On the Complement Structure of Causative *Have* and *Make*

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1. Introduction

It has been argued that all causative verbs have the same complement structure (cf. Stowell (1983), Hornstein and Lightfoot (1987) and so on). However, a close scrutiny of syntactic and semantic behaviors of causative *have* and *make* shows that their complement structures should be syntactically distinguished. For example, expletive *there* can appear as an embedded subject in *make* causatives, but it cannot in *have* causatives; individual-level predicates can appear as embedded predicates in *make* causatives, but they cannot in *have* causatives. These are illustrated in (1) and (2), respectively.

(1) a . *John had there be computers available for all the students.

　　b . John made there be computers available for all the students.

(2) a . *John had Bill like French cooking.

　　b . John made Bill like French cooking.

Based on these differences in (1)–(2), it is claimed that while causative *make* selects TP, as argued by Ritter and Rosen (1993), causative *have* selects Aspect Phrase, which is a smaller projection than TP. This is schematically illustrated in (3).
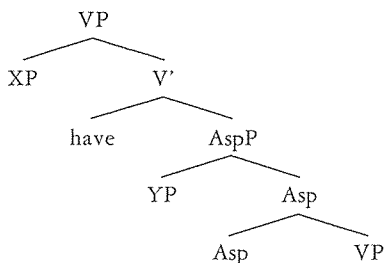
(3) a . causative *have*　　　　　　　b . causative *make*
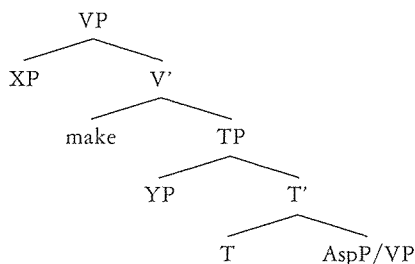
This paper is organized as follows: in section 2 we will argue that aspect is

syntactically realized as AspP, and that while AspP is projected with stage-level predicates, it is not with individual-level predicates. This will be crucial for discussion in section 4. Section 3 provides data concerning the two causative constructions. Particularly, section 3.1 and section 3.2 deal with their syntactic and semantic differences, respectively. On the basis of these differences, it will be claimed in section 4 that while causative *have* takes AspP as complement, causative *make* takes TP. Section 5 summarizes this paper and addresses two residual problems.

2. Syntactic Realization of Aspect

This section deals with clause structure which is crucial for the following discussion. Chomsky (1995) and subsequent studies have generally assumed only three functional categories: C for complementizer or clause type, T for tense and D for determiner. In addition to the three categories, this paper introduces a functional category relevant to *aspect*. One might say that this is at odds with the general minimalist spirit, but it is shown that this functional category is necessary to account for a number of syntactic environments. Let us begin by considering the distinction between tense and aspect, which are given in (4) and (5), respectively.

(4)	*Tense* is a category which expresses a temporal relationship between the time of the described event and some reference time, which, in the unmarked case, is the speech time.

(5)	*Aspect* tells us about the internal temporal structure of the event itself (e. g. completed, ongoing, recurring, and so on).

										(cf. Van Valin and LaPolla (1997: 40))

These two concepts must be strictly distinguished. If tense is syntactically realized as TP in clause structure, as generally assumed, it seems natural to assume that aspect is also realized syntactically. In fact, it has been proposed in the literature that Aspect Phrase (henceforth, AspP) is projected in clause structure, though there is no consensus on its position in clause structure.[1] It should be noted here that tense is a notion specifying a temporal relation and aspects are different ways of viewing the internal temporal constituency of an event. Based on the distinction between tense and aspect, we propose the clause structure in (6).

(6)	$[_{TP}$ T $[_{AspP}$ Asp $[_{VP}$ Subj V Obj$]]]$

It should be noted that AspP is not always projected in clause structure. This paper claims that the availability of AspP is contingent on the type of predicates involved:

stage-level or individual-level predicates. Stage-level predicates (henceforth, SLPs) are those expressing spatio-temporal properties and events, while individual-level predicates (henceforth, ILPs) are those expressing more permanent properties and characteristics (see Milsark (1974), Carlson (1980), Diesing (1992) and Kratzer (1995), among others). All phases or stages of the situation expressed by ILPs are identical and properties expressed by ILPs are interpreted as holding of an individual over an extended period of time. These do not hold for SLPs. Therefore, it seems natural to assume that AspP is not projected with ILPs, given that aspect indicates a way of viewing a given event, as stated in (5).

We further assume, by adapting Kratzer's (1995) argument, that the head of AspP contains a variable to be bound by a tense operator contained under T. An event expressed by a sentence is located at some temporal point if the variable in Asp is bound by the tense operator in T. Let us illustrate how this works by using the following participial constructions:

(7) a . When walking down the road, I often meet Harry.

  b . When walking down the road, I often met Harry.

The same expression, *when walking down the road*, has a different tense reference in each sentence of (7). In (7a), the situation described by *walking* holds at the present, given the verb in present tense *meet*; in (7b) it held in the past, given the verb in past tense *met* (cf. Comrie (1976: 2)).

Since the *when*-clauses in (7) contain non-finite verbs, it will follow that they do not involve tense projections. Thus, there is no tense operator in the relevant structure, but AspP is projected for the purpose of determining their temporal interpretations, as illustrated in (8).

(8) $[_{CP}$ when $[_{AspP}$ Asp $[_{VP}$ walking down the road$]]]$

Recall that Asp has a variable to be bound by a tense operator, so that the whole clause can be located at some temporal point. In (7), the variable in Asp is bound by the tense operator of the matrix finite verb, *meet* or *met*, thereby specifying the temporal interpretations of the *when*-clauses.

