking at LF.

Thus, it is not the case that the *wh*-in-situ itself is assigned Nominative Case at S-structure. Instead, its nominative marking is licensed at LF after it undergoes covert movement via the specifier position of Agr-sP.⁵

2.2 Objective *wh*-Subject

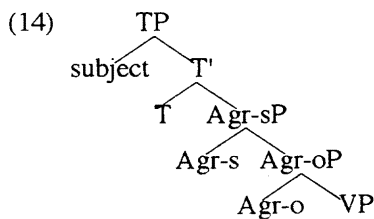
We turn to Objective Case of the *wh*-phrases in (4), repeated here for convenience as (12):

- (12) a. Who/Whom will you meet at the party?
b. Who/*Whom will come to the party?

Tanaka's condition on Objective Case assignment is twofold:⁶

- (13) a. NP is Objective if governed by Case-assigning verbs. Tanaka (1990:244)
b. NP is Objective if governed by Agr-o or its trace. Tanaka (1988:177)

The objective *wh*-phrase in (12a) is permitted by (13a), its original trace being governed by the main verb. That in (12b), in contrast, is licensed neither by (13a) nor by (13b), because there is no Case-assigning verb in the example and because the objective *wh*-subject is base-generated as the specifier of TP and, under any version of a definition of government, the trace it leaves as the result of *wh*-movement lies outside the commanding domain of Agr-o, which, in Tanaka's articulated sentence structure in (14), is located far below the subject position:



We sometimes witness an objective *wh*-subject, however, in examples like (15):

(15) Whom does Christine think bought that painting?

The objective *wh*-subject in (15) moves to its S-structure position producing the Chain (*whom*, *t*", *t'*, *t*), where *t* is marked nominative in the specifier of TP in the embedded finite clause, *t'* occupies the Spec of CP of that clause, and *t*" is marked objective by Agr-o in the specifier position of Agr-oP in the matrix clause. The condition in (6) on Case realization in an A'-Chain headed by an operator makes it possible for Objective Case of *t*" to be realized on the head *wh*-phrase in defiance of the presence of Nominative Case in the tail of the Chain.

One might point out some difficulty in Tanaka's approach concerning the A/A' status of the specifier position of Agr-sP in sentences like (15). In (15), the *wh*-phrase is base-generated in the A-specifier position of the embedded TP and then moved to the A'-Spec of the matrix CP by way of the A'-Spec of the embedded CP and the Spec of Agr-oP of the matrix clause. The former position is an escape hatch required by whatever principle responsible for the successive cyclic movement. The latter position is necessary for the objective realization of the *wh*-phrase. Then, the specifier of Agr-oP of the matrix clause should be an A'-position contrary to a standard view on that position in generative tradition, since, otherwise, the *wh*-phrase would be compulsorily moved from the A'-Spec of the embedded CP to another A'-Spec of CP via an A-position (the Spec of Agr-oP of the matrix clause), an instance of improper movement.⁷ Tanaka assumes the following to prevent this unwanted situation:

(16) The Spec of Agr is an A'-position if it is locally A'-bound and A-free. It is an A-position otherwise. Tanaka (1995: fn23)

According to this assumption, the Spec of Agr-oP of the matrix clause in (15) is an A'-position and no improper movement takes place, because the position in question is A-free and locally bound by the *wh*-phrase in the A'-Spec of the matrix CP.

The discrepancy between (12b) and (15) suggests that an objective subject must move across a clause boundary. Data like (17a), in reality, constitute counterexamples. (17a) is ill-formed although the *wh*-phrase is moved one clause up.

- (17) a. *Whom seems to be sick?
- b. Who seems to be sick?

(16), a condition concerning the A/A' distinction of the positional status of the Spec of

Agr, is not the source of the deviance of (17a). The Chain formed in (17a) is (*whom*, t'' , t' , t), where t is the A-Spec of the embedded TP (a non-Case-position), t' is the Spec of Agr-oP of the matrix clause associated with Objective Case, and t'' is the A-Spec of the matrix TP (a nominative Case-position). The intermediate trace t' is an A-position by the definition in (16), t'' being an A-binder of t' . Thus, all of these three trace positions are A-positions and the Chain does not represent the history of improper movement in which something in an A'-position is raised to an A-position. Tanaka (1993: 300), in order to reject sentences like (17a), assumes the condition in (18):

(18) Case in A-Chains is not associated with Agr. Tanaka (1993: 300)

(18), although it is not clear whether it derives from some deeper principle or not, precludes the objective realization of the *wh*-phrase in (17a). The subpart of the Chain in (17a), (t'' , t' , t), constitutes an A-Chain as required by the condition in (16) and therefore the condition in (18) requires the Case associated with the Chain not to be licensed by Agr-o. There is nothing but Agr-o, however, that can license the Objective Case of the *wh*-phrase. Thus, (17a) is predicted to be illegitimate. If Agr-oP is absent, the condition in (18) is respected because the intermediate trace in the Spec of Agr-oP can be omitted and the only available Case-marked position is the Spec of the matrix TP. In this case, (17b) will be generated instead of (17a) (but see also note 6).

