The Structure of Small Clause Predication

The Textual Functions of Their Heads

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1. Introduction

The structure of small clauses, which are exemplified in the italicized portions of (1), has been one of the most controversial topics in generative grammar.

(1) a. We consider *Mary honest*.
     b. We want *Mary happy*.

Various analyses have been proposed for the structure of small clauses. It is widely assumed that small clauses have the same categorial status and internal architecture regardless of the matrix verbs selecting them. However, as recently discussed by Contreras (1995), Baker (1997), and Basilico (2003) among others, there is good reason to argue that the structure of small clauses should not be treated uniformly. However, their analyses differ considerably as to the classification of small clauses.

Apparently, the matrix verbs in (1) seem to select small clauses with the same structure. As will be shown, however, small clauses selected by *consider* and *want* differ in their syntactic and semantic properties and therefore should be treated as having different structures. The verbs which behave like *consider* and *want* are given in (2a,b), respectively.

(2) a. believe, consider, find, imagine, judge, perceive, prove, regard, suspect, take, ...
     b. expect, fear, hate, like, love, need, want, ...   (cf. Declerck (1991))

The selection of small clauses of the matrix verbs is textual in the sense that it is determined not only by syntactic but also semantic factors.[1] It will be argued that the

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1   The concept of "text" would not only include discourse but also some other factors. Readers refer to Halliday (1978) as to the notion of text, although I would not strictly follow the framework of Halliday's systemic functional grammar here.

categories of the small clauses in (1) are both Pred[ication] Phrases (PredPs) along the lines of Bowers (1993), but they involve different types of predicates: the small clause in (1a) involves an individual-level predicate (henceforth, ILP), whereas the one in (1b) a stage-level predicate (henceforth, SLP). In other words, there are two types of PredPs in English small clauses. There seems to be a kind of texture between the selecting verb and the predicate in the selected small clauses. The purpose of this paper is to explain the properties of small clauses and explore the textual relationships between small clauses and the matrix verbs selecting them. Our concern is mainly on syntactic and semantic texts surrounding small clauses, which are necessary in determining the types of PredPs. We also focus on the textual properties of the functional category Pred as the introducer of a subject-predicate relationship within small clauses.

The organization of this paper is as follows. Section 2 overviews some properties of small clauses and examines several previous analyses of the structure of small clauses. Section 3 proposes different structures for small clause complements of *consider*-type verbs and *want*-type verbs. Section 4 extends the analysis proposed in section 3 to small clause complements of perception verbs. Section 5 is a conclusion.

2. Properties of Small Clauses and Previous Studies

2.1. Some Properties

Let us begin with reviewing some properties of small clauses in English. As shown in (3) and (4), verbs like *consider* and *want* take various categories as the predicative phrases in their small clause complements.

(3) a. I consider Mary intelligent.   (AP)
      b. I consider Mary John's best friend.   (NP)
      c. I consider your son grown up.   (VP)
      d. *I consider John off my ship.   (PP)   (Stowell (1981:259))

(4) a. *I want Mary intelligent.   (AP)
      b. *I want Mary my best friend.   (NP)
      c. I want this issue solved immediately.   (VP)
      d. I want this sailor off my ship.   (PP)

Stowell (1981) argues that the categories of predicative phrases within small clauses depend on their matrix verbs, and therefore small clauses are maximal projections of their predicative phrases.

As Kitagawa (1985) points out, however, that the categories of predicative phrases within small clauses depend on their matrix verbs is not correct. The examples in (5) and (6) show that the categories of predicative phrases are not relevant for the grammaticality of small clauses.

(5) a.   I consider Mary {honest/intelligent/*happy/*angry}.

    b.   Unfortunately, our pilot considers that island off the route.

<div align="right">(Kitagawa (1985:212))</div>

    c.   *I consider John off my ship.   (Stowell (1981:259))

    d.   We consider Mary our best friend.

(6) a.   We want Mary {happy/angry/*honest/*intelligent}.

    b.   *I expect that island off the route.   (Kitagawa (1985:212))

    c.   I expect that sailor off my ship by midnight.   (ibid.:211)

    d.   *We want Mary our best friend.

It is indeed the case that properties of small clauses are determined by the matrix verbs selecting them, but what is important for the grammaticality of small clauses is not the categories, but the semantic types of their predicative phrases. Kitagawa claims that *consider*-type verbs s-select small clauses which express 'state of affairs,' while *want*-type verbs s-select small clauses which express 'change of state.' This would correctly capture the restrictions on the predicate types of small clauses observed in (5) and (6). However, Kitagawa's analysis cannot account for the ungrammaticality of (7), where the small clause clearly denotes 'change of state.'

(7)   *I expect you an attorney by the end of the year.   (cf. Contreras (1987:230))

On the other hand, Svenonius (1994) and Basilico (1997) argue that *consider*-type verbs select small clauses which involve ILPs, whereas *want*-type verbs select small clauses which involve SLPs.[2] Various properties have been observed with respect to the two types of predicates since Carlson (1977), but the most fundamental difference is that SLPs denote temporary states/transitory relations, whereas ILPs denote more permanent properties. The examples in (8) and (9) illustrate the SLP/ILP distinction between small clause complements of *consider*-type verbs and *want*-type verbs.

(8) a.   The republics consider Zhirinovsky a threat.   (Svenonius (1994:91))

    b.   We find him unbearable.   (ibid.)

    c.   They proved the allegations false.   (ibid.)

(9) a.   Zhirinovsky wants reformers out of the parliament.   (ibid.)

    b.   We fear the rescue party lost in the mountains.   (ibid.)

    c.   She likes her eggs over-easy.   (ibid.)