(9) a . $[_{CP}$ When $[_{AspP}$ Asp $[_{VP}$ walking down the road$]]]$

  $[_{TP}$ I T $[_{-past}]$ $[_{VP}$ often $[_{VP}$ meet Harry$]]]$

  b . $[_{CP}$ When $[_{AspP}$ Asp $[_{VP}$ walking down the road$]]]$

  $[_{TP}$ I T $[_{+past}]$ $[_{VP}$ often $[_{VP}$ meet Harry$]]]$

In (9), the *when*-clauses have no independent tense specification, but they are specified for tense depending on the tense specifications of their matrix clauses.

In what follows, we go on to show that contrasts between SLPs and ILPs observed in some syntactic environments can be explained in terms of the aforementioned assumptions and adaptation of Bowers's theory of predication. Before going into the discussion of the contrasts between SLPs and ILPs, we will briefly review Bowers's theory of predication.

Predication is the relation between the subject and the predicate. The clearest example of predication is found in main clauses, as in (10). Another instance of predication is small clause predication, as in (11).
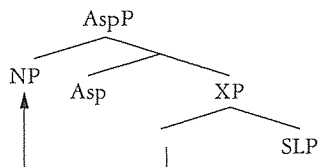
(10) a . [$_{NP}$ John] [$_{VP}$ ate a sandwich]

  b . [$_{NP}$ Bill] [$_{VP}$ is very angry]

  c . [$_{NP}$ Fred] [$_{VP}$ may be a good fellow]

  d . [$_{NP}$ Someone] [$_{VP}$ is in the living room]   (Bowers (2001: 299))

(11) a . Mary saw [$_{NP}$ John] [$_{VP}$ eat a sandwich]

  b . That made [$_{NP}$ Bill] [$_{AP}$ very angry]

  c . I consider [$_{NP}$ Fred] [$_{NP}$ a good fellow]

  d . We have [$_{NP}$ someone] [$_{PP}$ in the living room]   (ibid.: 300)

Bowers (2001) gives a unified account of both main clause predication and small clause predication by splitting I into T and Pr(edication). Syntactically, Pr is a functional category that selects the maximal projection of any lexical category. Its projection (PrP) can be generated independently in small clauses or selected by T in main clauses (cf. Bowers (2001: 302)). According to him, both main clause predication and small clause predication are established within PrP, as shown in (12)-(13), respectively.[2]
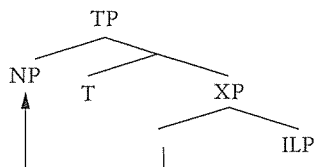
(12) [$_{TP}$ *e* T$_{[past]}$ [$_{PrP}$ John [$_{Pr'}$ eat-Pr [$_{VP}$ a sandwich *t*]]]]

(13) I consider [$_{PrP}$ John [$_{Pr'}$ Pr [$_{AP/NP/PP}$ insane/a good fellow/in the know]]]

(cf. ibid.: 303-4)

However, his approach to predication cannot capture some syntactic phenomena, such as the nonoccurence of ILPs in complement of perception verbs. If small clause predication is uniformly established within PrP, it would be predicted that both SLPs and ILPs can appear as embedded predicates of perception verbs, contrary to fact. I will then propose that predication with SLPs and predication with ILPs are established within different projections, in specific, AspP and TP, respectively. This is partly because AspP is not projected with ILPs. Each configuration is given in (14)-(15).

