

Syntactic Finiteness of Subjunctive Clauses*

Satoru KANNO and Tadao NOMURA

1. Introduction

It has been claimed that a finite clause is defined as one where its verb morphologically inflects for tense, person and mood. Under this morphological definition the bracketed clause in (1) is finite since the verb has the inflectional morphology for the past tense.

(1) I say [that he left at once].

Furthermore, the bracketed clauses in (2) and (3) are non-finite or infinitives due to the lack of inflectional morphemes on the verbs.

(2) I want [him to leave].

(3) I believe [him to have left].

When we apply the definition to the subjunctive clause in (4), it should be

* This paper is a revised and extended version of a paper presented at the 2nd General Meeting of Hokkaido Theoretical Linguistics Society held at Hokkaido University of Education, Asahikawa on December 18, 2011. We would like to thank the audience for helpful comments. We are especially grateful to Nobuhiro Miyoshi, Takahiro Tozawa and Hiroaki Emoto for their valuable comments and suggestions. We would also like to express our gratitude to an anonymous reviewer for invaluable comments. This study is supported by a Grant-in-Aid for Scientific Research (C) (No. 23520574). All remaining errors are our own.

finite.

(4) I demand [that he leave at once]. (Nomura 2006: 223)

The verb in the subjunctive clause inflects for mood, and the bracketed clause should be finite.

In this paper we argue a discrepancy between morphological finiteness and syntactic finiteness, mainly focusing on subjunctive clauses. Specifically speaking, we claim that subjunctive clauses are syntactically non-finite despite the fact that they are morphologically finite due to the inflection for mood. The reasons for the claim are based on the syntactic transparency of subjunctives.

Then, we argue that the syntactic transparency of subjunctives is captured by a phase-based approach outlined in Chomsky (2008). Subjunctive clauses are syntactically transparent because they do not have a Tense feature on the non-phasal C.

The organization of this paper is as follows. In section 2, we discuss the transparency effects of the subjunctives: operations are applicable across the clause-boundary of the subjunctives. Section 3 offers our phase-based approach to their transparency effects. We claim that the C heading the subjunctive clause is not a phase due to the lack of a Tense feature. Section 4 discusses temporal interpretations of the subjunctive clauses, and it is concluded that the subjunctive C does not have a Tense feature. Section 5 offers some problems to our phase-based approach. Section 6 concludes the discussion of the paper.

2. Transparency Effects of Subjunctive Clauses

2.1. Subjunctives in English

It has been known that finite clauses contrast with non-finite clauses such as *to*-infinitives in the possibility of *wh*-extraction. Observe the contrast between (5) and (6).

- (5) a. *Sam, **who** I know when you said you saw t, ...
 b. *The Matterhorn, **which** I found out why he announced that he climbed t, ... (Frampton 1990: 69-70)
- (6) a. Sam, **who** I know when to try to see t, ...
 b. The Matterhorn, **which** I've decided when to attempt to climb t, ... (ibid.)

In (5) the *wh*-phrases move across the other *wh*-phrases, causing the violation of the *wh*-island constraint. On the other hand, in (6) the *wh*-phrases move out of the infinitival clauses, but the sentences remain grammatical. The contrast here shows that the latter show a transparency effect in that movement is possible in the context where finite clauses prohibit it.

With the contrast between finite and infinitival clauses in mind, let us turn to subjunctive clauses. The sentences in (7)-(9) show the differences in grammaticality (see Nomura (2006: 87)).

- (7) ?Which books did he want to know where to put? (Hasegawa 2001: 136)
 (8) *Which books did he want to know where Mary [Past] put? (ibid.)
 (9) Which books did he want to know where he should put?
 (Tonoike 2001: 3)

As we have already seen, (7) differs from (8) in grammaticality. Note here that the subjunctive clause in (9) shows the similar behavior to the infinitival clause in that *wh*-movement from *wh*-island is possible. In other words, in terms of *wh*-movement out of *wh*-island, subjunctives behave similarly to infinitives but differently from finite clauses.¹

Matsumoto (2009) also offers a similar contrast between finite and infinitive/subjunctive clauses.

- (10) a. *What_i do you wonder [where_j he bought t_i t_j]?
 b. What_i do you wonder [how_j to cook t_i t_j]?
 c. What_i do you wonder [how_j you should cook t_i t_j]

The sentences in (10) show that the subjunctive clause behaves similarly to the *to*-infinitive clause in that they permit the *wh*-phrases to move across the other *wh*-phrases. The movement of this type is not found when the embedded clauses are finite.²

Furthermore, a transparency effect of the subjunctive clauses also can be observed in scopal phenomena. The contrast between finite and infinitive clauses is shown in (11) and (12).

- (11) At least one person expects [every Republican will win reelection].
(one > every, *every > one) (ibid.: 118)
- (12) Someone wants [to marry everyone].
(some > every, every > some) (ibid.)