Tanaka has developed his analysis to cover a variety of phenomena other than *who/whom* alternation like topicalization, antecedent-contained deletion, relativization, noun-incorporation, anaphor binding and long *wh*-movement, we shall limit ourselves to the phenomena we have presented so far.

3. Questions in Suzuki (1992), Answers in Tanaka (1995) and Further Arguments

I questioned in Suzuki (1992) Tanaka's analysis summarized in the last section and Tanaka (1995) attempted to falsify my points. In this section, we will critically review Tanaka's response to my arguments and some additional evidence supporting my standpoint will be presented.

3.1 Echo-Question

In Tanaka's approach, movement of a *wh*-phrase via (or to) the specifier position of Agr-sP or Agr-oP is necessary if an object *wh*-phrase is marked nominative or a *wh*-subject originating in a finite clause is marked objective as we can observe in (19):

- (19) a. Who_i will you meet t_i at the party? (repeated from (4a))
 b. Whom_i does Christine think t_i bought that painting? (repeated from (15))

The indispensability of such movement is evident in the contrast in (20):

- (20) a. *I don't know whom will win the election.
 b. Who is sure whom is innocent?

The *wh*-in-situ in the multiple-*wh*-question in (20b), *whom*, is moved to some left peripheral position of the matrix clause (by way of the Spec of the matrix Agr-oP) at LF to have an appropriate scope as a *wh*-operator whereas the *wh*-phrase in (20a) must not be realized as objective because the *wh*-subject has only moved vacuously from the Spec of TP to the Spec of CP blessed with no chance to make a stopover at the Spec of Agr-oP and no motivation for further covert movement involving the Spec of Agr-oP.

I presented the echo-question in (21) as evidence showing that movement is not a premise to the nominative realization of a *wh*-object or the objective realization of a *wh*-subject:

- (21) A: I saw Ted Dawson today.
 B: You saw who? Quirk et al. (1985: 835)

The nominative realization of the object *wh*-phrase in the echo-question in (21B) is acceptable, although a *wh*-phrase in an echo-question does not undergo movement as suggested by the contrast in (22):

- (22) a. What did who do? (echo-question reading) Authier (1993: 165)
 b. *What did who do? (multiple-question reading)

It has been widely proposed that examples like (22b) are instances of the superiority effect (Cf. Chomsky (1973)) that can be reduced to the lack of the proper government of the trace of the *wh*-in-situ.⁸ If it is to be explained in terms of the Empty Category Principle, the *wh*-in-situ in (22a) is unlikely to move (and leave a trace).

According to Tanaka's (1995) answer to my question, the *wh*-phrase in the echo-question in (21) undergoes covert movement up to the Spec of Agr-sP to have its Nominative Case checked, though its final landing site is not the leftmost position of the clause.

This way of solution, however, is not tenable. There are two reasons, one empirical and the other theoretical.

First, if it were the case that NP can be raised solely for the purpose of Case-checking to the Spec of AgrP and no further, then sentences like (23) would be unexpectedly sanctioned: *John* in these incorrect sentences should be allowed to be moved to the Spec of the matrix Agr-sP or Agr-oP for Case-checking just as *who* in (21B) is.

- (23) a. *It seems John to be sick.
b. *I assure you John to be a nice guy.

(It is conceivable that sentences in (23) are ruled out by the condition in (18). It is true that the movement of *John* in (23) to the Spec of the matrix Agr-sP or Agr-oP produces an A-Chain in which the condition in (18) makes Agr unable to license any Case, but this way of reasoning will also reject (21B). This point will be picked up as the second problem below.)

One might object that the gap between (21B) and (23) might have something to do with the fact that the NP in (21B) could be licensed by the matrix verb without movement if it is marked objective (*You saw whom?*) whereas those in (23) do not have this option. Notice, however, the contrast in (24).⁹

- (24) a. You saw me?
b. *You saw I?

The object NP in (24b), like that in (21B), could be checked by the matrix verb if it is marked objective as we can see in (24a). Nevertheless, (24b) is not grammatical.

Second, the Chain arising through the movement of the wh-phrase to the specifier position of Agr-sP in (21B) should be ill-formed in Tanaka's framework, since the moved wh-phrase, which is not locally A'-bound and hence is in an A-position according to the definition of A/A' status of the specifier of AgrP in (16), is a member of an A-Chain and the condition in (18) prohibits the Nominative Case of the Chain from being associated with Agr(-s).

3.2 Caseless Variable

The second piece of evidence I provided against Tanaka's AgrP analysis of *who/whom* alternation is the following:

- (25) a. *Who_i are you afraid t_i ?
b. *Whom_i do you like a picture t_i ?