(14)   (15)

```
        AspP                                    TP
       /    \                                  /   \
     NP      \                               NP     \
      ↑   Asp    XP                           ↑   T     XP
      |    \    /  \                          |    \    /  \
      |     \  /    SLP                       |     \  /    ILP
      |_____|                               |_____|
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By assuming two types of configuration for predication above and the availability of AspP, we can straightfowardly account for three syntactic constructions sensitive to the SLP/ILP distinction: progressive forms, *there* constructions and complements of perception verbs. First of all, SLPs can usually appear in the progressive form, but ILPs cannot, as shown in (16)–(17).

(16) a . Mary was washing dishes.

b . The students were running in the park.

(17) a . *The policemen are owning a car.

b . *John was knowing the answer.

The *-ing* form may be considered to be a reflex of Asp. Since ILPs do not project AspP, the ungrammaticality of (17) is attributed to the unavailability of Asp.

Secondly, the distinction between SLPs and ILPs is operative in *there* constructions, where only SLPs can be used as codas.

(18) a . There are firemen available.

b . There were many people laughing.

c . There were several alternatives suggested.

(19) a . *There are firemen altruistic.

b . *There are many people tall.

c . *There were several policemen intelligent.

Given configurations (14)–(15), there is a landing site for the logical subject in (18), but there is no such site in (19). As for SLPs, predication between the logical subject and the coda will be established within AspP; on the other hand, since ILPs project no AspP, no predication will be established between them. Thus, the *there*-constructions with ILPs are ruled out and those with SLPs are not.

Finally, the SLP/ILP distinction can be found in the complement of perception verbs.

(20) a . Martha saw the policemen nude/running into the bar.

b . *Martha saw the policemen intelligent/own a car.

This contrast can also be explained in the same way as in the contrasts observed in the

progressive forms and *there* constructions.[3]

   Before going into the main discussion based on the assumptions made in this section, we will examine syntactic and semantic differences between *have* and *make* causatives in the following section.

3. Syntactic and Semantic Asymmetries in Causative Constructions

3.1   Syntactic Differences between Have and Make Causatives

Several structures for complements of causative verbs have been proposed in the literature, e. g., they are analyzed as small clauses, or projections of functional categories, such as Agreement or Tense. However, it is not plausible to assume that a single type of complement structure can be postulated uniformly for all causative verbs. This is because some syntactic and semantic differences are observed depending on the type of causative verbs involved. Then, this subsection first provides syntactic differences between the complements of the two causative verbs *have* and *make*, and then turn to semantic differences in the next subsection.

   The two causative verbs can take bare infinitives as embedded predicates, as shown in (21)–(22).

(21) a . David had Sam wash behind his ears.

   b . Brenda has Katie put on her helmet whenever she rides her bike.

   c . Jason had Monica practice the piano before she went out to play.

                                          (Ritter and Rosen (1993: 524))

(22) a . Ralph made Sheila fall down.   (ibid.: 526)

   b . John made Bill throw up on him.   (ibid.: 532)

   c . The doctor made his patient breathe deeply.   (Baron (1977: 53))

However, they exhibit different behaviors with respect to participle complements. This is illustrated in (23)–(25).

(23) a . John has Bill shelving books whenever the boss walks in.

   b . *John makes Bill shelving books whenever the boss walks in.

                                          (Ritter and Rosen (1993: 536))

(24) a . The actress had her director eating out of her hand.

   b . *The actress makes her director eating out of her hand.

                                                   (Baron (1977: 53))

(25) a . ??John has Bill be shelving books whenever the boss walks in.

   b . John makes Bill be shelving books whenever the boss walks in.

(Ritter and Rosen (1993: 536))

As shown in (23)–(25), *make* requires the auxiliary *be* to precede the present participle, while *have* does not allow it to appear in its present participle complements. This contrast is also observable in the case of passive participle complements, as in (26)–(27).

(26) a . ??John had Bill be arrested.

  b . John had Bill arrested.

(27) a . John made Bill be arrested.

  b . *John made Bill arrested.   (Ritter and Rosen (1993: 536–537))

Examples (26)–(27) show that the auxiliary *be* is obligatorily required in *make* causatives and that it is not allowed in *have* causatives.

  As far as the aspectual auxiliary *have* is concerned, no difference is found between *have* and *make* causatives: it cannot occur in either of the constructions.

(28)   *John had/made Bill have finished his assignment by 5:00.

(Ritter and Rosen (1993: 537n13))

The ungrammaticality of (28) might be attributed to the mismatch in meaning between causative verbs and perfect infinitives.[4] This will be parallel to the unavailability of the perfect infinitive in control constructions and in the complement of perception verbs, as shown in (29) and (30), respectively.

(29) a . *John tried to have won the race.

  b . John tried to win the race.

(30)   *We saw them have/having repainted the house.

Roughly speaking, control constructions denote 'futurity,' which does not fit in with perfect infinitives which have a past/pluperfect meaning.   Perception verbs are semantically incompatible with perfect infinitives if they are to express direct perception.

  Let us now see the examples containing the negative particle:

(31) a . *Bill had Ralph not marry Sheila.

  b . *Bill had Sheila not write the editorial.   (Ritter and Rosen (1991: 327))[5]