As (11) shows, the quantifier *every* cannot enter into a scopal relation to the element outside of the finite clause. The only interpretation that we can get is that the DP *at least one person* takes wide scope over the other quantified DP *every Republican*. On the other hand, (12) shows that we can get the interpretation where the quantified DP in the subjunctive clause takes wide scope over *someone* in the matrix. In other words, the infinitival clause does not prohibit *everyone* from taking wide scope over the element outside of the clause.

When we turn to subjunctive clauses, we notice that subjunctive clauses behave similarly to infinitival clauses. Consider (13).

- (13) A different teacher demanded [that we read every book].
(a > every, ?every > a) (ibid.)

In (13) the quantified DP *every book* in the subjunctive clause can take wide scope over the DP *a different teacher* in the matrix clause. Therefore, we can say that quantifiers only take scope within finite clauses, but they can scope

out of infinitival and subjunctive clauses.

At this point, an anonymous reviewer points out that a universal quantifier can take scope out of a finite clause, offering the following contrast:³

(14) A doctor will try to assist every new patient personally.

(Reinhart 1997: 336)

(15) A doctor will make sure that we give every new patient a tranquilizer.

(ibid.)

In (14) *every new patient* occurs in the non-finite clause, and it can take scope out of the non-finite clause. Importantly enough, in (15) the quantified phrase *every new patient*, which is embedded in the finite clause, can take scope over *a doctor* in the matrix. Based on the contrast, the reviewer suggests a radical view that quantifiers in principle can take scope out of finite clauses and it is sometimes impossible due to some factor.

However, we claim that the sentences in (14) and (15) do not cause a serious problem to our claim and that it is not necessary to take the radical view that the review suggests. To understand the reasons, we have to consider the following sentence that the reviewer does not raise:

(16) Which patients will a doctor make sure that we give e a tranquilizer?

(ibid.)

(16) is the sentence where the *wh*-movement operation has applied to the sentence in (15). As (16) shows, a *wh*-phrase can move out of the complex NP island in some cases. This is originally observed by Ross (1967), who offers the following contrast:

(17) ?The money which I am making the claim that the company squandered amounts to \$400,000. (Ross 1967: 139)

(18) *The money which I am discussing the claim that the company squandered amounts to \$400,000. (ibid.)

(17) indicates that the *wh*-phrase can move out of the complex NP island when the main verb works as a light verb. On the other hand, the main verb in (18) has more semantic contents, which makes the movement of the *wh*-phrase impossible out of the complex NP island. The sentences in (17) and (18) strongly suggest that when a main verb serves as a light verb, it is possible for a *wh*-phrase to move out of the finite clause without the violation of the complex NP constraint. The standard analysis to these data is that *wh*-movement in principle cannot occur out of the complex NP island, but the cases in (16) and (17) are special in that the movement is somehow licensed by the matrix light verbs.

Let us return to the sentence in (15). Remember that the main verb is a light verb. We claim that the verb makes it possible that the quantified DP has an interpretation of wide scope over *a doctor*. Therefore, in usual complex NP contexts, wide scope interpretation of this kind is not possible. Consider (19).

- (19) A doctor will examine the possibility that we give every new patient a tranquilizer. (Reinhart 1997: 336)

In (19) we cannot get the interpretation where *every new patient* has wide scope over *a doctor*, and the only available interpretation is the opposite scopal relation: wide scope of *a doctor* over *every new patient*. If we base our discussions on (15), it seems possible that the quantified DP takes scope out of finite clauses, as the reviewer suggests. However, we do not adopt this radical view. Rather, we take a standard position that quantifiers cannot scope out of finite clauses and that the wide scope interpretation of (15) is related to some special status of the light verbs. Therefore, our position is the same as Reinhart's, who offers the data in (14) and (15) (see Reinhart (2006) for extended discussions).

2.2. Subjunctive Clauses in Icelandic and Some Romance languages

Here, let us turn to some other languages than English. Although our main

focus is to understand and analyze English subjunctive clauses, the data from other languages are very suggestive to understand the properties of English subjunctives and subjunctive clauses in general.

First, Icelandic, a member of the Germanic branch of Indo-European, offers a piece of evidence that subjunctive clauses show transparency effects. Specifically, when the reflexive *sig* ‘self’ appears within a finite clause, the antecedent of this reflexive should be found under the same-clause condition. On the other hand, when the reflexive occurs within a subjunctive clause, the antecedent can be outside of the subjunctive in which the reflexive occurs. Consider (20), where the reflexive is multiply embedded in some subjunctive clauses.

- (20) Jóni segir að María viti að Haraldur vilji
 John says that Mary know.subj that Haraldur wants.subj
 að Billi meiði sig_{i/j/k/l}
 that Bill hurts.subj self
 ‘John_i says that Mary_j knows that Haraldur_k wants that Bill_i hurts self_{i/j/k/l}’
 (Icelandic) (Johnson 1985: 106-107)

In this case, all of the DPs are appropriate candidates to bind the reflexive. Therefore, the subjunctive C is transparent. In other words, the anaphor-binding relation can be established across the subjunctive Cs (but not finite Cs).⁴

Next, let us turn to subjunctive clauses in Romance languages. The first point that we would like to show is related to *wh*-movement. In French, *wh*-movement out of the *wh*-island environment is possible if movement occurs out of an infinitival or a subjunctive clause. Consider the contrast between (21) and (22)/(23).

