In this article, focusing on the dative alternation with the Give Verbs and Verbs of Future Having, we propose (i) that the V-NP-PP construction and the double object construction (DOC) share the same underlying structure, which involves a small clause CP headed by the invisible verb HAVE, which is an amalgamation of the invisible copula BE and the invisible adposition TO, and (ii) that the former is derived from the latter, by the excorporation of TO out of HAVE, the C-to-V incorporation, and the A-movement of the Theme NP across the CP boundary. We argue that every movement across a CP-boundary is constrained by the Phase Impenetrability Condition (PIC), from which a syntactic solution is given to the question why certain double object verbs lack the V-NP-PP variant. It is argued that the legitimate derivation of the V-NP-PP variant from the DOC is subject to the PIC, since the C-to-V incorporation, which is independently constrained by the temporal equivalence condition, enables movement to the matrix Spec of the matrix non-phase head V, which is otherwise inapplicable.*

Keywords: dative alternation, decomposition of have, TO-excorporation, Phase Impenetrability Condition, C-to-V incorporation, temporal equivalence condition

1. Introduction

There is controversy about what kind of structures should be given to the
double object construction (DOC), as in (1a), and the V-NP-PP construction, as in (1b), respectively, and whether one is transformationally related to the other or they are based on different underlying structures:

(1) a. John gave Mary a picture.
    b. John gave a picture to Mary.

Building upon Barss and Lasnik’s (1986) pioneering work, Larson (1988) has argued that (1a) is transformationally derived from (1b) by a VP-internal “passive-like” operation, as in (2a, b):

(2) a. \[
\text{[IP} \text{NP1 [I [VP tNP1 [V’ V (gave)+V [VP NP2 [V’ tV [PP to NP3]]]]]]]}
\]
    b. \[
\text{[IP} \text{NP1 [I [VP tNP1 [V’ V (gave)+V [VP NP3 [V’ tV tNP3 [NP2]]]]]]}
\]

The analysis of the DOC as in (2b) and the V-NP-PP construction as in (2a) is arguably superior to a ternary branching structure (Oehrle (1976)) or a right-branching structure (Chomsky (1981)), in that they can properly capture the anaphoric relation to hold between NP2 and NP3 such that NP2 binds (into) NP3, but not vice versa, in (2a), whereas NP3 binds (into) NP2, but not vice versa, in (2b), without modifying a standard definition of binding conditions, a standard licensing condition on bound pronouns, or the first-branching definition of c-command:

(3) a. I showed Mary\(_i\) herself\(_i\).
    b. *I showed herself\(_i\) Mary\(_i\).

(4) a. I gave every worker\(_i\) his\(_i\) paycheck.
    b. *I gave its\(_i\) owner every paycheck\(_i\). (Barss and Lasnik (1986))

(5) a. I showed John\(_i\) to himself\(_i\) in the mirror.
    b. *I showed himself\(_i\) to John\(_i\) in the mirror.

(6) a. I gave every paycheck\(_i\) to its\(_i\) owner.
    b. ??I gave his\(_i\) paycheck to every owner\(_i\). (Larson (1988: 338))

As far as the DOC headed by verbs of the give type is concerned, however, since Ross (1976) and McCawley (1979), it has been well-recognized that there is a strong implication that the first object is the prospective possessor of the second, and since Kayne (1984), a large number of linguists, including Pesetsky (1995), den Dikken (1995), and Harley (1997), have argued for the idea, not implicated in (2b), that give (or an abstract verb CAUSE) takes a small clause whose abstract head denotes the semantics of “possession”:

(7) I give (or CAUSE) \([XP \text{NP3 HAVE NP2}\]

Given that an analysis of (1a) as in (7) is on the right track, the issues that need to be settled should involve (i) what category XP is, (ii) what ex-
actly the categorial status of HAVE is, and (iii) whether (1b) is transformationally related to (1a) or has an independent underlying structure.