As is obvious, the grammaticality of (3) – (7) can also be accounted for in terms of the

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2 As pointed out by Heycock (1995) and Diesing (1992), the predicative phrase *sick* can be interpreted either as an ILP or an SLP.

    (i)? We consider Mary sick.

This sentence turns out to be grammatical if *sick* is interpreted as an ILP meaning 'insane' or 'crazy.' It is also observed by Basilico (1997) that SLPs can express properties and behave like ILPs. The following example shows that *visible* can behave both as an SLP and an ILP.

    (ii) The visible stars are not visible tonight because it is cloudy.   (Basilico (1997:288))

It seems reasonable to assume that the SLP/ILP interpretation is not determined solely by the predicate itself. But I will not pursue this matter further here.

SLP/ILP distinction; especially, (7), which is problematic for Kitagawa's (1985) analysis, is ungrammatical, simply because NP can only be an ILP.

In addition to this semantic difference between small clauses selected by *consider*-type verbs and *want*-type verbs, there are some syntactic differences between the two types of small clauses. First, there is a difference in Condition C effects as illustrated in (10): small clause subjects of *consider*-type verbs cannot be coreferential with R-expressions contained in the matrix clause, whereas those of *want*-type verbs can. Second, (11) show that small clause subjects of *consider*-type verbs can be passivized, whereas those of *want*-type verbs cannot. Third, as the contrast between (12a) and (12b) shows, *consider*-type verbs do not allow topicalization of their small clause complements, while *want*-type verbs do.[3]

(10)   Condition C effect
    a. *I consider him honest more cordially than John's mother does.
    b. I wanted him dead more cordially than John's mother did.

(11)   passivization
    a. John was considered smart.
    b. *John was wanted happy.

(12)   topicalization
    a. *The allegations false, they proved.   (Svenonius (1994:93))
    b. Dogs in the house, they hate.   (ibid.:92)

2.2. Previous Analyses and their Problems

There are a number of proposals which attempt to analyze properties of small clauses in terms of the assumption that the structure of small clauses is uniform regardless of the matrix verbs selecting them. For example, Contreras (1987) analyze small clauses as projections of their predicative phrases. Another line of approach pursued by Bowers (1993), and Starke (1995) among others, assumes that small clauses are headed by some functional category. The two kinds of approaches are roughly illustrated in (13) and (14), respectively.

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3   As shown in (i) and (ii), the same is true of other movement operations like focalization, which are allowed only for small clause complements of *want*-type verbs.
        (i) it-cleft
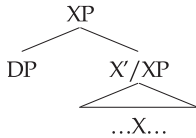   a. *It was Leslie in complete control of the situation that we believed.   (Park (1997: 259))
            b. It was Leslie in complete control of the situation that we feared most.   (ibid.)
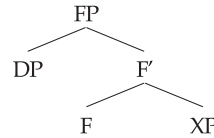   (ii) pseudocleft
            a. *What I really consider is Mary loyal to her friend.   (Svenonius (1994:93))
            b. What I really want is that man off my ship.   (ibid.:92)
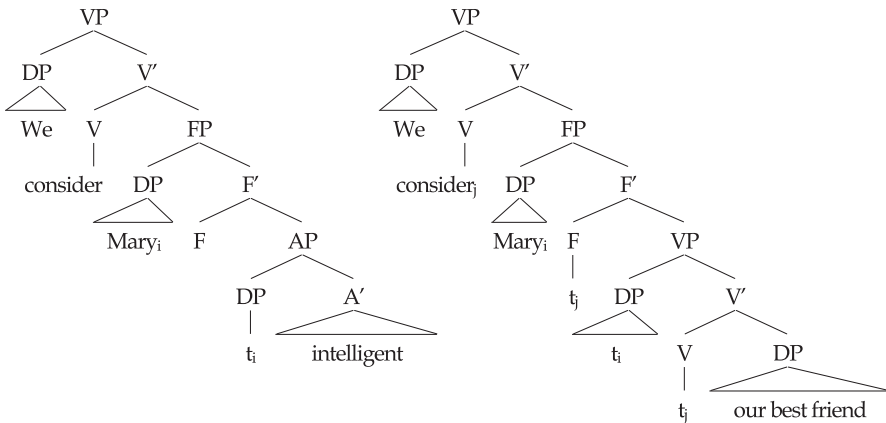
(13) Lexical Approach

```
            XP
          /    \
        DP     X'/XP
                 /\
               ...X...
```

(14) Functional Approach

```
            FP
          /    \
        DP      F'
               /  \
              F    XP
```

Although such unitary approaches to small clauses might be preferred on the ground of theory-restrictiveness, it was observed above that small clause complements of *consider*-type verbs and *want*-type verbs show different properties, which cannot be easily accounted for under the assumption that they have the same structure.