- (21) *Que te demandes-tu à qui Suzy a donné? (French)
 what_i you/refl wonder to whom_j Suzy gave t_i t_j?
 (Tsoulas 1995: 516)

- (22) Que te demandes-tu à qui donner?
 what_i you/refl wonder to whom_j to give t_i t_j? (ibid.)
- (23) Que te demandes-tu qui a voulu que Sophie voie?
 what_i you/refl wonder [who_j [t_j wanted that Sophie see/Subj t_i]]?
 (ibid.)

In (21) the embedded verb inflects for the indicative mood, and its complement *wh*-phrase cannot move across the other *wh*-phrase. On the other hand, in (22) where the *wh*-phrase undergoes *wh*-movement out of the infinitival clause, the other *wh*-phrase does not block the movement. Turning to the subjunctive clause in (23), we find the similarity between (22) and (23) at this point. The *wh*-phrase *que* can move out of the embedded subjunctive clause in spite of the presence of the other *wh*-phrase.

Moreover, the transparency of subjunctive clauses can be observed in terms of obviation effects: the co-indexation is not possible between the subject in the subjunctive and that of the upper clause. A specific example is (24) from Italian.

- (24) Gianni_i sperava che pro*_{1/2} partisse il giorno dopo. (Italian)
 Gianni_i hoped that pro*_{1/2} left(subj) the day after
 ‘Gianni hoped that he*_{1/2}/she would leave on the following day.’
 (Costantini 2005: 8)

In (24), whose embedded verb inflects for the subjunctive mood, it is not possible for the covert subject *pro* to have the same interpretation as the matrix subject.

The same obviation effect is also seen in the case where an overt subject is used instead of *pro*. Some relevant examples are seen in French examples (25) and (26).

- (25) Pierre_i a promise qu’il_{1/2} partira. (French)
 Pierre_i has promised that he_{1/2} will-leave(ind)

- ‘Pierre₁ promised that he_{1/2} to leave.’ (ibid.: 78)
- (26) Pierre₁ veut qu’il*_{1/2} parte.
 Pierre₁ wants that he*_{1/2} leaves(subj)
 ‘Pierre₁ wants him*_{1/2} to leave.’ (ibid.)

Since French does not have *pro*, the subjects in (25) and (26) are both overt pronouns. In (25) the embedded subject can be co-indexed with the upper subject because the embedded verb inflects for the indicative mood. On the other hand, when the subjunctive mood is used as in (26), the pronoun must have a different interpretation from the matrix subject.⁵

The obviation effects provide evidence for the transparency of subjunctives. Previous analyses have claimed that this effect should be reduced to Binding Condition (B) (see Costantini (2005) for a review of these analyses). Needless to say, there are slight differences among these analyses, but the main idea of these previous analyses is that the subjunctive CP does not constitute the binding domain. Thus, the appropriate binding domain is the whole sentence in (26). The embedded pronominal subject then cannot be bound within the domain of the whole sentence. If it is bounded by the matrix subject, the violation of Binding Condition (B) arises. To avoid this violation, the embedded subject must have a different index from the matrix one. The important point here is that the subjunctive CP does not constitute the binding domain and hence the binding relation across the CP can be established.⁶

To sum, we have argued that the syntactic transparency of subjunctive clauses is supported from the *wh*-island context and the scopal interpretation of quantified DPs. Icelandic and the Romance languages also show the same effect. Icelandic permits the long distance anaphor-binding established across the subjunctive CPs. The Romance languages permit *wh*-movement across the other *wh*-phrase on the C heading subjunctive clauses, and we have also observed that the obviation effects can be reduced to the binding relation between the two subjects across the subjunctive CP.

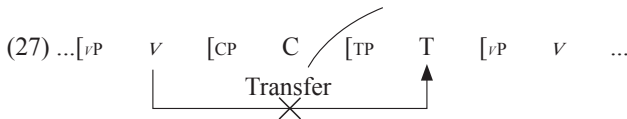
In the introduction of this paper we argued that based on the morphological definition of finiteness, subjunctives are finite. However, they are

syntactically non-finite, behaving similarly to infinitive clauses and showing the transparency effects. In the next section we will argue that the transparency effects arise because the C introducing subjunctives does not constitute a phase.

3. On the CP Heading Subjunctive Clauses

3.1. Phasal C and NonPhasal C

First of all, we introduce our framework. Chomsky (2001, 2008) claims that the syntactic derivation proceeds phase by phase, and that C and v constitute a phase. A phase can be defined as the smallest syntactic unit in derivation. In other words, it works as a syntactic unit when syntactic information is mapped to the interfaces. More specifically, let us use (27).⁷



Suppose that derivation reach the stage in (27). Once the CP phase is constructed in the derivation, its complement undergoes Transfer and is sent to the interfaces. As a result, an item, say, v cannot access an element within TP.

Moreover, examining properties of phases, Chomsky also claims that a phasal C has an Agree and a Tense feature. The former motives an agreement relation between two elements, and this is realized as agreement morphemes. The latter serves for a temporal interpretation of a clause. To understand roles of these two features, let us consider (28) as a specific example.