Researchers who argue against a transformational analysis have assumed that (1b) has a structure like (8a) (cf. Marantz (1993), Beck and Johnson (2004)) or (8b) (cf. Pesetsky (1995), Harley (1997), Norvin (2001)):

(8) a. \[\text{VP NP1 [\text{v'} v [\text{vp NP2 [\text{v'} V (give) [\text{pp to NP3}]]}]]}\]

b. \[\text{VP NP1 [\text{v'} v [\text{vp V (give) [\text{pp NP2 [p' to NP3}]]}]]}\]

On the other hand, many of the researchers who argue for a transformational analysis have suggested that the DOC is syntactically derived from the V-NP-PP construction, by PP-movement followed by preposition incorporation to the copula (= (9a)) (den Dikken (1995: 132)) or preposition incorporation to a causative verb plus NP-movement to [Spec, V] (= (9b)) (Oba (2002: 68)). Compare (9a, b) with Larson’s analysis in (2):

\[\text{Their gave Satoshi the map.} \quad \text{They gave the map to Satoshi.}\]

\[\text{he.ATe (the_map) (Satoshi)} \quad \text{he.HAVEe (the_map) (Satoshi)}\]

1 Hale and Keyser (1993: 105) suggest that “the English possessive verb ‘have’ ... is probably a realization of the universal category P, not V.” Harley (1997, 2004) assumes that the invisible HAVE is a preposition. (See also Baker (1988), Nakamura (1993), and Pesetsky (1995) for an empty preposition analysis of the indirect object in the DOC.) On the other hand, Aoun and Li (1989: 163) argue that the small clause in the DOC contains an empty verb, taking the second NP as its object. Guéron (1995) argues that have is a complex lexical item consisting of V (= BE) + P (in in English), rather than a result of the syntactic incorporation of P to V. Given these ramifications, we will ultimately have to settle the issue of what category the invisible HAVE is. If it turns out that the invisible HAVE is prepositional, we should make an additional assumption that the prepositional HAVE is selected by the invisible copula BE, which in turn is selected by Infl. For simplicity, however, we will assume here that the invisible HAVE itself is a verb and leave this issue of category determination open for future research.

2 Beck and Johnson (2004) argue against a transformational analysis that relates the DOC to the V-NP-PP frame. One of their reasons is that the semantics of the result states denoted by the two constructions are different from each other. Essentially, the point is that the result state implied by the DOC is the possession of the second object, whereas that implied by the V-NP-PP frame is a state of existence (ibid.: 115–117). They admit, however, that sentences using the verb give that occur in the DOC and in the V-NP-PP construction are semantically indistinguishable. Thus, (ia, b) have the semantic descriptions in (iia, b), respectively, which are identical to each other:

(i) a. They gave Satoshi the map.
    b. They gave the map to Satoshi.

(ii) a. \(\text{he.ATe (the_map) (Satoshi)}\)
    b. \(\text{he.HAVEe (the_map) (Satoshi)}\)

This is one of the reasons for which we focus our attention on the Give Verbs, in arguing for the transformational analysis of the DOC frame and the V-NP-PP frame. See also notes 5 and 8 and Green (1974) for some similarities and differences among the various subtypes of ditransitive verbs.
(9) a. \[\text{I give } [\text{SC}_1 [\text{VP } (\text{"be"}) + \text{P}(\varphi)] [\text{SC}_2 [\text{PP } t_p \text{ NP}_3] [\text{XP } X [\text{SC}_3 \text{ NP}_2 \quad t_{PP}]]]]\]

b. \[\text{I ... } [\text{v'} \quad P (\varphi) + \text{V} (\text{"given"}) + v (\text{"cause"}) (\rightarrow \text{spelled out as give}) [\text{VP } \text{NP}_3 [\text{v'} t_v [\text{PP } \text{NP}_2 [\text{p'} t_p \text{ NP}_3]]]]\]

What lies behind Oba’s analysis is Freeze’s (1992) proposal that the possessive and existential constructions share the same underlying structure, with the former being derived from the latter by the incorporation of the locative adposition to the copula. With respect to the orientation of the possessive have, den Dikken (1995) makes a more specific proposal, based on Benveniste’s (1966) research, that it is a complex of the copula be and the adposition to:3

(10) \textit{HAVE} = \text{copula BE} + \text{adposition TO} (\text{but see Guéron (1995)})

While den Dikken (1995) crucially uses (10) in arguing for a transformational analysis, a transformational analysis does not necessarily presuppose the validity of (10). Thus, Aoun and Li (1989) and Dryer (1986) argue that the V-NP-PP construction is transformationally derived from the DOC, by a ‘passive-like’ operation and the ‘Antidative’, respectively, without assuming the decomposition of have.