The ungrammaticality of (25) can be attributed to the lack of *of* insertion (i.e. the Case-filter) in the standard approach. If *of* is inserted in front of the traces in (25), they are in a Case-position and the Chain (*who(m)_i*, *t_i*) is legal. If the option of *of* insertion is not chosen, the position occupied by the traces is not a Case-position and the resulting sentences in (25) are ungrammatical due to the lack of Case.

If the *wh*-phrase could make a stopover in the Spec of Agr-sP or Agr-oP for the purpose of Case-checking as Tanaka proposes, then the resulting Chain (*who(m)_i*, *t_{i'}*, *t_i*), *t_{i'}* being the intermediate trace of the *wh*-phrase left in the Spec of Agr-sP or Agr-oP, would be erroneously estimated to be lawful because the position is associated with Case and it can be realized on the *wh*-phrase in accordance with the condition on Case realization in (6).

Tanaka imputes the ungrammaticality of (25) to a violation of the requirement as in Chomsky (1986) that a variable have Case. According to the definition in (16), the intermediate trace left in the Spec of Agr-sP or Agr-oP in (25) is in an A'-position, since it is locally A'-bound by the *wh*-phrase and is A-free. The intermediate trace is not a variable, since a variable is considered to be in an A-position associated with Case. The original trace left in the complement position to the head adjective or the head noun is not a variable either because it is not in a Case-position, hence the ungrammaticality of (25).

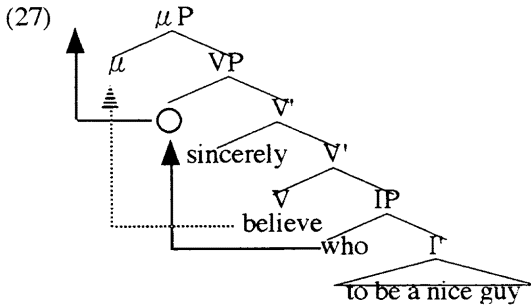
This requirement, however, makes a counterfactual prediction with respect to the contrast seen in (26), when coupled with Tanaka's AgrP analysis:

- (26) a. *John believes sincerely Bill to be the best man.
 b. Who does John believe sincerely to be the best man?

The Chain created in (26b) is (*who_i*, *t_{i'}*, *t_i*), *t_{i'}* and *t_i* occupying the Spec of the matrix Agr-sP and the Spec of the embedded TP, respectively.¹⁰ Since the latter position is not a Case-position as the ungrammaticality of (26a) suggests, *t_i* is not a variable. *t_{i'}* is not entitled to act as a variable either, because it is not in an A-position according to the definition in (16) (locally A'-bound and A-free). Consequently, we can not escape the false conclusion that (26b) is ungrammatical. Since this conclusion is in conflict with the fact, the requirement about a variable and Tanaka's version of AgrP analysis should not be coexistent.

The examples in (25) are simply ruled out as a violation of the Case-filter if we do not adopt Tanaka's version of AgrP analysis. As for (26), there seem to be a few ways to deal with the contrast in (26) in the standard approach. For example, Johnson (1991)

derives sentences like (26b) from the structure (27) through the obligatory overt movement of *believe* to some higher head represented as μ and the overt movement of *who* via the A-specifier position of VP (He considers the movement of *who* up to the specifier position of VP as obligatory).¹¹



I claim that in (27), the intermediate trace left in the Spec of VP is Case-licensed by the main verb raised to the head μ .¹² As for (26a), we simply follow Johnson in requiring an objective NP to be raised to the Spec of VP by S-structure across an adverb. He defends the sentence structure in (27) capitalizing on data like (28):

- (28) a. Mary talked slowly to Gary.
 b. Chris ate the meat slowly and the vegetables quickly.
 c. Betsy sent the letter secretly to Liz.

As long as it is not viable that an adverb is immediately dominated by (all the segments of) V', the main verb must be raised in (28a) and (28c). The main verb in (28b) must be raised in an across-the-board manner so that the conjunct might be VP.

3.3 Double *who*

The third argument against the AgrP analysis is concerned with data such as (29):

- (29) a. Who_i did you tell t_i about who?
 b. Who_i did you kill t_i with who?

It is problematic that there are three nominative noun phrases in a single clause, because the sentence structure of wh-question in Tanaka's framework given in (5) can only accommodate two nominative NPs. In (5), one trace of Agr-s licenses the Nominative Case of the subject and the other trace of the Agr-s licenses the Nominative Case of the

wh-phrase through the Spec of Agr-sP. In the wh-question sentences above, however, there exists one more additional nominative wh-phrase.

Tanaka follows Speas' (1991) suggestion to the effect that while functional elements such as Tense and Negation occur only once in a clause, the number of Agr in a clause may vary with the number of constituents with which they share ϕ -features. He then claims that there can be two (or more) occurrences of Agr-s in a single clause. If this suggestion is correct, the D-structure of (29a) would look like (30):

(30) C you T [Spec Agr-s [Spec Agr-s [tell who about who]]]

The two nominative wh-phrases are licensed by distinct Agr-s head. I admit that this analysis can be maintained as long as more than one Agr-s is allowed in a single clause in English.