(28) John says [_{CP} that [_{IP} she was/is/will be in his room]].
 [Ag]/[Tns]

In (28) the Agree feature (abbreviated as [Ag]) establishes the agreement relation between the subject and T. As a result, the verb inflects for the 3rd

person singular, and the subject receives Nominative Case from T. In addition, this clause has a Tense feature (abbreviated as [Tns]) on C. The presence of the Tense feature comes from the fact (i) that the verb in (28) can entertain all kinds of tenses such as past and non-past, and (ii) that the temporal interpretation of the clause does not depend on that of the other one. Therefore, it can be concluded that the bracketed clause in (28) has both of the Agree feature and the Tense feature on C, as Chomsky (2008) claims.

Adopting the framework of Chomsky (2008), Kanno (2008, 2010a) discusses the determining factor for the phasehood. He addresses the problem on what makes C a phase. He proposes (29).

- (29) The head C constitutes a phase if and only if it has both of an Agree and a Tense feature.

Under this proposal the finite C constitutes a phase because it has both of an Agree and a Tense feature. After this phase is constructed in the derivation, its complement is transferred to the interfaces, and hence no operation is allowed to apply to an item within the complement of the C. Furthermore, the CPs of infinitives (including control and raising complements) are not phases because these clauses do not have either feature or both of them, according to his analysis.⁸

In this paper, assuming that Kanno's claim is on the right track, we claim that a subjunctive C is not a phase either; it has an Agree feature but does not have a Tense feature. The presence of an Agree feature can be seen in (30).

- (30) I demand [that they/*them/*their leave for Hawaii tomorrow].

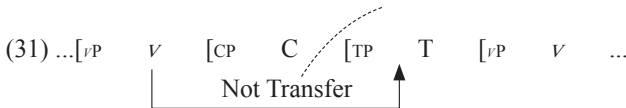
(Radford 1988: 292)

In (30) the subject in the subjunctive clause must be in the Nominative form. This fact supports the claim for the presence of the Agree feature on C, because the nominative case is a reflection of the agreement relation between the subject and T. Therefore, despite the absence of the agreement morpheme

on the verb, we can safely conclude that the subjunctive C has the Agree feature.

The lack of the Tense feature accounts for the fact that subjunctive clauses must depend on another clause in temporal interpretation. However, the temporal interpretation of the subjunctives is a much debated topic. In the next section we will return to this issue and claim that subjunctive clauses do not have an independent tense property. It is sufficient here to understand that the subjunctive C does not constitute a phase due to the lack of the Tense feature.

The next question that we would like to address is how our phase-based approach can capture the transparency effects of the subjunctives. The subjunctive C is not a phase and hence the Transfer operation does not apply to its complement. As a result, an item within its complement is accessible to an item outside of the phase. This is diagrammed in (31).



In (31) TP is not transferred to the interfaces since the subjunctive clause is headed by the non-phasal C without the Tense feature. Therefore, the upper *v* head, which appears above the C, can access an element within TP.

Specifically, consider the contrast raised above. We repeat the sentences in (8) and (9) as (32) and (33) respectively.

(32) *Which books did he want to know where Mary [Past] put?

(33) Which books did he want to know where he should put?

In (32) the derivation reaches the stage where the embedded CP is constructed, the *wh*-phrase *which books* must move to the specifier position of the embedded CP. However, this position has been already occupied by the other *wh*-phrase *where*, and *which books* cannot move there, staying in the original position. The phasal complement TP then undergoes Transfer, and

the *wh*-phrase *which books* within it cannot receive any further operation. As a result, movement of *which books* to the sentence-initial position makes the sentence ungrammatical. In contrast, in (33), even when the embedded CP is constructed, its complement TP is not transferred to the interfaces. As a result, *which books* in the original position can undergo movement and is successfully attracted by the matrix C, and the derivation converges.

All of the other contrasts between finite and subjunctive clauses that we have raised in this paper can be accounted for in terms of (non-)application of the Transfer operation to the complement TP.

In this section we have argued that C is not a phase in the subjunctive clause due to the absence of the Tense feature and hence a further operation from outside the CP is applicable. However, we have postponed the discussion on temporal interpretations of the subjunctives to the next section.

4. Absence of Tense Feature on Subjunctives

4.1. On Romance languages

Temporal properties of the subjunctives are extensively discussed in Romance languages. Picallo (1984) argues for the lack of an independent tense, saying:

(34) Subjunctive clauses do have morphological markers for [\pm Past].

However, these markers depend upon the [Tense] marker of the higher clause. (Picallo 1984: 86-87)

As Picallo claims in (34), a temporal morpheme in a subjunctive clause must be correspondence to that of the matrix. Therefore, Picallo concludes that the subjunctive tense is anaphoric. Let us use (35) as a specific example.

(35) Desitja que {porti/hagiportat/*portés/*haguésportat}_{subj} un llibre.
 desire.3rd.sg.Pres that {bring/have brought/*brought/*had brought} a book.
 ‘(He/She) desires that (he/she) {bring/have brought/*brought/*had

brought} a book.’