(32) a . Her vulnerability might make it not work.

  b . ?The event made all the students not think of words.

  c . ?Make me not get high.

  d . The death of a rock star will not make a person not plan to kill themselves.

Make causatives are compatible with the negative particle, as in (32), while *have* causatives are not, as in (31).

  This subsection has shown that the complement of *have* causatives is syntactically different from that of *make* causatives.   The following subsection further reviews

semantic constraints on these two causative constructions.

3. 2 Semantic Constraints on *Have* and *Make* Causatives

A remarkable contrast concerns the SLP/ILP distinction: in *have* causatives only SLPs can appear and ILPs cannot. This is exemplified in (33)–(34):

(33) stage-level predicate

    a . John had Bill run in the three-legged race.

    b . Brian had Mila write the French exam.

    c . Barbara had George take a shower.

(34) individual-level predicate

    a . *John had Bill like French cooking.

    b . *John had Bill want to learn French.

    c . *John had Bill know French.   (Ritter and Rosen (1993: 540–541))[6]

As opposed to causative *have*, causative *make* can take both SLPs and ILPs as embedded predicates. This is illustrated in (35)–(36).

(35) stage-level predicate

    a . John made Bill run in the three-legged race.

    b . Brain made Mila write the French exam.

    c . Barbara made George take a shower.

(36) individual-level predicate

    a . John made Bill like French cooking.

    b . John made Bill want to learn French.

    c . ??John made Bill know French.   (ibid.)

ILPs, such as *know*, *want*, and *like*, cannot be used as embedded predicates of *have* causatives, but they can be embedded in *make* causatives.

Moreover, the event expressed by causative *have* and that expressed by the embedded predicate constitute a single combined event. On the other hand, the event expressed by causative *make* and that expressed by the embedded predicate constitute separate events. This can be seen in the following contrast:[7]

(37) a . The teacher didn't [make] Bill write the article, but he did it anyway.

    b . *The teacher didn't [have Bill write the article], but he did it anyway.

(Ritter and Rosen (1993: 529))

In sentences (37), the scope of negation is represented by the brackets. In (37a), the causing event is negated and the event which is caused is outside the scope of negation. Thus, the sentence does not lead to contradiction. On the other hand, the negation

takes scope over the entire clause of the first conjunct in (37b), and the event writing-the-article did not happen. Thus, the second conjunct conflicts with the first conjunct.

A similar contrast is observable in the use of temporal adverbs. As for *make* causatives, two different temporal adverbs can be used in a single sentence, as shown in (38).

> (38) a . Yesterday, the witch made John know the answer last night and forget it this morning.   (Rothstein (1999: 365))[8]
>
> b . ?Yesterday John made Bill wash his car at three today.
>
> c . ?Last Monday John's doctor made him drink wine tonight.

The clause-initial and clause-final temporal adverb in each sentence modify the causing event and the caused event, respectively. On the other hand, such temporal modification is not observed in the causative construction with *have*, as indicated in (39).[9]

> (39) a . */??Yesterday John had Bill wash his car at three today.
>
> b . */??Last Monday John's doctor had him drink wine tonight.

There is another example of *have* causatives showing that the causing event and the caused event constitutes a single combined event. This is illustrated in (40).

> (40) a . Fred's doctor had him drinking decaf on Tuesday.
>
> b . Fred's doctor got him drinking decaf on Tuesday.
>
> (Ritter and Rosen (1993: 530), cf. Cowper (1989))

These sentences are different in temporal interpretation of *on Tuesday*. In (40a), the temporal adverb *on Tuesday* modifies the entire clause, the causing event and caused event. In (40b), by contrast, the same adverb modifies only the causing event.

The above contrasts may lead us to conclude: in *have* causatives, the causing event and the caused event make a single combined event, and these two events are interpreted as taking place simultaneously; in *make* causatives, on the other hand, the causing event and the caused event do not constitute a single event, and then they can be modified by different temporal adverbs.


4 . Analysis

In the preceding section, we showed that the complement of causative *make* and that of causative *have* exhibit the distinctive behaviors. These different behaviors are summarized in (41).[10]

(41)

	–ing	be	negation	single combined event	embedded predicate type
a*have* causative	✓	*	*	✓	SLP only
b*make* causative	*	✓	✓	*	ILP/SLP

On the basis of this list, we will propose in this section that the complement structure of *have* is AspP, and that the complement structure of *make* is TP, as Ritter and Rosen (1993) assume. Each structure is illustrated in (42).
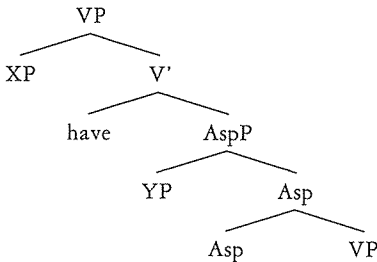
(42) a . *have* causative   b . *make* causative
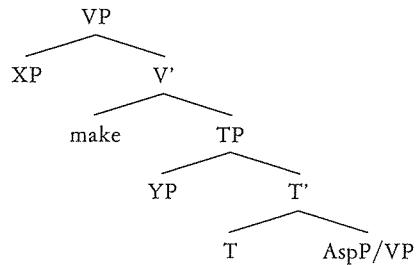
This section further discusses the contrasts described in (37)–(39), and the (un)availability of *there* in *have* causatives and *make* causative.
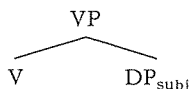

4. 1   The Complement Structure of Causative *Have*

Let us first examine the complement structure in (42a) for *have* causatives and then turn to that of *make* causatives in (42b). It is assumed in the literature that causative *have* takes a bare VP as complements (cf. Ritter and Rosen (1993) and Harley (1995)).[11] However, this assumption seems to be untenable. A notable argument against this is that unaccusative verbs and passive participles can be embedded under causative *have*.
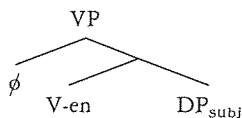
(43) a . He had them come early.   (Palmer (1988: 199))

　　b . John had Bill go to the theater.

　　c . John had Bill arrested.

The (surface) subject of unaccusatives and passive participles is generally assumed to be generated in the complement position, as illustrated in (44).

(44) a .   b .