The real difficulty, however, lies in the mechanism of Case licensing in which the same Agr-s head can license a nominative subject and a nominative wh-phrase before we can discuss the appearance of two nominative wh-phrases. In the sentence structure in (5), (the trace of) Agr-s is in a Spec-head relation with the intermediate trace of the nominative wh-object and at the same time it agrees with the subject of the clause. This means that, in sentences like *Who will you meet at the party?*, Agr-s agrees with two different NPs, a nominative wh-object and a nominative subject. This state of affairs is not desirable from both theoretical and empirical standpoints. Theoretically speaking, a single Agr-s does not seem to have two different contradictory values as to the same features. Actually, if the morphological realization of the ϕ -features of Agr-s could be dependent either on *you* (2nd person singular) or on *who* (3rd person singular) in (31), the two sentences in (31) would be equally ruled in:

- (31) a. Who do you like?
b. *Who does you like?

3.4 *Who* within a Subject or a Comp

The fourth argument against the AgrP analysis is based on sentences like (32), where a nominative wh-in-situ is located within a subject noun phrase or another wh-phrase in Comp (the Spec of CP):

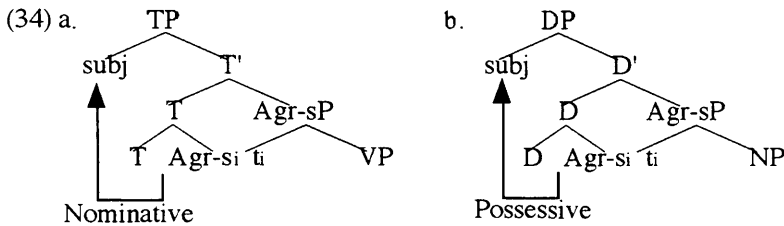
- (32) a. Who did pictures of who please?
Fiengo, Huang, Lasnik & Reinhart (1988: 83)
b. How large a picture of who do you need?

The nominative *wh*-in-situ in these examples is raised to some sentence-initial position at LF for the purpose of generating an operator-variable configuration. This LF movement, however, can not include the Spec of Agr-sP (a nominative Case-position), since the *wh*-in-situ is located in a subject noun phrase (the Spec of TP) or another *wh*-phrase in the Spec of CP and these positions are structurally higher than the nominative-licensing position of the Spec of Agr-sP in the sentence structure Tanaka adopts. Therefore, the Nominative Case of the *wh*-in-situ fails to be licensed and there seems to be no way to rule in examples like (32).

Tanaka's counterargument relies on the version of a DP analysis that places AgrP between DP and NP (See Abney (1987) among others for the basics of a DP analysis of noun phrases). His analysis assigns a structure like (33) to (32a):

(33) who_i did [_{DP} D [_{Agr-sP} Agr-s [_{NP} pictures of who_j]]] please t_i ?

At LF, *who_j* covertly moves to some sentence-initial position to have a scope as an operator via the Spec of Agr-sP, where its Nominative Case is licensed by Agr-s. Tanaka seems to be assuming some parallelism between a noun phrase and a clause. They are alike in that both of them have Agr-sP, out of which Agr-s moves to a higher head to license the nominative or possessive Case of a subject in the Spec of the projection of the higher head (TP in a clause and DP in a noun phrase) as illustrated in (34):¹³



Tanaka's solution, however, can not be extended to *wh*-phrases in Comp that are not noun phrases. Consider examples in (35):¹⁴

- (35) a. How afraid of *who* is your daughter?
 b. How many meters behind *who* did you find a ghost?

The fronted phrase in (35a) is an adjective phrase and that in (35b) is a prepositional phrase. One may object that the fronted constituent in (35) also contains Agr-sP. This

analysis can be easily falsified by Tanaka's own data in (36):

- (36) a. *To who will you write?
b. To whom will you write?

These sentences indicate that the fronted prepositional phrase does not contain Agr-sP, since otherwise the nominative wh-phrase in (36a) would move to the Spec of Agr-sP and its Nominative Case would be licensed by Agr-s in the same manner that a nominative wh-in-situ is licensed in echo-questions like *You saw who?*¹⁵

3.5 Topicalization

I would like to add some other point. Tanaka's approach makes a wrong prediction as to whether a topicalized non-wh object NP can be realized as nominative or not. Consider (37):¹⁶

- (37) a. Them, I questioned about each other. (Heim, Lasnik & May (1991: 93))
b. *They, I questioned about each other.

In (37b), it ought to be permissible for the topic NP to make a stopover at the Spec of Agr-sP in the course of the movement to the sentence-initial topic position in Tanaka's framework as in *Who did you meet at the party?*, because the Spec of Agr-sP is an A'-position (i.e. locally A'-bound by the topic and A-free in conformity with the condition on A/A' status of the Spec of Agr given in (16)) and therefore the Nominative Case of the topic NP could be successfully licensed thanks to the presence of its trace in the Spec of Agr-sP without offending the condition concerning the incompatibility of an A-Chain and Case licensing by Agr offered in (18).