(Catalan) (Picallo 1984: 87)

In (35), where the matrix verb inflects for the present tense, the verb in the subjunctive can only have the present tense morpheme. Furthermore, as the sentence in (36) shows, when the matrix verb appears in the past tense form, the verb in the subjunctive clause must occur in the past form.

- (36) Desitjà que {*porti/*hagiportat/portés/hagués portat}_{subj} un llibre
 desire.3rd.sg.Past that {*bring/*have brought/brought/had brought} a book.
 ‘(He/She) desired that (he/she) {*bring/*have brought/brought/had brought} a book.’
 (ibid.)

This anaphoric relation cannot be observed in finite clauses, as shown in (37).

- (37) Sap/Sabè que
 Know.3rd.sg.Pres/Know.3rd.sg.Past that
 {porta/ha portat/portava/havia portat/va portar/portarà/portaria/
 hauria portat}_{ind} un llibre
 {brings/has brought/had brought/brought/ will bring} a book.
 ‘(He/She) {knows/knew} that (he/she) {brings/has brought/had brought/
 brought/will brought} a book’
 (ibid.: 88)

The embedded verb in (37) inflects for the indicative mood. In this case, the verb can entertain any kind of temporal inflections.

We argued that the reason why the subjunctives are temporally anaphoric to the upper clause is that the clauses do not have a Tense feature. Due to its absence, the clause must get a specific tense from the upper one.

4.2. On English Subjunctives

Given that the transparency of the subjunctives in the Romance languages comes from the absence of the Tense feature, we expect that subjunctive clauses in English do not have a Tense feature either since they also show the

transparency effects (as discussed in Section 2.1).

An apparent counterexample to the claim that English subjunctives do not show a temporal interpretation is the fact that we tend to interpret an event to occur “in the future” when a verb inflects for the subjunctive mood. As a specific example, consider (38).

(38) I insist that the Council reconsider its decision. (Quirk *et al.* 1985: 155)

In (38), where the embedded verb inflects for the subjunctive mood, we naturally interpret the event of the Council’s reconsidering of the decision as coming after the event of my insisting. In other words, the reconsideration is interpreted as a future event. Therefore, one might claim that the subjunctive clause shows a temporal property and has a Tense feature.

However, this argument for the presence of a Tense feature on the subjunctive clauses can be easily refuted. For example, in (39), the to-infinitival clause is often interpreted as “future.”

(39) John promised me to work hard.

However, the important point is that the future-oriented interpretation has no relation to the presence of a Tense feature. Specifically, we argue just below, following Ogihara (1995, 1996) and Wurmbrand (2007), that the infinitival clauses syntactically do not have any Tense feature. The absence of the Tense feature can be shown by using a sequence of tense as a diagnostic test.

A sequence of tense interpretation is available when a past tense is embedded in another past tense. Under this interpretation, the embedded past does not work as a real past tense. Rather, it is interpretationally nullified. As an illustration of this, consider (40).

(40) John said that Mary was sick. (Ogihara 1995: 670)

In (40) the *be* verb in the past form is embedded in the past tense verb *said*.

In this case, we can get two interpretations. One is a shifted interpretation: the time of Mary's being sick is further past than the time of John's saying. The other is a sequence of tense interpretation: the time of Mary's being sick is simultaneous with the time of John's saying.

The crucial property of sequence of tense phenomena is the fact that two past tenses must be clausally adjacent to each other without any intervening tense. Consider (41).

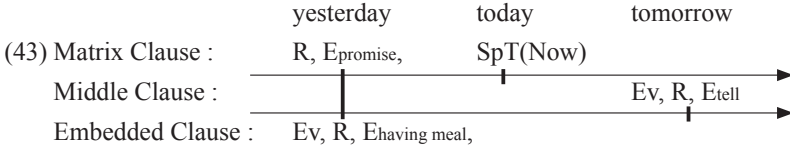
- (41) John decided a week ago that in ten days at breakfast he will say to his mother that they were having their last meal together. (ibid.: 677)

In this sentence, the verb in the past tense *were* is embedded in the matrix past tense. However, we cannot get the sequence of tense interpretation since the non-past tense verb *will say* occur, intervening between the two. Therefore, the only interpretation that we can get is a shifted interpretation: the time of their having their last meal is a further past than the time of John's deciding.

With this rule in mind, let us consider whether the infinitival clause in (42) has its own tense feature or not.

- (42) John promised me yesterday to tell his mother tomorrow that they were having their last meal together. (Wurmbrand 2007: 5)

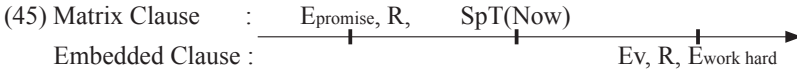
If the infinitival clause had some kinds of tenses (present/non-past or past), the sequence of tense interpretation between the topmost verb and the most embedded verb should not be possible. This is because an intervening tense (if any) blocks the temporal relation of the matrix verb to the most embedded verb. On the other hand, if there is no intervening tense between the two, this interpretation is possible. Actually, the interpretation that we can get is the sequence-of-tense interpretation. Adopting the Reichenbachian approach to tense (Reichenbach 1947), the temporal interpretation of this sentence is shown in (43) where E indicates an event time, R a reference time, SpT a speech time, and Ev an evaluation time.