On the other hand, some linguists have proposed non-unitary analyses of small clauses, arguing that they have different structures depending on the types of their predicative phrases. Contreras (1995) argues that small clauses are divided into two types in terms of the [±V] properties of their predicative phrases. The distinction of small clauses proposed by Contreras is based on the assumption that [+V] predicates have subjects, while [-V] predicates do not.
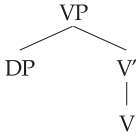
(15) a. Small Clause with a [+V] Predicate b. Small Clause with a [-V] Predicate

```
              VP                                      VP
            /    \                                  /    \
          DP     V'                               DP     V'
          /\    /  \                              /\    /   \
         We   V    FP                            We   V     FP
              |   /   \                               |   /    \
         consider DP   F'                         considerⱼ DP   F'
                 /\   /  \                              /\   /   \
              Maryᵢ F    AP                          Maryᵢ F    VP
                        / \                                |   /   \
                      DP   A'                             tⱼ  DP   V'
                      |   /  \                                /\   /  \
                      tᵢ    intelligent                      tᵢ   V    DP
                                                                  |   /  \
                                                                 tⱼ  our best friend
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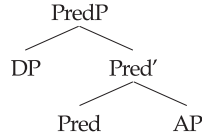
In (15a), FP, a functional projection, dominates AP which is [+V], and the small clause subject raises from the predicative phrase to [Spec, FP], where it is assigned Case. In (15b), on the other hand, the verb raises from the lower V to the upper V via F, and the small clause subject, which is base-generated in the lower VP, raises to [Spec, FP] in order to be assigned Case.

Another non-unitary analysis is proposed by Baker (1997) and Basilico (2003). They argue that two types of small clauses, namely verbal small clauses and adjectival small clauses, must be distinguished in syntactic terms. Among them, Baker (1997) claims that verbal small clauses are projections of V, while adjectival small clauses are projections of a functional category Pred, as shown in (16).

(16) a. Verbal Small Clause   b. Adjectival Small Clause