4. Language-Particular Account

It is true that *who/whom* alternation does not occur in a haphazard fashion and it is consistently dependent on the context in which it arises, but I claim that it does not necessarily lead to the conclusion that the alternation should be accounted for in terms of general core properties of UG (like the mechanism generating the basic sentence structure in (5)) without recourse to any language-specific characteristics. In fact, the alternation does not seem to be a universal phenomena. German, for example, does not tolerate *wer/wen* alternation as we can see in (38):

- (38) a. Wen hat er eingeladen?
whom has he invited

- b. *Wer hat er eingeladen?
who has he invited

If the condition about Nominative Case licensing given in (3) were a condition of a universal nature and if a nominative NP could invariably be licensed by Agr-s or its trace, then (38b) ought to be ruled in. This suggests that English *who/whom* alternation is not an instance of a universal phenomenon but a language-specific morphological variation.

In addition, *who/whom* alternation is a matter of style to some extent within a particular language. In (39), *who* is associated with colloquial or informal usage while *whom* sounds rather formal (Cf. Quirk et al. (1985: 370)):

- (39) a. Who do you admire most? (informal)
b. Whom do you admire most? (formal)

These considerations and the difficulties we saw in the last section incline us to pursue the possibility of the existence of some English-particular licensing conditions relevant to *who/whom* alternation. I propose (40):

- (40) In English, a clause-initial position, or a position somehow related to that position, licenses the nominative realization of an otherwise objective wh-phrase.

(40) seems to take effect only when informal speech is meant. The nominative wh-object in (39a) occupies a sentence-initial position and could be replaced by an objective counterpart. Therefore its Nominative Case is licensed as informal by the condition (40). The reason why it is "wh-phrase" instead of "NP" in general in (40) is that it does not apply to a personal pronoun as we can observe in the pair in (37) reproduced here as (41):

- (41) a. Them, I questioned about each other.
b. *They, I questioned about each other.

The statement of this condition tempts us to test a similar condition referring to a clause-final position, the objective realization of originally nominative elements, and its informality. Consider (42):¹⁷

- (42) In English, a clause-final position, or a position somehow related to that position, licenses the objective realization of an otherwise nominative NP.

The condition in (42) seems to hold in examples like (43):

- (43) a. It was he. (formal)
 b. It was him. (informal) Quirk et. al. (1985: 337)

If we assume that a subjective complement in English is normatively nominative, the objective NP in the subjective complement position in (43b) is licensed by (42) as informal. Interestingly, the phenomenon seen in (43) is not universal. In German, again, the equivalent of English formal version is the only possibility:

- (44) a. Das bin Ich.
 it is I
 b. *Das bin mich.
 it is me

The language-specific nature and the stylistic contrast shared by (39) and (43) suggest that (40) is likely to be an appropriate licensing condition to the extent that (42) is the licensing condition accounting for the alternation in pairs like (43).

Finally, I would like to add a proviso. (42) should be revised as (45):

- (45) In English, a clause-final position licenses the objective realization of an otherwise nominative NP.

If we adopted (42) instead of (45), it would overgenerate such examples as (46), where *him*, although it occupies a clause-initial position, could be "somehow related to" a clause-final position through its trace:

- (46) *Himi was killed *ti*.

4.1 The Licensing Condition of *who*

It is now in order to apply the condition in (40), repeated here as (47) for convenience, to examples we have seen so far.

- (47) In English, a clause-initial position, or a position somehow related to that position, licenses the nominative realization of an otherwise objective wh-phrase.

The condition correctly licenses the following examples repeated from the foregoing sections:

- (48) a. Who/Whom will you meet at the party? (= (4a))
b. I don't know who to ask. (= (8))

The nominative wh-object in (48a) is obviously sentence-initial and that in (48b) is at the left periphery of the embedded infinitival clause.

The condition in (47) can also manage data with a nominative wh-in-situ like (49), although the nominative wh-in-situ in (52) is not in a clause-initial position at S-structure:

- (49) What happened to who? (= (10))

The wh-in-situ in (49) is moved to, and occupies, some sentence-initial position for an interpretative reason at LF. Thus, its Nominative Case is licensed by the condition in (47) at LF.

A nominative object, if it is a full NP, is never licensed since it is interpreted in its S-structure position unlike a wh-in-situ and therefore has no motivation to be raised to any sentence-initial position at LF, hence the deviance of (50):

- (50) *You saw I. (= (24b))

The condition in (47) does not predict by mistake that a full NP is licensed in the initial position of a non-ECM infinitive clause without an overt complementizer like those in (51), which have no relevance to the condition in (47) because a full NP (nominative) subject is not "an otherwise objective NP".

- (51) a. *I tried [Bill to win]. (= (9a))
b. *[Bill to leave] was expected. (= (9b))
c. *It seems John to be sick. (= (23a))
d. *I assure you John to be a nice guy. (= (23b))

Furthermore, (47) does not overgenerate such repugnant sentences as (52):

- (52) *It is impossible for they to eat a horse in a minute.