```
        VP                              VP
      /    \                          /    \
    V      DP_subj              ∅        /    \
                                      V-en    DP_subj
```

Under the minimalist assumptions, no light verb projections are contained in the VP structure of unaccusatives. The subject, which is base-generated in the complement of V, must move to the specifier of a functional head higher than V so that the surface word order in (43) may be derived. Movement to the specifier position of a lexical head is excluded. Such movement results in the movement from a theta position to another theta position, which is banned by the θ-criterion.

(45)   Each argument bears one and only one θ-role, and each θ-role is assigned to
        one and only one argument.   (Chomsky (1981: 36))

Similarly, the surface subject of passive participles must move out of VP so that the correct word order will be derived. These facts cannot be captured if the complement structure of causative *have* is a bare VP.

There is another piece of syntactic evidence against the approach assuming a bare VP as complement of causative *have*:

(46) a . He had these ladies continually interrupt his dinner.

     b . Bush had his spokesman merely tack up a sign.

     c . What happens next had people literally jumping out of their seats.

In these sentences, the adverbs intervene between the embedded subjects and embedded predicates. Suppose that the adverbs in (46) are adjoined to VP.[12] If the complement of causative *have* is a bare VP, the following construction is wrongly derived:

(47)   He had [$_{VP}$ continually [$_{VP}$ these ladies [$_{V'}$ interrupt his dinner]]]

The embedded subject must move across the adverb adjoined to VP so that the correct word order may be derived. We therefore pay attention to the possibility of some functional projection as the complement structure of causative *have*, determining whether the projection is TP or AspP.

The possibility of TP can be easily eliminated. A first reason for this is the nonoccurrence of negative particle *not* in the complement to causative *have*. The relevant examples are repeated here as (48).

(48) a . *Bill had Ralph not marry Sheila.

     b . *Bill had Sheila not write the editorial.

Given the basic clause structure in (49) (cf. Zanuttini (1991)), it will follow that TP is

not projected in the complement to *have*.

(49) $[_{TP}$ T $[_{NegP}$ not $[_{VP}$ V $]]]$

A second reason is concerned with the interpretation of temporal adverbs. As noted in section 3, a clause-final temporal adverb in *have* causatives only modifies the event described by *have*, and cannot modify the event described by the embedded predicate. This is contrasted with *make* causatives, which we will return to below. The relevant example is given in (50).

(50) Fred's doctor had him drinking decaf on Tuesday.

If temporal adverbs must be adjoined to the tense projection they modify, (50) will indicate that there is no tense projection in the complement of causative *have*.[13]

In addition, the embedded predicate of *have* causatives is within the scope of the matrix negation. This might mean that the embedded predicate has no truth value independent of the matrix predicate. Therefore, it is concluded that the complement structure of causative *have* is not TP. Let us now examine the second possibility that it is AspP.

Here let us recall that only SLPs can be embedded under the complement of causative *have*. Given that SLPs are syntactically realized as AspP, it seems plausible to assume that causative *have* takes the AspP as a complement. By assuming so, the fact that no ILPs can appear as embedded predicates is straightforwardly explained. Since ILPs are not syntactically realized as AspP, they do not fit in with the complement structure of *have*. When ILPs are used as embedded predicates of causative *have*, they cannot form predication with their subject within AspP, which leads to ungrammaticality.

Moreover, as mentioned in section 2, aspects are different ways of viewing the internal temporal constituency of a situation (cf. Comrie (1976: 3)). If the present analysis is on the right track, it would be expected that there is an aspectual difference between bare infinitive and present participle complements. This expectation is borne out.

(51) a . John had Mary come to the theater.

   b . John had Mary coming to the theater.

(52) a . John had Bill wash his car.

   b . John had Bill washing his car.

Each pair in (51)–(52) differs in meaning in accord with aspect: the sentences with the infinitives can be used for a one-time action or regular action; those with the present participles only for a regular action. For example, sentence (51a) indicates 'punctual-

ity,' as in 'John had Bill come to the theater at 3 p. m.,' while sentence (51b) means that John succeeded in getting Mary to come regularly to the theater for some reason.

As for sentences (52), similarly, the expressed event in (52a) is interpreted as taking place one time or regularly; that of (52b) is only interpreted as taking place regularly. The sentence in (52b) can be said in a situation like this: Bill wants to borrow money from John again or John is a tyrant.

What we should next explain is the facts which cannot be explained by assuming that the complement of *have* is TP: the interpretation of temporal adverbs, and the non-occurrence of negative particle not. In the clause structure posited in this paper, the negative particle may be located between TP and AspP. Given this, sentences like (48) can be easily ruled out because *have* must take AspP as complement. Since temporal adverbs are adjoined to tense projection, they cannot be located in embedded clauses, if no tense projection is selected by *have*. Then, how do we capture the interpretation of sentences like (50)?

Here, let us return to the proposal that the head of AspP contains a variable to be bound by a tense operator. The abstract structure of (50) would be like (53).[14]

(53)
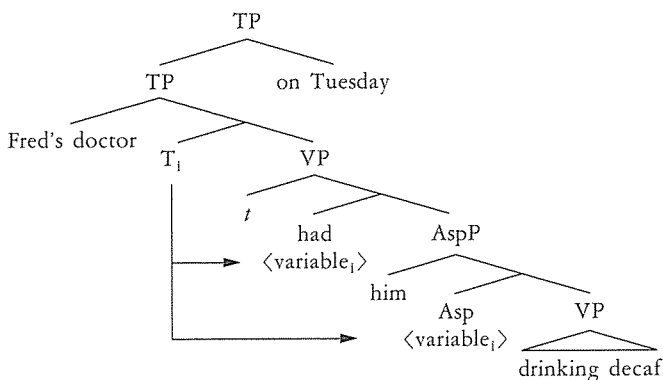
In (53), the tense operator that can bind the variable contained in Asp is only the matrix one. So, the two variables in this structure are bound by the same tense operator.[15] By this, the index of the matrix tense is inherited by both variables, and the two variables share the same index of the matrix tense. As a result, the causing event and caused event are interpreted as simultaneously taking place.