The time of John’s promising is simultaneous to the event of their having of the meal. The conclusion that we can draw from (43) is that the infinitive has no Tense feature syntactically.

The important question to be solved here is how we can interpret the embedded event as “future” if we admit that the infinitival Cs do not have any Tense feature. Let us discuss this matter, using simplified example (39) repeated as (44) below, and its interpretation is in (45).

(44) John promised me to work hard.



Following Kanno (2010b), we claim that the matrix verb *promise* pushes the embedded event rightward, relative to the matrix event. In other words, the matrix verb has the inherent lexical ability to put the embedded event to the “future,” relative to the matrix event. This idea can solve the contradictory demands: one that the embedded event can be interpreted as “future” and the other one that the embedded *to*-infinitive does not have any syntactic Tense feature.

Returning to the subjunctive clauses in English, we can say that the future interpretation of subjunctive clauses does not come from the presence of a Tense feature. Rather, we claim that subjunctive clauses do not have a Tense feature and their future interpretation arises due to the lexical property of the upper verb that push the embedded event rightward, relative to its event. Therefore, the complement clauses of the subjunctive verbs can have the future-oriented interpretation in spite of the absence of a Tense feature.

We can reach the same conclusion from a different perspective. Note a

contrast between finite and infinitive/subjunctive clauses. Finite clauses can indicate when the event happens by entertaining various kinds of temporal affixes. Some examples are shown in (46).

- (46) a. John hopes that he **was** in the correct room. (Baker 1989: 530)
b. John hopes that he **is** in the correct room. (ibid.)
c. John hopes that he **will be** in the correct room. (ibid.)

The embedded clauses in (46) show that they can determine the temporal position of the event without depending on the matrix clause.

On the other hand, infinitival clauses cannot have the property to determine the temporal position of the event all by themselves. Rather, the temporal interpretations of events are univocally determined by the upper verb. As an illustration of this, consider (47) and (48).

- (47) John persuaded Mary to work hard.
(48) John claimed to reach the summit.

The embedded event in (47) is put in the future, relative to the matrix event, since the upper verb *persuade* pushes the embedded event rightward on the time scale. The verb *claim* puts the embedded event on the same time as the matrix event. Therefore, the infinitival event times are determined by the lexical properties of the matrix verbs.

Similarly, subjunctive clauses do not have the ability to show when the event happens, and the matrix verbs determine the event times of the subjunctive clauses. As an illustration of this, consider (49).

- (49) I request that she go alone. (Quirk *et al.* 1985: 1180)

In (49) the embedded subjunctive clause has no ability to determine where its event should be put. The matrix verb *request* assigns the embedded event to the right of the matrix event.

Therefore, only finite clauses can determine their temporal interpretation independently of that of another clause. We conclude that the contrast between finite and infinitival/subjunctive clauses should be attributed to the presence or absence of the Tense feature.

To sum, in this section we have focused on the temporal interpretations of finite, infinitival, and subjunctive clauses and have concluded that the subjunctive Cs do not have their own Tense feature. In the Romance languages, the absence of this feature is realized as the anaphoric nature of temporal properties of the subjunctives. In English, subjunctives and infinitives are grouped together in that they both do not have any Tense feature, in spite of the fact that they are typically interpreted as future.

In the next section we will offer some problems to be solved under our phase-based approach to subjunctive clauses.

5. Remaining Problems

5.1. Multiply Embedded Subjunctives

The first problem is on the interpretation in multiply embedded contexts, as is shown in (50) from Catalan.

- (50) [En Pere]₁ esperava que [en Jordi]₂ volgués (Catalan)
 [The Pere]₁ hoped that [the Jordi]₂ wanted (subj)
 que *pro*_{1/*2/3} hi anés.
 that *pro*_{1/*2/3} there went(subj)
 ‘Pere₁ hoped that Jordi₂ wanted him_{1/*2/3}/her to go there.’
 (Costantini 2005: 31)

Under the claim that the subjunctive C is not a phase, it is expected that the matrix subject should bind the most embedded *pro* and hence that the obviation effects should work between the matrix subject DP and the deeply embedded *pro*. In other words, the most embedded DP is expected not to be able to have the same interpretation as the matrix subject. However, contrary

to our expectation, the interpretation is possible.

A generalization obtainable from the sentences such as (50) is that the obviation effects work between the embedded subject and only the next upper subject. Thus, in (50) the element with which *pro* cannot be co-indexed is only *en Jordi* ‘the Jordi.’ To be sure, it can be guessed that the so-called minimality effect plays a role in this case, but the precise formulation of this mechanism must be addressed for further research.

5.2. Objects and the Obviation Effect

The next problem comes from object control constructions. Our claim expects that the matrix object cannot be co-indexed with the subject in a subjunctive clause since the subjunctive C is transparent or does not block the binding relation between these two items. However, this is contrary to fact. Consider (51).