Also notably, most researchers who argue for a small clause analysis have identified the category XP in (7) and/or (8) as VP (Oba (2002)) or PP (Pesetsky (1995), Harley (1997)), rather than IP or a larger functional projection.4

\[\text{3 That the lexical have is decomposed into the copula be and the adposition to is supported by the cross-linguistic data as follows (cf. Freeze (1992) for more data):}\]

(i) \[\text{Le livre est à Jean.} \quad \text{<French> the book is to Jean} \quad \text{(den Dikken (1998: 195))}\]

‘Jean has the book.’

The semantic similarity between (iia) and (iib) in English, as is pointed out in Ross (1976: 269), also supports the hypothesis at hand:

(ii) a. \{'?The/*/A\} top is to this table.\]

b. \text{This table has \{"the/a"\} top (to it).}\]

On the other hand, Harley (2004) proposes that the lexical have is an amalgamation of the abstract light verb BE and the abstract (stative) preposition P_{HAVE}. Hale and Keyser (1993: 98) also suggest that “the double object construction ... involves a nonovert preposition expressing ‘central coincidence’, corresponding to the overt with in its ‘possessive’ use ... and it contrasts with the to of ‘terminal coincidence’ that appears in the overtly prepositional partner in the dative alternation.” These suggestions are incompatible with our view.

\[\text{4 Collins and Thrainsson (1996: 425–428) suggest that a ditransitive verb is the abstract verb CAUSE that selects TP, which is a clause headed by the abstract verb HAVE}\]
Recognizing these ramifications, in this article, I will make three claims, with special reference to what Levin (1993: 45) calls *Give Verbs* and *Verbs of Future Having*, which are exemplified in (11a) and (11b), respectively:

(11) a. give, feed, lease, lend, loan, pass, pay, render, sell, serve, trade, ...

b. promise, leave, permit, guarantee, offer, assign, grant, bequeath, ...

First, I claim that they are not triadic verbs, as argued in Larson (1988), but dyadic verbs that take a small clause complement headed by the invisible verb HAVE.

or BE, and that *give*, for instance, is a Spell-Out of HAVE amalgamated, via successive-cyclic head movement, with CAUSE.

Johnson (1991) and Runner (2001) argue that the category of the small clause in question is DP, in which the indirect object and the direct object establish essentially the same relation as John and book in John’s book. More specifically, Runner (2001) proposes that the first object is originally in the Spec of the second object, which is the small clause complement of a ditransitive verb, and that, through a set of operations, both the first and second objects of the DOC are ultimately extracted out of the matrix VP. Runner argues that the data like (i) support his proposed derivation:

(i) I gave Greg a gift [on purpose last Christmas] but [only reluctantly this year].

(Runner (2001: 28))

However, I suspect that (i) can be analyzed as involving a coordination each conjunct of which is an adverb to which another adverb is adjoined, which Takano (2002) calls “surprising constituents.” Takano (2002: 295) notes that, although formation of a surprising constituent is more constrained in English than in Japanese, it can still be formed in a focus position under limited circumstances. Baltin (2006: 735) also points out the same kind of example, as shown in (i):

(ii) It was in Boston on Saturday that I saw her.

5 We do not take a particular stance about the V-NP-PP construction headed by *send* (Green’s (1974) to-class 3), *tell* (Green’s to-class 4), etc. It may be possible that these verbs undergo the same analysis as the one given to the Give Verbs (Green’s to-class 2), or select a structure on the order of (8a) or (8b), or they could receive dual analyses. In this respect, introduction of two differences between *give* and *send* may be in order. First, Green (1974) points out that, unlike with *give*, a sentence-final time adverb that occurs with the verb *send* modifies only the causation and the initiation of the going. Thus, we may say (i) “even if we know that the letter has gone no further than the local post office” (ibid.: 133–134). Compare this fact with what is said in note 8:

(i) Mary sent her father the letter on Monday. (= Green’s (211))

Second, as Beck and Johnson (2004: 120; note 23) point out, the NP that occurs in the PP of the V-NP-PP construction with *send* can be a place, whereas it is odd with *give*:

(ii) a. send the plane to Yubara

b. (*)Thilo gave the plane to Yubara.