```
        VP                          PredP
       /  \                        /     \
     DP    V'                    DP       Pred'
           |                             /     \
           V                          Pred      AP
```

According to Baker, the main difference between verbs and adjectives lies in their thematic structures: the theme argument of a verb is its internal argument, whereas the theme argument of an adjective is its external argument. He further assumes that while verbs assign theta-roles to their arguments directly, adjectives cannot. Adjectives require help by Pred to assign a theta-role to their external arguments, so that one of the functions of Pred is to assign a theta-role to small clause subjects.

However, the analyses by Contreras (1995) and Baker (1997), in which small clauses are classified in terms of their internal properties, face some serious problems. First, one of the arguments against Baker's analysis is that in spite of his claim that verbs can assign theta-roles to their arguments directly and hence do not need Pred's help, there is evidence that Pred exists even in verbal small clauses. This concerns the distribution of *as* in small clauses, as illustrated in (17) and (18).

(17) a.   I consider him as my best friend.
     b.   I consider him as intelligent.

(18) a.   We want the kids as asleep.
     b.   He wants his own rights as promised.

As for the status of *as* in small clauses, there is good reason to assume that it is a functional category, not a preposition (Aarts (1992) and Starke (1995)among others). One of the arguments comes from the selectional property of *as*. As shown in (17) and (18), *as* allows not only NPs but also APs and VPs as its following elements, which in turn indicates that *as* is a functional category which selects predicative phrases in general. If this is correct and *as* is a phonetic realization of a functional category Pred (Bowers (1993)), it is reasonable to conclude from examples like (17) and (18) that Pred exists in verbal small clauses, as well as in adjectival small clauses.

Furthermore, it should be pointed out that it is difficult to account for the facts in (10)-(12) under analyses which pay attention only to internal properties of small clauses like the categories of their predicative phrases, without recourse to the kinds of matrix verbs selecting small clauses. The next section proposes an alternative approach which can solve these problems.

3. Proposal

From the data observed in section 2.1, it is reasonable to consider that properties of small clauses are determined by their matrix verbs: *consider*-type verbs select small

clauses which contain an ILP, whereas *want*-type verbs select small clauses which contain an SLP. On the other hand, the facts in (17) and (18) concerning the presence of *as* indicate that the categories of small clause complements of *consider*-type verbs and *want*-type verbs are both PredPs.

Bowers (1993) proposes the structure of small clauses as in (19), where the small clause subject is base-generated in [Spec, PredP].

(19)   [$_{PredP}$ NP [$_{Pred'}$ Pred [$_{XP}$ X′]]]

However, there is evidence from quantifier floating that it is first base-generated in the specifier position of a predicative phrase XP and then moves to [Spec, PredP], as shown in (20).

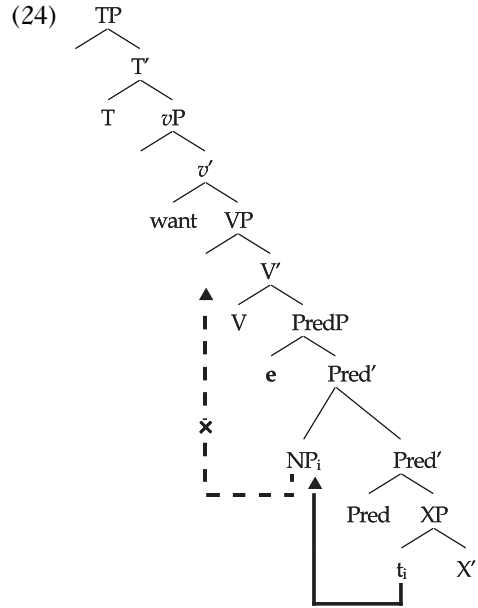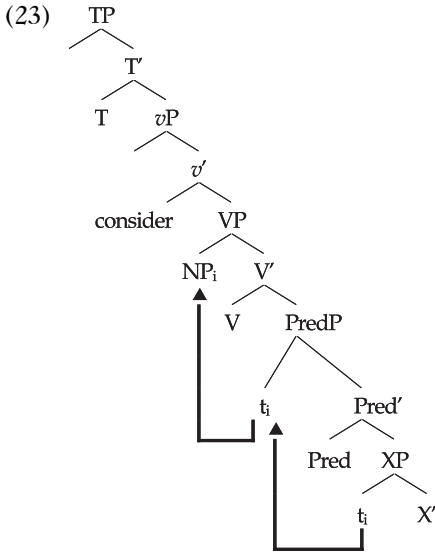(20)   [$_{PredP}$ NP$_i$ [$_{Pred'}$ Pred [$_{XP}$ t_i X′]]]

(21) a.   The cat considers the kids as all hopeless cases.   (Starke (1995:242))
      b.   We want the kids as all asleep.

Here I adopt the analysis by Sportiche (1988) that a floating quantifier does not move rightward from the NP it is associated with, but it is left behind when the NP moves from its base-generated position to the surface position. Given this, it is concluded from examples like (21) that a small clause subject is base-generated in the specifier position of a predicative phrase and then moves to [Spec, PredP], thereby preceding *as*, which is a phonetic realization of Pred . I also assume that this movement is triggered by the EPP feature of Pred. This is supported by examples like (*22*), where expletive *it* is obligatorily inserted to satisfy the EPP requirement in small clauses.

(*22*)   We consider *(it) impossible that he will win the game.

Now consider the internal architecture of small clause complements of *consider*-type verbs and *want*-type verbs in the light of the SLP/ILP distinction observed in section 2.1. Diesing (1992) claims that an SLP has an event argument which is base-generated in [Spec, IP], whereas an ILP does not. Her point is that the distinction between the two types of predicates is based on the different properties of Infl which they are associated with.[4] Here I extend this analysis to small clauses and assume that small clauses with an SLP involve an event argument in [Spec, PredP], whereas small clauses with an ILP do not. Then, the structures of small clause complements of *consider*-type verbs and *want*-type verbs are shown in (23) and (24), respectively:

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4   In a similar vain, Kratzer (1995) argues that the distinction between SLPs and ILPs comes from a difference in their argument structures. She proposes that the former have a "Davidsonian" spatiotemporal external argument, while the latter do not.

(23)
```
TP
 └ T′
   ├ T
   └ vP
      └ v′
        ├ consider
        └ VP
           ├ NP_i
           └ V′
              ├ V
              └ PredP
                 ├ t_i
                 └ Pred′
                    ├ Pred
                    └ XP
                       ├ t_i
                       └ X′
```

(24)
```
TP
 └ T′
   ├ T
   └ vP
      └ v′
        ├ want
        └ VP
           └ V′
              ├ V
              │  e
              └ PredP
                 └ Pred′
                    ├ NP_i
                    └ Pred′
                       ├ Pred
                       └ XP
                          ├ t_i
                          └ X′
```

In (23) the small clause subject is base-generated within the predicative phrase XP and then raises to the matrix clause via [Spec, PredP]. Since lexical verbs generally do not move higher than v in English, the landing site of the small clause subject would be the matrix [Spec, VP] (Chomsky (2001, 2005)). As for the trigger of movement of the small clause subject to [Spec, VP], I assume along the lines of Chomsky (2005) that it is induced by the EPP feature of V, which is inherited from v along with its-features. If this is correct, the small clause subject is assigned a Case value under agreement with V and raises to [Spec, VP] in order to satisfy the EPP feature of V.

In (24) the small clause subject is also base-generated within the predicative phrase XP and then moves to [Spec, PredP]. This position is the inner specifier position of PredP, with its outer specifier position occupied by the event argument. Once the small clause subject moves to the inner specifier position of PredP, it cannot move further to the matrix clause because the movement would cross the event argument and hence violate the minimal link condition. Therefore, it follows that small clauses which *consider*-type verbs and *want*-type verbs select are both PredPs, but the surface positions of their subjects are different because of the presence/ absence of an event argument.

One might object that the structure in (24) where the small clause subject remains within PredP is problematic because the EPP feature of V would not be satisfied. This problem can be solved, however, by assuming that the event argument which occupies the outer specifier position of PredP raises to [Spec, VP] in order to satisfy the EPP feature of V. Given that the event argument is —incomplete (which would be plausible because it does not correspond to any participants in the eventuality designated by the predicate it is associated with), agreement is established between V and the small clause subject in order to delete the -features of V,

simultaneously valuing the Case feature of the small clause subject. These operations can occur because the event argument has already moved to [Spec, VP] and hence there are no elements which intervene between V and the small clause subject. Note also that this derivation is not countercyclic, because all the relevant operations are triggered by the features of *v* (which are inherited by V) and hence they are regarded as occurring simultaneously within the same phase, namely *v*P.

With this much, the contrasts in (10) – (12) can be explained as follows. First, as for Condition C effects, in (25a) with a *consider*-type verb, the small clause subject *him* moves from [Spec, PredP] to the matrix [Spec, 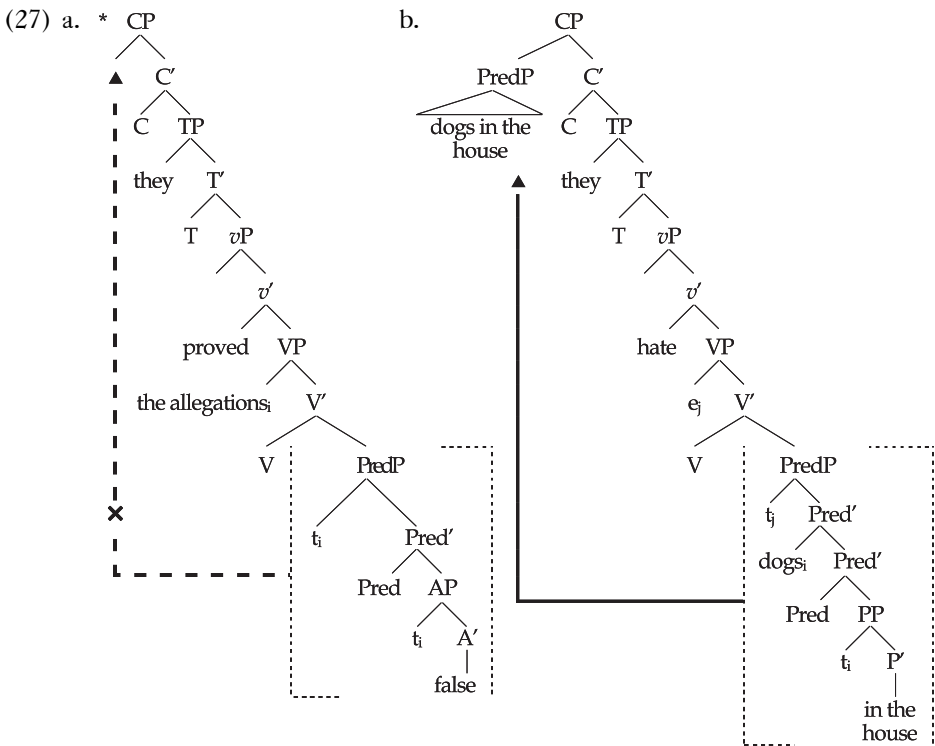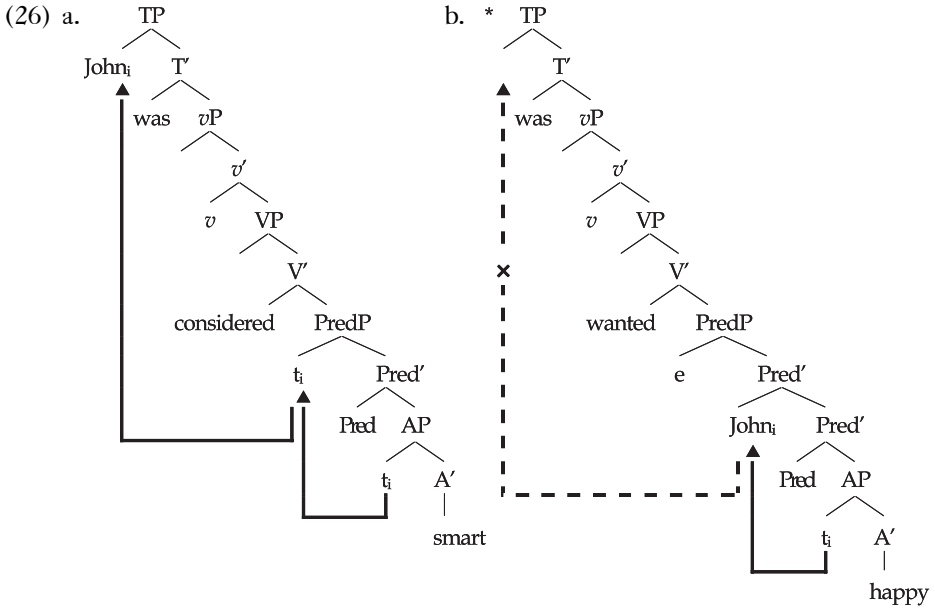VP], and it c-commands *John* in the matrix clause, so the sentence violates Condition C. In (25b) with a *want*-type verb, on the other hand, the small clause subject *him* remains within PredP, so it does not c-command *John* in the matrix clause and hence the sentence does not violate Condition C.

Second, as for passivization, in (26a) with a *consider*-type verb, passivization of the small clause subject is possible, because it can move from [Spec, PredP] to the matrix [Spec, TP] without violating the minimal link condition. In (26b) with a *want*-type verb, on the other hand, passivization of the small clause subject inevitably cross the event argument, yielding a violation of the minimal link condition.

Finally, as for the contrast in topicalization, in (27a) with a *consider*-type verb, the small clause subject moves to the matrix [Spec, VP], so it no longer forms a constituent with PredP. Therefore, it is impossible to move these two elements together. In (27b) with a *want*-type verb, on the other hand, the small clause subject stays within PredP. Therefore, it is possible to move the entire small clause as a constituent.

(25) a. * TP   b.   TP

[Tree diagram (25a): TP → I, T′; T′ → T, vP; vP → v′; v′ → consider, VP; VP → him$_i$, V′; V′ → V′, AdvP; V′ → V, PredP; V → t$_i$; PredP → Pred′; Pred′ → Pred, AP; Pred → t$_i$; AP → A′; A′ → honest; AdvP → ...John$_i$...]

[Tree diagram (25b): TP → I, T′; T′ → T, vP; vP → v′; v′ → want, VP; VP → e$_j$, V′; V′ → V′, AdvP; V′ → V, PredP; V → t$_j$; PredP → Pred′; Pred′ → him$_i$, Pred′; Pred′ → Pred, AP; Pred → t$_i$; AP → A′; A′ → dead; AdvP → ...John$_i$...]

(26) a.