- (51) En Pere va convèncer [en Jordi]_i pro_i anés a Nova Nork.
The Pere persuaded [the Jordi]_i that pro_i went(subj) to New York
‘Pere persuaded Jordi to go to New York.’ (Costantini 2005: 34)

In (51) the verb *va convèncer* ‘persuaded’ takes the two arguments: one is the object *en Jordi* ‘the Jordi’ and the other is the embedded subjunctive proposition. In this sentence the matrix object and the embedded subject can be co-indexed.

To solve the problem, some previous analyses claim that the subjunctive CP moves to a higher position that the matrix object cannot c-command. However, a problem to this claim is that the movement is not motivated or is a construction-specific operation. Clearly, the movement is not theoretically favored. Therefore, the grammaticality of the sentences such as in (51) should be explained away in a principled way under our phase-based approach.

5.3. Nominative Case Assignment and Absolutive Constructions

Finally, we point out a problem on the Nominative Case assignment. We

have made the assumption that Nominative Case is assigned from T with a Agree feature. However, we can see some counterexample sentences to this assumption. Specifically, in absolutive constructions, the subject can appear in the nominative form in (52) and (53) or the accusative form in (54).

- (52) At a great mass meeting at the Shwe Dagon Pagoda in January 1946, some twenty thousand people attended to hear him speak, [**I** being one of them].

(from BNC corpus, cited from Tozawa (2008: 205, fn. 9))

- (53) Elaine's winking at Roddy was fruitless, **he** being a confirmed bachelor.
(Reuland 1983: 101)

- (54) She does not answer but keeps walking, [**me** standing like a zombie watching the action].

(from BNC corpus, cited from Tozawa (2008: 205, fn. 9))

Therefore, we face the dilemma between the assumption on the presence of the Agree feature to account for the Nominative Case assignment seen in (52)-(53) and the assumption on its absence to account for the Accusative Case assignment seen in (54).⁹

In this section we have laid out some problems that our present approach to the subjunctive clauses must solve in further research. Some of them are extremely hard to solve in whatever approach we might adopt. However, it is expected that addressing these issues makes a theoretical and empirical progress toward a better understating of the language structure.

6. Conclusion

In this paper we have proposed a phase-based approach to subjunctive clauses. First, we have shown some pieces of evidence that subjunctive clauses contrast with finite ones and behave similarly to infinitival ones. This is not seen only in English, but also in Icelandic and the Romance languages. Next, we have offered our phase-based approach to the transparency effects of

the subjunctives under the framework of Chomsky (2001, 2008). It has been claimed that the subjunctive clauses are headed by the non-phasal Cs based on the claim that they do not have a Tense feature. Thus, when the CP is constructed, its complement does not undergo the Transfer operation, and an item within it remains accessible for a further operation. Third, we have addressed the issue on the temporal interpretation of the subjunctives and concluded that the interpretation depends on the lexical property of the embedding verb. Finally, we have shown some remaining issues to the current approach. These problems should be pursued in further research.

Notes

1. Nobuhiro Miyoshi (personal communication) pointed out, as a logical possibility of the grammaticality of (9), that the embedded subject has the same interpretation as the matrix subject in (9) and that this co-indexation makes the sentence grammatical since this co-indexation is found in control construction (7), where extraction out of the *wh*-island environment is much better than in finite case (8). In order to avoid this possibility, the embedded subject must be changed to get a different interpretation from the matrix one. However, we leave this issue open for further research.
2. Some questions remain whether or not (9) and (10c) are definitely treated as genuine subjunctive examples. This is because the verbs *know* in (9) and *wonder* in (10c) are not typical ones that take subjunctive complements.
3. We are grateful to an anonymous reviewer for pointing out examples in (14) and (15).
4. In this paper the Germanic subjunctives and the Romance subjunctives are treated equally because they syntactically behave the same in many relevant respects. However, in Germanic languages, subjunctives sometimes show similar properties to finite clauses in some other respects. If it is correct to treat subjunctive clauses in Germanic to be syntactically finite, the long distance anaphor binding found in (20) remains to be solved.
5. One should not confuse bound pronouns and accidental coreference (also called pragmatic coreference or coreference with no dependency). Specifically, (25) is not the instance where the matrix subject interpretationally binds the embedded subject across the finite clause boundary. Rather, the embedded pronoun in (25) happens to have the same index as the matrix subject (see Reinhart (1983) for

discussions).

6. As an anonymous reviewer correctly pointed out, the obviation effect discussed in the text is not observed in English:
 - (i) John_i insists that he_j go there.
 The difference in (non-)presence of obviation effects between Romance languages and English will be explored in further research (see Note 4).
7. Here and henceforth, we only focus on the CP phases to simplify the discussion.
8. See Kanno (2008, 2010a) for detailed discussions on infinitival clauses and for claims that these CPs are not phases.
9. Huddleston and Pullum (2005: 210) argue that “the accusative is markedly informal and somewhat unlikely: the construction itself is relatively formal, so the accusative tends to sound out of place here.” If their claim is on the right track, the difference between nominative subjects and accusative subjects in the construction simply can be reduced to idiolectal variations: some speakers use nominative and the other people use accusative as a default case.