See also section 5.5 and note 19 for another difference between the two types of ditransitive verbs.
Second, I claim that (1a, b) share the same underlying structure, whose small clause complement is CP. The structure of (1a) will then be represented as in (12):

\[
(12) \quad [\text{IP} \ \text{NP1} \ [\text{I'} \ [\text{tNP1} \ [\text{v'} \ [\text{vP \ (gave)} \ [\text{CP} \ C \ (\phi) \ [\text{IP} \ \text{NP2} \ [\text{I'} \ (\phi) \ [\text{vP} \ \text{tNP2} \ \text{HAVE} \ \text{NP3}]])]]]]]]
\]

Third, exploiting (10) in a different way, I claim that the V-NP-PP construction in (1b) is syntactically derived from the DOC in (1a), by the excorporation of the adposition TO out of the verb HAVE and the A-movement of the so-called direct object to the matrix [Spec, V], across the so-called indirect object and out of the small clause CP, as in (13):

\[
(13) \quad [\text{IP} \ \text{NP1} \ [\text{I'} \ [\text{tNP1} \ [\text{v'} \ [\text{vP \ (gave)+v} \ [\text{vp} \ \text{NP3} \ [\text{v'} \ \text{tV} \ [\text{CP} \ C \ (\text{to}) \ [\text{IP} \ \text{NP2} \ [\text{I'} \ (\phi) \ [\text{vP} \ \text{tNP2} \ \text{BE} \ \text{tNP3}]])]]]]]]]
\]

This article is organized as follows: in section 2, we will present two pieces of evidence for the proposal that the Give Verbs and Verbs of Future Having that occur in the DOC (and the V-NP-PP construction, too) select a small clause. In section 3, we will give two pieces of evidence for the proposal that the small clause complement is headed by the invisible HAVE, and argue that one of them can be used to show that the small clause in question contains the projection of Infl, too. In section 4, we will give two new pieces of evidence for the proposal that the small clause in question is better analyzed as a projection of CP. In section 5, building on the arguments in the previous sections, we will propose a new analysis of the V-NP-PP construction, based on the hypothesis that it is transformationally derived from the DOC by the excorporation of TO out of HAVE. Then, we will demonstrate how this proposal can overcome a set of potential problems that reside in the previous analyses of the DOC that derive it from

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6 In this article, we will assume that the A-movement of a book across Mary in (13) does not violate the Minimal Link Condition (MLC), for the same reason as the A-movement of John in (i), because an inherent Case-marked NP (Bill in (i)) does not enter into the computation of “closeness”:

(i) John seems to Bill [t_\text{to be guilty}].

As for the question why the A-movement in question can take place across a CP-boundary without violating Chomsky’s (2001) Phase Impenetrability Condition (PIC), see a discussion in section 6. Readers are also referred to Postal (1974), who proposes that the apparent object of prevent in (ii) has been raised to the matrix object position, across the negative prepositional complementizer from, and a different analysis of (ii) made by Landau (2002):

(ii) I prevented the doctor from [cP from t_\text{examining John}].

Arguably, the derivation in (13) is the “positive” counterpart of (ii) in that from is semantically opposite to to. See also note 12 for Kayne’s (2001) proposals.
the V-NP-PP construction or those which assume that the two constructions are based on different underlying structures. Specifically, the connectivity effects on binding, scope (un)ambiguity, nominalization, extraction out of the (in)direct object, and adverb placement are discussed in the light of the present proposals. Section 6 discusses how the V-NP-PP construction, which is argued to involve A-movement across CP, is derived in a way compatible with Chomsky’s (2001) Phase Impenetrability Condition (PIC). We will also argue that certain verbs with the DOC variant lack the V-NP-PP variant, because the derivation of the latter involves a violation of the PIC. And section 7 is a conclusion.

2. Arguments for the Small Clause Analysis

In the literature, there have been suggested a number of arguments for the hypothesis that the ditransitive verbs take a small clause complement.