4.2 Complement Structure of Causative *Make*

Let us turn to the complement structure of causative *make*. Like *have*, it can take unaccusative verbs as embedded predicates.

(54) Ralph made Sheila fall down.

Under the general assumption, the subject of unaccusatives is base-generated in the complement position. Then, the subject must be raised over the embedded predicate so that sentences like (54) will be derived.

Moreover, adverbs can be located between the embedded subject and predicate, as shown in (55).

(55) a . Something made him instantly change artistic attitude.

b . An excellent toothbrush makes you positively look forward to brushing your teeth.

c . That strange sound made people suddenly lift their heads.

Given that subjects are generated within VP and that adverbs are adjoined to VP, sentences (55) are derived by movement of the embedded subjects over the adverbs. Based on this, we can conclude that *make* also selects a functional projection, not a lexical one (see above (45)).

A question to be raised here is where the embedded subject moves. A candidate would be [Spec, TP] or [Spec, AspP], but the option of [Spec, AspP] may be thrown away, based on the different behaviors of *have* and *make* provided in section 3. Therefore, we propose that the complement structure of *make* is TP, as described in (42b).

In contrast to *have* causatives, *make* causatives allow the negative particle in the embedded clause; two distinct temporal adverbs can be used to modify the causing event and the caused event. Some relevant examples are repeated here as (56) and (57).

(56) a . Her vulnerability might make it not work.

b . ?The event made all the students not think of words.

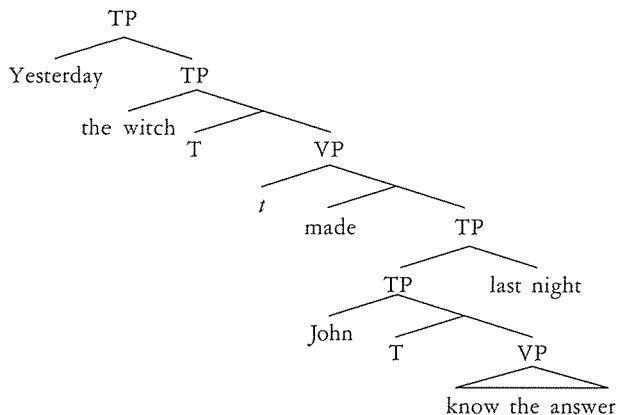(57) a . Yesterday, the witch made John know the answer last night and forget it this morning.

b . ?Last Monday John's doctor made him drink sake tonight.

Recall the assumption that *not* is located between TP and AspP and a subject must move to a specifier position higher than VP. Given this, we would have the following structure for *make* causatives:

(58) $[_{VP}$ make $[_{TP}$ DP$_i$ T $[_{NegP}$ not $([_{AspP}$ Asp$)$ $[_{VP}$ t_i V$]]]$ $(])]^{16}$

By assuming (58), which is based on the possibility of embedded negation, we can explain the interpretation of temporal adverbs: there are two tense projections involved in the clause structure with causative *make*. Each temporal adverb is adjoined to a different tense projection. Part of the structure for sentence (57a) is given in (59).

(59)

Here is another interesting contrast:

(60) a . Yesterday, the witch made John be clever last night and be stupid this morning.

　　b . *Yesterday, the witch made John clever last night and stupid this morning.

(Rothstein (1999: 373))

(60a) contains *be* in the embedded clause, while (60b) does not. The (un)grammaticality of sentences (60) seems to depend on the presence or absence of *be*. Suppose that AP is not directly selected by T in English and that copula *be* is located between AP and TP. With these in mind, let us consider the contrast in (60). Then sentence (60a), in which *be* is contained, would have the structure of (61a). On the other hand, the structure of sentence (60b) without *be* would be like (61b).

(61) a . [$_{TP}$ the witch T [$_{VP}$ made [$_{TP}$ John T [$_{VP}$ be [$_{AP}$ clever]]]]]

　　b . [$_{TP}$ the witch T [$_{VP}$ made [$_{XP}$ John [$_{AP}$ clever]]]]

Since TP is projected in the embedded clause of (61a), the adverb *last night* can be adjoined to the TP and modifies the embedded event. In (61b), by contrast, there is only one TP. Since two temporal adverbs referring to different time cannot be adjoined to the same tense projection, the sentence (60b) is ruled out.

4.3 (Un)availability of *There*

In this subsection, we examine why *there* can be used in the complement of *make*, but cannot in the complement of *have*. The occurrence of *there* is restricted to non-theta positions for its own lexical property as an expletive. Chomsky (1995, 1998) makes the following assumption to rule out the occurrence of *there* in argument positions:

(62) Pure merge in theta position is required of (and restricted to) arguments.

(Chomsky (1998: 16))

Given (62) and our assumption that the complement of *have* is AspP, it would be predicted that *there* can be used in the complement of causative *have*, because the specifier position of AspP is a non-theta position. However, this prediction is not borne out, as shown in (63).

(63) a . *John had there be computers available for all the students.

    b . *The minister of finance had there be major cuts in the military budget.

(Ritter and Rosen (1993: 541-542))

    c . *You had there be no mistakes in your paper.

There are two possible solutions to rule out sentences like these. Here the complement structure of *have* in (63a) is schematically illustrated in (64).

(64) $[_{VP}$ have $[_{AspP}$ there Asp $[_{VP}$ be available computers ...$]]]$

The first solution is based on predication. Recall that AspP is a domain of predication (see section 2). Given this, it is a lexical subject, not a pure expletive, that should be located in the specifier position of AspP in order to establish a subject-predicate relation. In (64), a candidate to meet this requirement is *computers*. The following contrast provides additional supporting evidence.

(65) a . There are firemen available.

    b . *There are firemen altruistic.   (cf. Milsark (1974); Kratzer (1995))

It is generally accepted that existential constructions are compatible only with SLPs. The contrast in (65) can be syntactically explained as follows: SLPs are syntactically realized as AspP (cf. section 2). Given this, sentences (65) would have the structures given in (66).

(66) a . $[_{AspP}$ firemen Asp $[_{AP}$ *t* available$]]$

    b . $[_{AP}$ firemen altruistic$]$

Since Aspect Phrase is projected with SLPs, the logical subject of the predicate *available* can move into the specifier position of AspP. On the other hand, the logical subject of the predicate *altruistic* cannot move from its base-generated position. This is just because