References

- Baker, Carl L. (1989²) *English Syntax*. Cambridge, MA: MIT Press.
- Chomsky, Noam (2001) “Derivation by Phase.” In Michael Kenstowicz (ed.) *Ken Hale: A Life in Language*, 1-52. Cambridge, MA: MIT Press.
- Chomsky, Noam (2008) “On Phases.” In Robert Freidin, Carlos P. Otero and Mari Luisa Zubizarreta (eds.) *Foundational Issues in Linguistic Theory: Essays in Honor of Jean-Roger Vergnaud*, 133-166. Cambridge, MA: MIT Press.
- Costantini, Francesco (2005) *Subjunctive Obviation: An Interface Perspective*. Doctoral dissertation, Università Ca' Foscari di Venezia.
- Frampton, John (1990) “Parasitic Gaps and the Theory of *WH*-Chains.” *Linguistic Inquiry* 21: 49-77.
- Hasegawa, Kinsuke (2001) “Feature Checking and *Wh*-Movement.” Paper Presented at the Workshop, Phase and Cyclicity, the 19th Conference of the English Linguistic Society of Japan.
- Huddleston, Rodney and Geoffrey K. Pullum (2005) *A Student's Introduction to English Grammar*. Cambridge: Cambridge University Press.
- Johnson, Kyle (1985) “Some Notes on Subjunctive Clauses and Binding in Icelandic.” *MIT Working Papers in Linguistics* 6: 102-133.
- Kanno, Satoru (2008) “On the Phasehood and Non-Phasehood of CP.” *English Linguistics* 25: 21-55.

- Kanno, Satoru (2010a) *Finiteness and Specificity in the Minimalist Program*. Doctoral dissertation, Tohoku University.
- Kanno, Satoru (2010b) "Tense Features of Infinitival Complement Clauses." *Explorations in English Linguistics* 24: 23-72. Department of English Linguistics, Graduate School of Arts and Letters, Tohoku University.
- Matsumoto, Tomoko (2009) "Futeisi-setu to Kateiho-Genzai-setu-no Tougokouzo-Bunseki: *Wh*-sima to *that* Seiki-no Gensyo-o Tyusin-ni [An Analysis of Syntactic Structure of Infinitival Clauses and Subjunctive Present Clauses: Focus on *Wh*-Island and the Occurrence of *That*]." *Kyudai Eibungaku* 51: 117-133.
- Nomura, Tadao (2006) *ModalP and Subjunctive Present*. Tokyo: Hituzi Syobo.
- Ogihara, Toshiyuki (1995) "The Semantics of Tense in Embedded Clauses." *Linguistic Inquiry* 26: 663-680.
- Ogihara, Toshiyuki (1996) *Tense, Attitudes, and Scope*. Dordrecht: Kluwer Academic Publishers.
- Piccolo, Carme M. (1984) "The Infl Node and the Null Subject Parameter." *Linguistic Inquiry* 15: 75-102.
- Quirk, Randolph, Sidney Greenbaum, Geoffrey Leech and Jan Svartvik (1985) *A Comprehensive Grammar of the English Language*. London: Longman.
- Radford, Andrew (1988) *Transformational Grammar: A First Course*. Cambridge: Cambridge University Press.
- Reichenbach, Hans (1947) *Elements of Symbolic Logic*. New York: Macmillan.
- Reinhart, Tanya (1983) "Coreference and Bound Anaphora: A Restatement of the Anaphora Questions." *Linguistics and Philosophy* 6: 47-88.
- Reinhart, Tanya (1997) "Quantifier Scope: How Labor is Divided Between QR and Choice Functions." *Linguistics and Philosophy* 20: 335-397.
- Reinhart, Tanya (2006) *Interface Strategies: Optimal and Costly Computations*. Cambridge, MA: MIT Press.
- Reuland, Eric (1983) "Governing *-ing*." *Linguistic Inquiry* 14: 101-136.
- Ross, John R. (1967) *Constraints on Variables in Syntax*, Doctoral dissertation, MIT. Published as Ross (1986) *Infinite Syntax!* Norwood, N.J.: Ablex Publishing Corporation.
- Tonoike, Shigeo (2001) "Phase and Cyclicity: Comments on Papers by Daiko Takahashi, Mamoru Saito, and Kinsuke Hasegawa." Paper Presented at the Workshop, Phase and Cyclicity, 19th Conference of the English Linguistic Society of Japan.
- Tozawa, Takahiro (2008) "Some Notes on Feature Inheritance." *Explorations in*

- English Linguistics* 22: 171-210. Department of English Linguistics, Graduate School of Arts and Letters, Tohoku University.
- Tsoulas, George (1995) "Indefinite Clauses: Some Notes on the Syntax and Semantics of Subjunctives and Infinitives." *WCCFL* 13: 515-530.
- Wurmbrand, Susanne (2007) "Infinitives are Tenseless." *Penn Working Papers in Linguistics* 13: 407-420.