2.1. Nominalization

First, Kayne (1984) provides the generalization that verbs that take a non-control infinitive or small clause complement clause resist nominalization, irrespective of the position of the embedded subject in overt syntax:

(14)  
  a. *John’s belief [(of) Mary to have left]  
  b. *Mary’s belief [t to have left] by John  
  c. *their consideration [of Mary a genius]  

With this generalization presupposed, he argues that sentences like (1a) have a structure like (7), because they also resist nominalization:

(15)  
  a. *her teacher’s gift [of Mary of the letter]  
  b. *Mary’s gift [t of the letter] by her teacher  

In contrast to (15), the verbs in the V-NP-PP frame can be nominalized (though the passive nominal in (16b) is ruled out for some reason (cf. Anderson (1979))):

(16)  
  a. Mary’s gift of a car to Harry amazed us.  
  b. *A car’s gift to Harry by Mary  
  c. the presentation of the ball to Satoshi  
  d. the ball’s presentation to Satoshi

This fact apparently suggests that they do not take a small clause complement. In fact, exploiting the contrast between (15a, b) and (16c, d), Beck and Johnson (2004) argue that verbs that occur in the DOC frame are
dyadic verbs that take a small clause, whereas verbs that occur in the V-NP-PP frame are triadic verbs that occur in a Larsonian VP-shell structure, and that, because these two types of verbs differ in their argument structure, and argument structure should not be changed in the course of derivation, the DOC frame and the V-NP-PP frame are not transformationally related. As we will argue in section 5.4, however, this argument is not as strong as it first appears, because we can provide an alternative explanation of the contrast in question.

2.2. The Middle Construction

A second argument can be constructed from a consideration of the middle construction in English. Hale and Keyser (1993: 82) suggest that only verbs that take an "affected" argument (in the sense of Anderson (1977)) can undergo the middle formation, and identify the "affected" argument with the NP that occurs in the Spec of the lowest V which selects AP or PP in their Lexical Relational Structure (LRS):

(17) a. These books shelve easily. (change of location) (H&K: 84)
    b. This screen clears easily. (change of state) (ibid.: 84)

When the lowest V selects PP in the LRS, the referent of the NP in its Spec undergoes change of location; when the lowest V selects AP in the LRS, it undergoes change of state. This dual interpretation of "affectedness" is in line with Gropen, Pinker, and Goldberg's (1991) definition of "affectedness," as cited below:

(18) The verb's object would be linked not to the moving entity but to the argument specified as "affected" or caused to change as the main event in the verb's meaning. The change can either be one of location, resulting from motion in a particular manner, or of state, resulting from accommodating or reacting to a substance.

It is important to note that the "affected" arguments in H&K's sense are a proper subset of the NPs that are the internal arguments of a verb. Thus, although the postverbal NPs are the internal arguments of the verbs in (17a–c), respectively, only the former two are the "affected" arguments in their sense. Given this understanding, we predict that, if a postverbal NP is the subject of its (small) clausal complement, then the verb cannot be the target of the middle formation, even if it is regarded, under (18), as an "affected" argument. As is predicted, Nakamura (1995) points out that verbs that occur in the ECM construction, as in (19), and in the intransitive resultative
construction, as in (20), cannot undergo the middle formation:

(19)  
  a. Bill considers [John to be fool].
  b. *John considers to be a fool easily.  

(20)  
  a. They laughed [John off the stage].
  b. *John laughs off the stage easily.

The subject of the resultative predicate in (20a), which undergoes change of location, must be the “affected” argument in the sense of (18). Nevertheless, (20b) is ruled out, since the NP John is not the “affected” argument of the verb laugh.

With this in mind, note that verbs that denote change of possession cannot occur in the middle construction, as pointed out in Nakamura (1995: 13):

(21)  
  a. *Children give home tasks easily.
  b. *Books give to orphans easily.

It is clear that the first object NPs of the DOC and the V-NP-PP construction should both be “affected arguments” in the sense of (18), since the former undergoes change of state from non-possession to possession, and the latter undergoes change of location. What matters here is whether they are the “affected arguments” of the verb give. If they were the real argument of the verb give in the DOC and V-NP-PP construction, its LRS would be schematized as in (22a, b) respectively:

(22)  
  a. \([vp V (give) [vp NP1 [v' V [pp P (with) NP2]]]]\)
  b. \([vp V (give) [vp NP1 [v' V [pp P (to) NP2]]]]\)

Given (22a, b), (21a, b) should be ruled in for the same reasons as (17a, b). On the other hand, if the verb give in the two constructions takes a small clause complement, whose subject is the post-verbal NP, then (21a, b) will be ruled out for the same reasons as (20b).