```
              TP
         John_i    T′
              was    vP
                        v′
                     v     VP
                              V′
                        considered    PredP
                                    t_i    Pred′
                                        Pred    AP
                                            t_i    A′
                                                   |
                                                 smart
```

b. *

```
              TP
                   T′
              was    vP
                        v′
                     v     VP
                              V″
                        wanted    PredP
                                e    Pred′
                                  John_i    Pred′
                                        Pred    AP
                                            t_i    A′
                                                   |
                                                 happy
```

(27) a. *

```
            CP
               C′
            C    TP
            they    T′
                 T     vP
                         v′
                    proved    VP
                 the allegations_i    V′
                            V    PredP
                              t_i    Pred′
                                 Pred    AP
                                     t_i    A′
                                            |
                                          false
```

b.

```
                        CP
              PredP           C′
          dogs in the     C    TP
            house       they    T′
                             T     vP
                                     v′
                                hate    VP
                                     e_j    V′
                                         V    PredP
                                           t_j    Pred′
                                             dogs_i    Pred′
                                                   Pred    PP
                                                       t_i    P′
                                                              |
                                                          in the
                                                           house
```

This section has proposed two types of small clause structures, arguing that the small clause subject of ILPs moves to the matrix clause, whereas the small clause subject of SLPs remains within PredP.

4. Small Clause Complements of Perception Verbs

This section extends the analysis in the previous section to small clause complements of perception verbs. The list of perception verbs taking small clauses is given in (28).

(28) discern, feel, hear, notice, overhear, see, smell, taste, watch, ...

(cf. Declerck (1991))

As illustrated in (29), small clause complements of perception verbs involve SLPs.

(29) a.   John saw Mary {alive/*intelligent}.
    b.   I saw John on TV.   (Felser (1999:46))
    c.   *We saw John a handsome man.   (ibid.)
    d.   I heard my name called.   (Hayashi (1991:20))

It is natural to assume that this also comes from the selectional property of perception verbs, as in the case of *consider*-type verbs and *want*-type verbs. Given that perception verbs select small clauses which contain an SLP, it would be predicted that their small clause complements behave like those of *want*-type verbs. However, this prediction is not borne out: the former exhibit different properties from the latter, which suggests that the two types of small clauses have different structures.

First, as for the syntactic properties observed in (10)-(12) concerning *consider*-type verbs and *want*-type verbs, small clause complements of perception verbs show the following distribution.

(30) a.   I saw him singing more clearly than John's mother did. [Condition C effect]
    b.   The old man was seen alive.   [passivization]
    c.   John drunk, I saw yesterday.   [topicalization]

Importantly, small clause complements of perception verbs do not always behave like those of *want*-type verbs: the former pattern with the latter with respect to Condition C effects and topicalization, but they differ with respect to passivization of small clause subjects.[5]

There is also another respect in which small clause complements of perception verbs behave differently from those of *want*-type verbs: extraction from small clause subjects. As shown in (31), extraction from small clause subjects is possible only with perception verbs, but not with *consider*-type verbs and *want*-type verbs.

(31) a. *Whom does Mary consider [a friend of *t*] idiotic?
    b. *Whom does Mary want [a friend of *t*] alive?

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5   As shown in (i), bare infinitive complements of perception verbs exhibit different behaviors from the small clause complements in (30).
    (i) a. *John was seen draw a circle.
        b. *John cross the street, I saw yesterday.
    Of course, the discussion of bare infinitive complements is beyond the scope of this paper, just noting that some of the factors would be at work in (i) that are responsible for the limited distribution of bare infinitives in English.
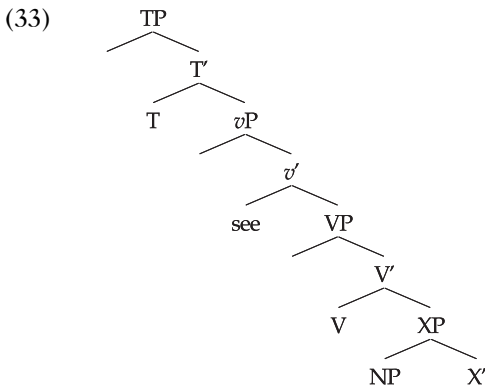
c. ?Which planet did you feel [a picture of *t*] strange?

(32) summarizes the observations of small clause complements of *consider*-type verbs, *want*-type verbs, and perception verbs.

(32) The syntactic and semantic distribution of small clauses

	interpretation	Condition C effects	passivization of small clause subjects	topicalization	extraction from small clause subjects
consider-type verbs	ILP	*	√	*	*
want-type verbs	SLP	√	*	√	*
perception verbs	SLP	√	√	√	√

Given these observations, it seems clear that the structures of small clauses in (23) and (24) cannot apply to small clause complements of perception verbs. Therefore, the following structure is proposed for them:

(33)