The nominative subject *they* in (52) is "an otherwise objective NP" (Cf. *it is impossible for them to eat a horse in a minute*), but the clause-initial position is not occupied by the subject but by the infinitive complementizer.

Now we will deliberate how the condition in (47) overcomes the difficulties pointed out in the last section.

4.1.1 Echo-Question

The topic of the subsection 3.1 is an echo-question. I argue that the nominative *wh*-object-in-situ in (53B) is licensed by the condition in (47) without recourse to movement. I suspect that *who* in (53B) can be regarded as "somehow related to" a clause-initial position for the reason that this *wh*-phrase could be moved to the initial position of a clause if it were a *wh*-in-situ in a real interrogative sentence.

- (53) A: I saw Ted Dawson today.
 B: You saw *whó*? (= (21))

The two questions I submitted about Tanaka's movement approach to (53) are no menace to the solution I am proposing. The first problem is the wrong prediction that sentences like (23) are ruled in:

- (54) a. *It seems John to be sick.
 b. *I assure you John to be a nice guy. (= (23))

In our approach, the sentences in (54) are simply abandoned as a Case-filter violation, since we do not consider the Spec of AgrP as a possible landing site of Case-motivated movement like Tanaka does in accounting for (53B). Moreover, the ungrammatical sentences in (54) can not be ruled in by (47), because *John* in (54) is not "an otherwise objective NP".

The second problem in Tanaka's framework is the conflict between the A-Chain of *who* headed by the specifier position of Agr-sP and the condition in (18) requiring an A-Chain not to be licensed by Agr. This inconsistency does not arise in our approach, since the condition in (18) is just irrelevant for us.

4.1.2 Caseless Variable

The subsection 3.2 is focused on the example (25a), reproduced here as (55):

- (55) **Who_i* are you afraid *ti*?

This sentence is simply ruled out due to the lack of Case in the Chain of the *wh*-phrase in our account: neither member of the Chain (*who_i*, *ti*) is in a Case-position. As for the difficulty Tanaka's framework is confronted with over the matter of a Caseless variable seen in (56), repeated from (26), a solution based on a standard generative view is recounted in 3.2.

- (56) a. *John believes sincerely Bill to be the best man.
b. Who does John believe sincerely to be the best man?

4.1.3 Double *who*

We concentrated on (29) in the subsection 3.3:

- (57) a. Who_i did you tell *t_i* about who?
b. Who_i did you kill *t_i* with who? (= (29))

In our account, both of the nominative *wh*-phrases are licensed by the condition in (47). There is no limitation on how many times the condition is invoked in a single sentence. As for (31b), our account excels Tanaka's, because *who* falls into a Spec-head configuration under AgrP in Tanaka's framework but not in ours.

- (58) *Who does you like? (= (31b))

Notice that we have to assume that the position of the fronted nominative *wh*-phrase and that of the nominative *wh*-in-situ are both counted as clause-initial at LF to observe the condition in (47).

4.1.4. *who* within a Subject or a Comp

The subsection 3.4 presented the following examples:

- (59) a. Who did pictures of who please? (= (32a))
b. How large a picture of who do you need? (= (32b))
c. How afraid of who is your daughter? (= (35a))
d. How many meters behind who did you find a ghost? (= (35b))

The nominative *wh*-in-situ in (59) will be all licensed by the condition in (47) if we assume the LF-movement of *who* to some clause-initial position. This is straightforward in the case of (59a): a *wh*-in-situ must move somewhere around [+*wh*]C to avert vacuous quantification. The *wh*-in-situ in (59bcd) should also be moved even if it is already within the Spec of an interrogative CP, since otherwise there would not arise an operator-variable configuration.

Now we go on to examples like (60):

- (60) a. *To who will you write?
b. To whom will you write? (= (36))

In (60a), it is not the nominative *wh*-phrase but the preposition that is in the sentence-

initial position and the Nominative Case of *who* remains unlicensed. I assume that the necessity of producing an operator-variable configuration does not motivate the movement of *who* to the leftmost position of the clause in (60a) because PP can be taken for a projection of NP in some sense (e.g. the extended projection of Grimshaw (1991)) and therefore the PP in (60) itself is expected to constitute an operator.

In order to preclude every possible way of escape from ungrammaticality, it is necessary to prohibit *who* in (60a) from moving only for the purpose of avoiding a failure of Case-licensing. Without this prohibition, *who* in (60a) would wrongly be allowed to move across the preposition *to* only to have its Nominative Case licensed in accordance with the licensing condition (47). This kind of requirement might sound strange in the light of the well-formedness of NP-movement to a Case-position. The movement of *who* in question, however, is different from the ordinary NP-movement seen in raising and passive constructions: the latter is a movement of a last resort nature whereas the former is not, since the replacement of *who* with *whom* makes the sentence acceptable without recourse to any movement.