3. Arguments for the Invisible HAVE and Invisible INFL

Since Green (1974), McCawley (1979) and Ross (1976), a number of researchers, including Kayne (1984) and Aoun and Li (1989), have argued for the existence of the invisible HAVE in the complement of the Give Verbs and Verbs of Future Having, and even if we look around the last decade or so, we find that Pesetsky (1995), den Dikken (1995), Harley (1997, 2004), Collins and Thrainsson (1996), Richards (2001), Oba (2002), and Beck and Johnson (2004), among others, have developed a similar argument in one way or another. Their arguments are based on the consideration of various linguistic phenomena, including modification by temporal adverbials (Green
(1974), McCawley (1979), Ross (1976)), verbal idioms (Richards (2001), Harley (2004)), the restitutive reading of again (Green (1974), Beck and Johnson (2004)), and so on. For space limitations, we will only overview the arguments based on verbal idioms and those based on modification by temporal adverbials.

3.1. The Idioms Using Give, Get, and Have

Richards (2001) divides English idioms with give into two types and shows that a set of idioms that obligatorily appear in a form using the DOC, as in (23a), can also have a counterpart with take or get, as in (23c), whereas a set of idioms that obligatorily appear in a form using the V-NP-PP construction, as in (24a), have no counterpart using take or get, as in (24c):

(23) a. The Court gives Mary the creeps.
   b. *The Court gives the creeps to Mary.
   c. Mary got the creeps.

(24) a. Laura gave birth to Nolan.
   b. *Laura gave Nolan birth.
   c. *Laura got birth.

Richards uses these data as evidence for Harley’s (1997) proposal that the DOC such as (25a), the V-NP-PP construction such as (25b), and a sentence headed by the verb get such as (25c) involve a structure as in (26a, b, c), respectively.

(25) a. Susan gave Mary a goldfish.
   b. Susan gave a goldfish to Mary.
   c. Susan got a goldfish.

(26) a. [vp NP1 [v' v (CAUSE) [pp NP2 (Mary) [p' P (HAVE) NP3]]]]
   b. [vp NP1 [v' v (CAUSE) [pp NP3 (a goldfish) [p' P (LOC) NP2]]]]
   c. [vp v (BECOME) [pp NP2 (Susan) [p' P (HAVE) NP3]]]

Under the assumption that “idioms can have part of a verb as one of their components” (ibid.: 188), (23a) and (23c) are both acceptable, in contrast to (23b), because the former two share [pp NP2 [p' P (HAVE) NP3]] as part of their verbal structures. On the other hand, (24c) is ruled out because its DOC counterpart (24a) is ill-formed and the V-NP-PP counterpart in (24b) does not share part of their verbal structure with the sentence with get.

The gist of Richards’ and Harley’s proposal is that, as the lexical verb have/get is decomposed into the abstract verb BE/BECOME and the abstract preposition HAVE, so the lexical verb give that occurs in the DOC is de-
composed into the abstract verbs CAUSE and HAVE, and for this reason, only idioms that appear in the DOC have their correspondents with transitive verbs like get, take and/or have.

3.2. Modification by Temporal Adverbials

Green (1974), McCawley (1979), and Ross (1976) argue for the existence of the invisible HAVE in the syntactic complement of a ditransitive verb. Although Green (1974) is concerned with the semantic representation of a ditransitive verb sentence, we can straightforwardly translate it to syntactic representation. The alleged evidence for their proposals is sentences involving a durative time adverb, such as (27a–c):

(27) a. Yesterday Bill lent me his bicycle until tomorrow.  
   (McCawley (1979: 93))

b. I gave Ted my keys until tomorrow.  
   (Ross (1976: 267))

c. They promised Jill a free room until she gets a job.  
   (Green (1974: 142))

(27a) means that yesterday Bill lent me his bicycle so that I could keep it until tomorrow. Similarly, in (27b, c), the durative time adverb modifies the state of the first object’s referent keeping the second object’s referent. Hence, it is reasonable to argue that the small clause of these verbs is headed by the abstract verb HAVE.