```
            TP
          /    \
              T′
            /    \
          T      vP
               /    \
                    v′
                  /    \
               see     VP
                      /   \
                         V′
                       /    \
                     V       XP
                           /    \
                        NP       X′
```

As shown in (33), there is no functional category Pred within small clause complements of perception verbs, and the small clause subject is base-generated within the predicative phrase XP. The absence of Pred is supported by the fact that *as* cannot appear within small clause complements of verbs which express direct perception, as shown in (34).

(34) a. We see Mary as intelligent.
     b. *We saw Mary as alive.

(34a) is only acceptable when *see* is construed as a *consider*-type verb, which selects a small clause involving an ILP. On the other hand, (34b), in which *saw* selects a small clause involving an SLP, is unacceptable when it occurs with *as*. Therefore, it follows that *as*, which is a phonetic realization of Pred, does not appear in small clause complements of perception verbs, which in turn leads us to conclude that they do not involve a functional category Pred, as represented in (33).

At this point, two problems will arise with respect to the structure of small clause
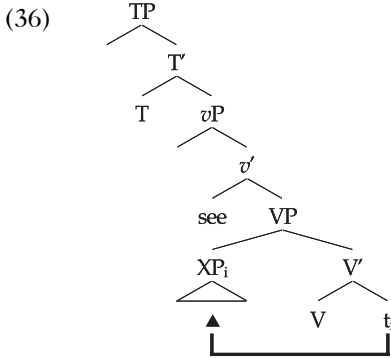
complements of perception verbs given in (33). One concerns the existence of an event argument within small clauses. It would be natural that there is an event argument within small clause complements of perception verbs, because they involve SLPs like those of *want*-type verbs. However, I assume that small clause complements of perception verbs do not involve an event argument, unlike those of *want*-type verbs. One of the motivations for this assumption is that they have no functional category which licenses an event argument, given the lines of Diesing's (1992) analysis adopted here that an event argument is licensed in the specifier position of functional categories such as T and Pred. Another support comes from the fact that the event expressed by perception verbs is simultaneous with the event expressed by their small clause complements. This can be neatly captured under the present analysis, where both events are taken to share the same event argument which occupies the matrix [Spec, TP].

If the above arguments are on the right track, it is predicted that passivization of small clause subjects is grammatical in the case of perception verbs, as shown in (30b). This is because an event argument does not exist in small clause complements of perception verbs, so passivization of their subjects does not violate the minimal link condition, as shown in (35), where there is only one event argument in the matrix [Spec, VP] shared by the matrix and embedded events.
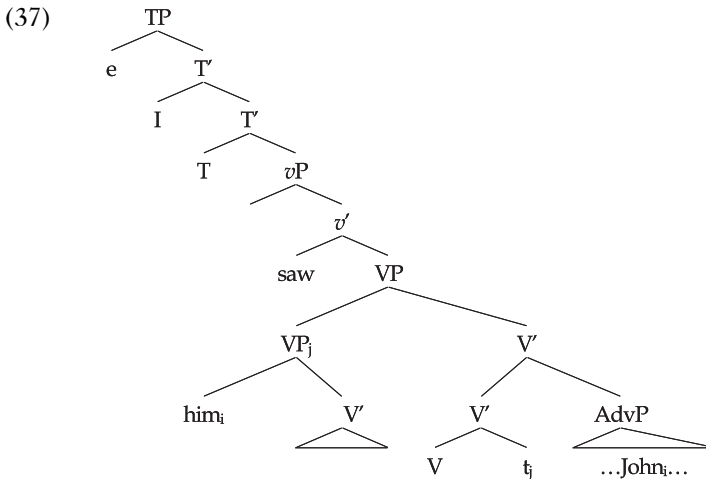
(35)
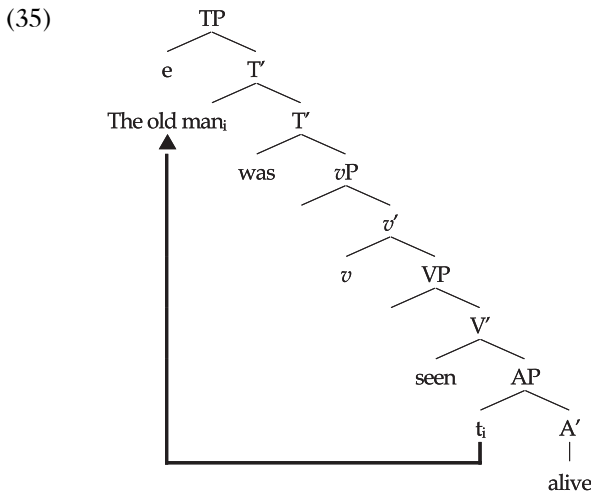
Next, let us turn to the other problem with (33), namely the position of a small clause subject. Recall that the matrix V has the EPP feature in the case of *consider*-type verbs and *want*-type verbs selecting small clauses. Given the natural assumption that V always has the EPP feature in English (Chomsky (2005)), a question will arise how it is satisfied in the case of perception verbs selecting small clauses. Here I assume that raising of the whole small clause would satisfy the EPP feature of V in this case.[6]

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6   Alternative option would be to raise the small clause subject. See Yokogoshi (2007) for further
    discussion.

(36)

```
              TP
             /  \
                T′
               /  \
              T    vP
                   /\
                   v′
                  /  \
                see   VP
                     /    \
                   XPᵢ      V′
                  /\       /  \
                  ▲       V    tᵢ
```
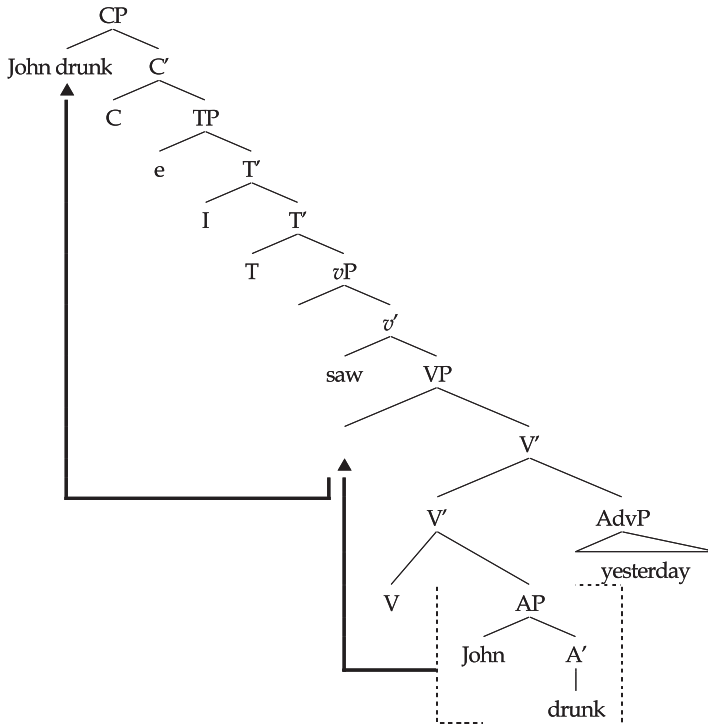
One might wonder whether raising of the whole small clause is ever possible, but it turns out that there is no theoretical reason to ban this; on the contrary, it enables us to account for some properties of small clause complements of perception verbs.[7]

Given (36), we can explain the following two properties of small clause complements of perception verbs. One is the absence of Condition C effects and the other is the possibility of topicalization of the whole small clause, as shown in (30a,c). The relevant structures are given in (37) and (38), respectively.

(37)