there is no landing site but the specifier of TP, which is occupied by expletive *there*. With this in mind, let us consider the contrast given in (67).

(67) a . The mayor has more firemen available during the summer.

     b . *The mayor has more firemen altruistic during the summer.

<div align="right">(Ritter and Rosen (1993: 541))</div>

Expletive *there* is not contained in both sentences. Examples (67a, b) have the structures of (68a, b), respectively. In (68a), there is a landing site for the embedded subject to move into, while in (68b) there is no such site. The sentence in (67b) is thus ruled out.

(68) a . The mayor has $[_{AspP}$ more firemen$_i$ Asp $[_{AP}$ t_i available ...$]]$

     b . The mayor has $[_{AP}$ more firemen altruistic ...$]$

        $\times \longleftarrow \longleftarrow \rfloor$

Here we return to example (63a). At the stage in the course of its derivation given in (69), merge of *there* is preferred to movement of *computers* under the general minimalist assumptions. After merge of *there*, we will obtain the structure in (70).

(69) $[_{AspP}$ Asp $[_{VP}$ be $[_{AP}$ computers available ...$]]]$

(70) $[_{AspP}$ *there* Asp $[_{VP}$ be $[_{AP}$ computers available ...$]]]$

In order to establish a subject-predicate relation, the embedded subject computers must be raised into the specifier position of AspP. However, the place has already been occupied by the expletive, and then the derivation is not legitimate. Instead of merge of *there*, movement of *computers* will make the sentence grammatical:

(71)   John had computers be available ...

A second solution is so simple: expletive *there* must be inserted into the specifier of TP. This explains not only the ungrammaticality of (63), but also the grammaticality of sentences like (72), where expletive *there* is used in *make* causatives.

(72) a . John made there be computers available for all the students.

     b . The minister of finance made there be major cuts in the military.

<div align="right">(Ritter and Rosen (1993: 541–542))</div>

The sentence in (72a) has the structure in (73) in the course of derivation.

(73)   ... made $[_{TP}$ *there* T $[_{VP}$ be $[_{AspP}$ computers Asp $[_{AP}$ available ...

In (73), a subject-predicate relation is established within AspP. *There* is inserted into the specifier of TP.

5. Concluding Remarks

In this paper I have proposed the distinctive complement structures for causative *have* and *make*, based on the syntactic and semantic differences between the two causative verbs.   In particular, it was argued that *make* selects TP, which has tense operator independent of the matrix tense operator, whereas *have* selects AspP, which contains no independent tense operator.   It was also shown that by assuming this categorial distinction, the (im)possibility of modification with two temporal adverbs and the (un)availability of *there* can be properly accounted for.

However, there remain two open questions concerning matrix passivization.   One resides in the possibility of passivization: embedded subjects in *make* causatives can be passivized, while those of *have* causatives cannot, as shown in (74).

(74) a . *Bill was had (to) leave.

 b . Bill was made * (to) leave.   (cf. Ritter and Rosen (1991: 327))

This contrast might be attributed to a difference in lexical property between causative *have* and *make*.   The other question is why *to* must appear in *make* causatives when the embedded subject is passivized.   Given that *to* is generated under T, the appearance of *to* may be correctly predicted under our analysis assuming that the complement of causative *make* is TP.   However, we cannot explain the fact that *to* appears only in passive sentences.   These two questions are thus left open for future work.

Notes

*   This is a revised version of the paper presented at the 72nd General Meeting of The English Literary Society of Japan held at Rikkyo University on May 20–21, 2000.   I would like to thank NAKANO Hirozo, AMANO Masachiyo and TANAKA Tomoyuki for their helpful comments on earlier versions.   I am grateful to YASUI Izumi, SANO Masaki, OKUNO Tadanori, and NAWATA Hiroyuki for their valuable suggestions.   My thanks also go to Justine Alexander Figget, Christpher Tancredi and some members of LINGUIST, who played a role as informants.   Needless to say, all remaining errors are my own.

1   See Ouhalla (1991), Watanabe (1993), Diesing and Jenlik (1995) and so on.

2   According to Bowers, subjects are generated in the specifier of PrP and objects in that of VP.

3   Felser (1998) independently formulates this contrast, as in (i).

 (i) SLP Mapping Hypothesis

     Stage-level predicates are realized as AspP syntactically (where Asp is specified for the feature [±progressive] in English).   (Felser (1998: 369))

⁴   One might claim that the unavailability of auxiliary *have* leads to the absence of TP in the constructions under discussion. This is not correct, however. For example, *believe* can take a perfect infinitive as complement, as shown in (i).

(i)   John believed Peter to have brought the beer.

It is clear that the infinitival marker to is generated under T in (i), which indicates that *have* is base-generated under V rather than T. Similarly, the unavailability of *have* in the complement of causative *have* would lead us to the conclusion that the complement does not contain AspP, on the assumption that auxiliary *have* is located under Asp.

⁵   As noted by Ritter and Rosen (1993: 538), if *not* is accented, the sentences in (31) are marginally accepted. In this case, however, it counts as adverbial negation.

⁶   Interestingly, if the embedded predicates in (34) are replaced by the *-ing* forms, the resulting sentences would be acceptable, especially when qualified or quantified. For example,

(i)   After teaching him for three months, John had Bill knowing French better than a Parisian.

is acceptable. I am grateful for this point to Justine Alexander Figget and Niegel Vincent. Sentences like (i) are not counterexamples to the present analysis.

⁷   There is no contrast between the two constructions if they are affirmative. See Karttunen (1971)

⁸   One of my informants points out that if *this morning* is replaced with *by this morning*, the sentence in (38a) would be much more acceptable.