4.1.5 Topicalization

The subsection 3.5 is devoted to the contrast in (61):

- (61) a. Them, I questioned about each other.
- b. *They, I questioned about each other. (= (37))

It was already shown around (41) how our account explains the discrepancy between (61) and *who/whom* alternation. The licensing condition in (47) only refers to "wh-phrase" thereby excluding personal pronouns. Thus, a sentence-initial nominative wh-object is licensed while a clause-initial nominative personal pronoun base-generated in the position marked with Objective Case is not.

This issue suggests that the condition in (47) is very restrictive and all the more likely to be language-specific.

4.1.6 French

We can observe *who-whom* alternation in English but not in German as we can see in the contrast between (62) and (63):

- (62) a. Whom will you meet at the party?
- b. Who will you meet at the party? (= (4a))

- (63) a. Wen hat er eingeladen?
whom has he invited
b. *Wer hat er eingeladen?
who has he invited (= (38))

The *wh*-phrase in these sentences must be normatively objective while English, but not German, has a language-specific rule tolerating a nominative *wh*-phrase that originates in a position associated with Objective Case.

Here we turn our attention to French facts in (64):

- (64) a. Qui cherchez-vous? 'Who do you seek?'
who seek you
b. Que cherchez-vous? 'What do you seek?'
what seek you

They seemingly suggest that French is of an English type, since *qui* and *que* are nominative and objective complementizers as in (65):

- (65) a. rien qui me plaise
nothing that me please
b. la dame que vous demandez
the lady that you ask

(64), however, are not an instance of anything like English *who/whom* alternation, because *qui* (a human) and *que* (nonhuman) in (64) constitute a complementary distribution (they are not stylistic variants).

4.2 The Licensing Condition of *whom*

We reached the licensing condition (45) at the beginning of this section:

- (66) In English, a clause-final position licenses the objective realization of an otherwise nominative NP. (= (45))

This condition, however, has nothing to do with the following examples we have seen so far which contain an objective *wh*-phrase that does not originate in a clause-final object position:

- (67) a. Who/*Whom will come to the party? (= (4b))
b. *Whom seems to be sick? (= (17a))
c. *I don't know whom will win the election. (= (20a))

(68) a. Whom does Christine think bought that painting? (= (15))
b. Who is sure whom is innocent? (= (20b))

The sentences with *whom* in (67) are ungrammatical while those in (68) are permissible although the objective wh-phrases in both of them are all moved from a subject position associated with Nominative Case to the left periphery of a clause for the purpose of having a scope. The deviance of (67) comes from the absence of a licenser of Objective Case. The subject position in which *whom* is base-generated is a Case-position associated with Nominative Case. The sentence-initial position occupied by *whom* in (67) is not a Case-position.

Then, what makes the question sentences in (68) acceptable? The most conspicuous difference between (67) and (68) is the fact that *whom* only makes a vacuous movement from a subject position to the Spec of the contiguous CP in (67) whereas it moves one clause up in (68). I suspect that there is a language-specific licensing condition like (69):

- (69) In English, A'-movement across a clausal boundary from a position lying between elements belonging to different clauses licenses the objective realization of an otherwise nominative wh-phrase.

Let us see how the condition in (69) works. In (68a), for example, *whom* is base-generated as the subject of the lower clause and is adjacent to the verb in the lower clause on the right and to the main verb in the upper clause to the left. Thus, the wh-phrase lies "between elements belonging to different clauses". This position looks like the final position of the upper clause and the initial position of the lower clause at the same time and therefore it is plausible that the subject wh-phrase in (68a) tends to be mistaken in some sense for something like a complement to some head (usually V) in the upper clause. The same story can be applied to (68b) if "A'-movement" in (69) includes covert movement.

(69) does not improve sentences in (67). In (67ab), the wh-phrase is base-generated in the root sentence and therefore is not adjacent to any element in the "upper" clause. In (67c), in contrast, the base position of the wh-phrase is adjacent to elements of different clauses, satisfying one necessary condition for (67) to take effect. The wh-phrase in (67c), however, only makes an overt vacuous movement crossing no clause boundary. Moreover, it has no motivation of covert movement. Thus, the wh-phrase in (67c) can not be realized as objective.

The reason why it is "A'-movement in (69) is that we have to rule out (70), where the objective subject is fitted for the definition in (69) except its A-Chain:

(70) He/*Him is expected t to come tomorrow.

Now the condition in (69) is restrictive in terms of its target Chain and looks all the more like language-specific.

5. Conclusion

In this paper, we tried to show that *who/whom* alternation is not a phenomenon to be explained by core properties of UG. We pointed out difficulties remaining in Tanaka's framework and proposed the following English-specific conditions on the morphological realization of a wh-phrase:

(71) In English, a clause-initial position, or a position somehow related to that position, licenses the nominative realization of an otherwise objective wh-phrase. (= (47))

(72) In English, A'-movement from a position lying between elements belonging to different clauses licenses the objective realization of an otherwise nominative wh-phrase. (= (69))

I believe that these conditions are sufficiently restricted in coverage to be language-specific and that they are not merely a description of the facts awaiting a principled account within a core grammar.