```
              TP
             /  \
            e    T′
                /  \
               I    T′
                   /  \
                  T    vP
                       /\
                       v′
                      /  \
                    saw   VP
                         /      \
                       VPⱼ        V′
                      /   \      /   \
                   himᵢ    V′   V′    AdvP
                          /\   /\    /    \
                         V  tⱼ  …Johnᵢ…
```

(38)

```
                CP
        ┌────────┴────┐
   John drunk         C′
                   ┌──┴──┐
                   C     TP
                      ┌──┴──┐
                      e     T′
                         ┌──┴──┐
                         I     T′
                            ┌──┴──┐
                            T     vP
                                  │
                                  v′
                              ┌───┴───┐
                             saw     VP
                                  ┌───┴───┐
                                          V′
                                     ┌────┴─────┐
                                     V′        AdvP
                                 ┌───┴───┐    yesterday
                                 V      AP
                                     ┌──┴──┐
                                   John   A′
                                          │
                                        drunk
```

In (37) the small clause raises to [Spec, VP] to satisfy the EPP feature of V. Then, *him* does not c-command *John* in the matrix clause, so the sentence does not violate Condition C. In (38) the small clause can move to the topic position as a constituent via [Spec, VP], where it satisfies the EPP feature of V.

Finally, we are in a position to account for the contrasts in (31): extraction from small clause subjects. This contrast can be accounted for along the lines of Takahashi (1994) and Basilico (2003) by assuming that A-bar movement must proceed through adjoined positions of all maximal projections on the way to its final landing site. In small clause complements of *consider*-type verbs and *want*-type verbs, the subject moves from its base-generated position: to the matrix [Spec, VP] in the former and to [Spec, PredP] in the latter, as illustrated in (40a,b). Therefore, the extraction of *whom* from the small clause subject applies to its highest copy in these cases, violating the Chain Uniformity Principle in (39) that requires all members of a chain to be identical under the copy theory of movement. Namely, *whom* must adjoin to all maximal projections on the way to its final landing site including the small clause subject, yielding non-uniform chains as in (40a,b). In small clause complements of perception verbs, on the other hand, PredP does not project. Given the above assumptions on how the EPP feature of V is satisfied in the case of perception verbs, we can explain the grammaticality of (31c) as follows: since the whole small clause can move to satisfy the EPP feature of V, the extraction of *which planet* in (40c) does not violate (39)

because the small clause subject constitutes a (one-membered) trivial chain.[8]

(39)   Chains must be uniform.   (cf. Basilico (2003:6))

(40) a. *Whom does Mary consider [$_{VP}$ [$_{NP}$ whom [$_{NP}$ a friend of whom]] [$_{V'}$ V [$_{PredP}$ [$_{NP}$ a friend of whom][$_{Pred'}$ Pred [$_{AP}$ [$_{NP}$ a friend of whom][$_{A'}$ idiotic]]]]]]

     b. *Whom does Mary want [$_{VP}$ e$_{j}$ [$_{V'}$ V [$_{PredP}$ [$_{NP}$ t_{j}]][$_{Pred'}$ [$_{NP}$ whom [$_{NP}$ a friend of whom]][$_{Pred'}$ Pred [$_{AP}$ [$_{NP}$ a friend of whom][$_{A'}$ alive]]]]]]]

     c. ?Which planet did you feel [$_{VP}$ [$_{AP}$ [$_{NP}$ which planet [$_{NP}$ a picture of which planet]][$_{A'}$ strange]][$_{V'}$ V [$_{AP}$ a picture of which planet strange]]]

In this section it has been argued that although small clause complements of perception verbs involve SLPs as their predicative phrases and share some of the syntactic properties with small clause complements of *want*-type verbs, they do not contain a functional category Pred and hence should be treated as having a different type of structure.

5. Conclusion

This paper has examined the relationships between some matrix verbs and their small clause complements. Small clause complements of *consider*-type verbs and *want*-type verbs are both PredPs, as proposed in (23) and (24), but *consider*-type verbs take small clauses which contain ILPs, whereas *want*-type verbs take small clauses which contain SLPs. Thus the textual relationship can be found between the selecting verbs and their small clause complements. In small clause complements of *consider*-type verbs the subject moves to the matrix [Spec, VP] via [Spec, PredP], whereas it remains in [Spec, PredP] in small clause complements of *want*-type verbs because of the presence of an event argument. It was claimed that the structures of small clauses in (23) and (24) can explain the syntactic differences between the two types of small clauses with respect to Condition C effects, passivization, and topicalization. As for small clause complements of perception verbs, it was argued that there is no functional category Pred and hence they show different syntactic properties from those of *consider*-type verbs and *want*-type verbs. The structure of the types of matrix verbs and their complement clauses is summarized in (41).

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8   There is another option to satisfy the EPP feature of V in the case of perception verbs: by raising the small clause subject to [Spec, VP]. It is obvious that this option leads to a violation of the Chain Uniformity Principle like (40a, b) because it would create a two-membered chain, from whose highest copy extraction takes place.

(41) Types of small clauses

	interpretation of small clauses	the projection of Pred	the existence of an event argument
consider-type verbs	ILP	$\sqrt{}$	---
want-type verbs	SLP	$\sqrt{}$	$\sqrt{}$
perception verbs	SLP	---	---

The structures proposed in this paper correctly account for not only the syntactic distribution of small clause complements of each type of the matrix verb, but also explain their semantic properties.

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