⁹   The judgements of sentences (38)-(39) vary among individuals. Some informants I consulted judge both constructions as unacceptable. For them, in this point, there is no difference between *have* and *make* causatives.

¹⁰   Here, *be* represents the auxiliary used in the progressive and passive sentence rather than the main verb. See Felser (1999: 56) for a more detailed list covering causative and perception verbs.

¹¹   Adopting the core idea of Freeze (1992) and Kayne (1993) and following Borer's (1994) discussion on aspect, Ritter and Rosen (1997) propose the structure in (i) for causative *have* as well as other uses of *have*.

(i)
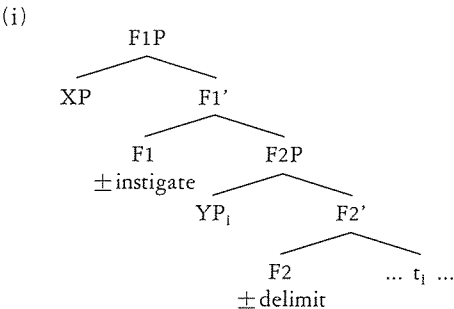
(Ritter and Rosen (1997: 301))

They suggest that F1 and F2 are unspecified functional heads, unlike Kayne's labelling of them as verbal and prepositional heads, respectively. Although they assign no specific category to F1 and F2, F2 $[\pm\text{delimit}]$ is similar to Asp advocated in this paper in that both F2 and Asp are functional heads related to aspect; F1 is similar to small v in that they are both related to agentivity or causing of an event.

[12]   The possibility of adjunction to V' is excluded. This is because V' (or any bar-level category) is not visible for computation (cf. Chomsky (1995: 242-243)).

[13]   Unlike causative *have*, causative *get* takes *to*-infinitives as complements. It is clear that the complement structure of *get* , unlike that of *have*, is TP, simply because *to* is generated under T. If temporal adverbs are adjoined to the tense projection they modify, the interpretation of sentences like (37) will be straightforwardly accounted for.

[14]   The structure in (53) is to some extent simplified because some parts are irrelevant to the main point of discussion. To be more precise, matrix verb *have* is also dominated by AspP.

   (i) a . John is having the students read three articles.

     b . John is having Mary walk the dog.   (Ritter and Rosen (1997: 305))

Causative *have* is compatible with the meaning of progressive forms.

[15]   An anonymous reviewer pointed out to me that the structure of (53) may violate the Bijection Principle:

   (i)   Every variable is locally bound by one and only one $\bar{\text{A}}$-position and every $\bar{\text{A}}$-position locally binds one and only one A-position.

                                 (Koopman and Sportiche (1982::146))

However, this principle does not always hold. For example, in the following example the two variables, the trace and parasitic gap, are bound by the same *wh*-operator, yielding a violation of the Bijection Principle:

   (ii)   Which book$_i$ did you buy t_i without reading pg_i?

Nevertheless this sentence is grammatical. Likewise I assume that the structure of (53) is unproblematic though it might violate the Bijection Principle. More detailed discussion is needed, but this is left for future work.

[16]   When an ILP is embedded, AspP is not projected (cf. (17)).

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Synopsis

On the Complement Structure of Causative *Have* and *Make*
Tomohiro Yanagi

This paper is concerned with the complement structure of two causative verbs in English, *have* and *make*. It is claimed that while causative *make* takes TP as complement, as argued by Ritter and Rosen (1991) and Harley (1995), among others, causative *have* takes Aspect Phrase. This is illustrated in (1).

(1) a . have $[_{AspP}$ DP1 Asp $[_{VP}$ V DP2$]]$

    b . make $[_{TP}$ DP1 T $([_{AspP}$ Asp$)$ $[_{VP}$ V DP2$]$ $(])]$

Aspect Phrase, which is independently assumed in this paper, is a functional projection which is relevant to aspect. Aspect Phrase is not always projected in clause structure; it is projected only with stage-level predicates, and not with individual-level predicates (cf. Felser (1998)). These complement structures are based on syntactic and semantic differences between these causative verbs. In the first place, causative *have* can only take a stage-level predicate as embedded predicate, while causative *make* can take an individual-level predicate as well as a stage-level predicate.

(2) a . John had Bill run in the three-legged race.

    b . *John had Bill like French cooking.

(3) a . John made Bill run in the three-legged race.

    b . John made Bill like French cooking.

The (a) and (b) examples of (2) and (3) contain stage-level predicate *run* and individual-level predicate *like*, respectively. Secondly, the negative particle *not* appears in the complement of causative *make*, but it does not appear in the complement of causative *have*.

(4) a . *Bill had Ralph not marry Sheila.

    b . Bill made Ralph not marry Sheila.

Thirdly, while expletive *there* is not compatible with *have* causative constructions, it is compatible with *make* causative constructions.

(5) a . *John had there be computers available for all the students.

    b . John made there be computers available for all the students.

We will further propose that the head of Aspect Phrase contains a variable to be bound by a tense operator. If the variable in Aspect is bound by a tense operator, the event described by a sentence will be located at some point of time. What is important here is that if two variables are bound by the same tense operator, the two events expressed within the two AspP's are interpreted as taking place simultaneously. As illustrated in (1a), the complement structure of causative *have* is not TP but AspP, whose head contains a variable to be bound

by the tense operator of a matrix clause. Consequently, the event expressed by causative *have* and that expressed by its embedded predicate constitute a single combined event. By contrast, causative *make* takes a TP complement, which contains a tense operator different from the matrix one. Thus, the event described by causative *make* and that described by its embedded predicate constitute separate events. This may be supported by the following example:

(7)   Yesterday, the witch made John know the answer last night and forget it this morning.

In (7), the clause-initial adverb and clause-final adverbs modify the matrix predicate and the embedded predicate, respectively. Such temporal modification is not observed with *have* causative constructions.