NOTES

*: This paper is a revision of the presentation made in the meeting of the Fukuoka Linguistic Circle on April 21/1996. I am very grateful to the participants there for their insightful and helpful comments and questions. I also thank Motoyuki Tsunekawa for his information about German and Peter Rawlings for his minute and extensive comment on example sentences. Any remaining inadequacies and errors in this thesis is solely of my responsibility, and not theirs.

- 1: "s" in Agr-s stands for a subject. "o" in Agr-o signifies an object.
- 2: We stick to the notion of "government" without any particular reason. This notion is no longer available in the Minimalist Program, based on which Tanaka (1993) tries to revise his theory. I believe, however, that our arguments are still valid.
- 3: Precisely speaking, it is not Agr-s but the mixture of T and Agr-s that leaves a trace in the head position of TP.
- 4: The deviance of (9a) might come from the property of *try* that forces a subject control configuration.
- 5: I assume, in spite of the statement in (11), that NP is already Case-marked when it is introduced into a tree structure and that its Case is licensed at LF. This is in harmony with the strategy in the Minimalist Program. This assumption will not do any harm to our discussion in this article.

- 6: At first sight, *whom* in (12b) seems to be licensed at LF because its trace in the Spec of TP is governed by Agr-o after this head is raised to T in the course of V-to-T movement. This possibility is blocked, however, by Tanaka's assumption to be proposed in (18): the Spec of TP constitutes a trivial A-Chain and no Case is licensed by Agr in this position. This way of solution makes us suspect that the Agr-s that is adjoined to finite T can not license the subject in the Spec of TP that constitutes a trivial A-Chain. A possible solution is to regard the Case-assigner here as the mixture of finite T and Agr-s (but not Agr-s itself) and revise the licensing condition in (3) so that it may include the mixture as a Case-assigner, while keeping the condition in (18) intact.
- 7: We will not discuss how to give a principled account of the deviance of the improper movement.
- 8: This ECP account is not applicable to sentences showing the so-called pure superiority effect like (i):
 (i) *What did you tell who to fix?
 The trace resulting from the LF movement of *who* in (i) is properly governed by the matrix verb.
- 9: I am indebted to Toshiaki Inada for reminding me of the contrast in (24).
- 10: In fact, Tanaka (1988: 178) elucidates the difference claiming that Case-licensing in (26b) takes place under "Agr-oP [sic]" and that the intervention of the adverb between the main verb and the trace of the *wh*-phrase in the Spec of the embedded TP does not cause a violation of the Case-adjacency condition.
- 11: Johnson presents no compelling principled account of the obligatoriness of the movement of the main verb and the objective NP.
- 12: As for the reason why the nominative form can emerge instead of *whom* in (26b), see (47).
- 13: The details of the internal structure of the mixture of T or D and Agr-s are not clear in Tanaka's approach. Tanaka (1995: 37) simply assumes that T+Agr-s and D+Agr-s are Case-markers.
- 14: My informant says that questions in (35) are technically possible and might appear in writing although they are too compressed for colloquial use and should be made into two or three questions like "Is she afraid of her mother or her father? How afraid is she?"
- 15: One might defend Tanaka's solution by claiming that under the assumption that PP contains Agr-sP, (35b) is ruled in because *who* is moved to somewhere around *how* by way of the Spec of Agr-sP, which is an A-position being A'-bound and A-free according to the condition in (16) and therefore is an appropriate location for Case-licensing by Agr-s in conformity with (18), whereas (36a) is ruled out because *who* only moves up to the Spec of Agr-sP and therefore constitutes an illegitimate object at LF because it fails to be raised to a possible location for an operator. This claim, however, is quite vulnerable. If PP is a projection of the noun phrase it contains as I will propose in 4.1.4, *to whom* in (36a) is already in an operator position and *who* can undergo a partial movement to the Spec of Agr-sP to have its Case licensed. One might still object that this partial movement results in a violation of (18), since the Spec is an A-position. In that case, however, the echo question *You saw who?* would be wrongly rejected for the same reason.
- 16: My informant claims that (37b) is totally unacceptable.
- 17: It is not clear whether "an otherwise nominative NP" includes a *wh*-phrase or not. My informant observes that *who* and *whom* are both possible as the *wh*-in-situ in a subjective complement position depending on context. He gives the following examples:
 (i) A: At first I thought it was Mary eating the cake and then I realized that it was Peter.
 B: I couldn't hear you. It was who?
 (ii) A: At first, I thought it was Mary I could see in the street, then I realized it was Peter.
 B: I couldn't hear you. It was whom?
 The choice of the Case form of the *wh*-in-situ is affected, I suspect, by the fact that *Mary* is the subject of the predicate *eating the cake* in (i) while *Mary* is the object of the verb *see* in (ii). This issue is very delicate, however. "It was" in B utterances might be a reduced form of some emphatic construction

rather than a pure echo-question.

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