In fact, given a small clause analysis, (27a–c) also indicate the existence of IP (or TP) in the small clause. The past tense morphology on a verb requires that the event denoted by the verb should take place and complete at a temporal point (or in the temporal interval) before the speech time. For this reason, a durative time adverb that occurs in a simple clause cannot specify a temporal interval that straddles the speech time and extends from some point in the past to some point in future:

(28) a. *Yesterday, the stall was opened until tomorrow.  
    (H. R. Rosszell (p.c.))

b. *A week ago, Bill painted your car until tomorrow.

Given this generalization, the acceptability of (27a–c) demonstrates that the small clause should contain TP. Since the head T does not have a past tense morphology, until tomorrow can specify the temporal interval that

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7 One exception to this generalization is the well-formedness of examples like (i):

(i) a. The judge postponed the court until tomorrow.

b. The Chairperson adjourned the Commission until tomorrow.
straddles the speech time.

A contrast between ditransitive verbs and transitive verbs can also be illustrated with a punctual time adverb. Green (1974: 135) points out that in (29b), the adverb on Thursday in the sentence-initial position can only modify the time at which the subject made a promise, whereas (29a), in which the same adverb is in the sentence-final position, can also be interpreted such that T.D. promised (on some day before Thursday) that Judy would get a new car on Thursday. In the latter interpretation, the time adverb modifies the subevent of Judy's getting a new car.8

(29) a. Tricky Dick promised Judy a new car on Thursday.
    (ambiguous)

b. On Thursday, Tricky Dick promised Judy a new car.
    (unambiguous)

On the other hand, more than one punctual time adverb cannot modify a simple sentence headed by the verb paint, an accomplishment verb:9

(30) *A week ago, Bill painted your car yesterday.
    (McCawley (1979: 85))

The event of Bill's painting your car consists of a subevent of Bill's acting on your car by painting and another subevent of your car being painted. However, these two subevents cannot be modified by two temporal adverbs with different temporal references, since they must both be "bound" by a single T. Given the ill-formedness of (30), the ambiguity of (29a) also supports the claim that the Verbs of Future Having take a small clause whose category is at least as large as TP (or IP).

4. Arguments for the CP Complementation

In this section, I will propose that the small clause complement of the Give verbs and Verbs of Future Having is CP, headed by the empty C. Given this proposal, the full-fledged structure of (1a) is schematized as

8 We assume with Green (1974: 133) that when a time adverb modifies the verb give, it simultaneously modifies several aspects of the action described by the verb, including the act of giving, the event of moving, and the result state of having. For these reasons, the give counterpart of (28a), as in (i), is presumably unambiguous:

(i) Tricky Dick give Judy a new car on Thursday.

9 The distinction Lakoff (1970) draws between direct causation and indirect causation can be explained along the same lines (ibid.: 432-433):

(i) a. Floyd caused the glass to melt on Sunday by heating it on Saturday.
    b. *Floyd melted the glass on Sunday by heating it on Saturday.
in (31):\(^{10}\)

\[(31) \quad [\text{IP} \, \text{NP1} \, [\text{I'} \, [\text{VP} \, \text{tNP1} \, [\text{v'} \, [\text{vP} \, \text{V} \, \text{gave}) \, [\text{CP} \, \text{C} \, (\emptyset) \, [\text{IP} \, \text{NP2} \, [\text{I'} \, [\text{VP} \, \text{tNP2} \, \text{HAVE} \, \text{NP3})]')))]]\]

An argument for this proposal is based on the distribution of the Negative Polarity Item (NPI) in English. Note first that the NPI in English must be c-commanded by a negative element:

(32) *Any student did not come.

When the NPI occurs in a nonnegative context, such as in the complement of the negative verb *deny*, the establishment of c-command seems insufficient:

(33) a. *John denied anything.
   
   b. John denied that he had won anything.

In both (33a) and (33b), the verb *deny* c-commands *anything*. Nevertheless, (33a), where the direct object of the negative verb is itself the NPI, is ill-formed. To account for this asymmetry, Laka (1990) proposes that the NPI in a nonnegative sentence is not licensed by the negative verb itself but by the head of the complement CP, which is negatively specified. Progovac (1992) also provides a contrast as in (34) and claims that nonnegative NPI is licensed via a negative polarity operator in [Spec, C] (ibid.: 343) (see also Landau (2002)):

(34) a. Every man [CP who owns any guns] must report to the police station.
   
   b. *Every man [PP with any guns] must report to the police station.

The verb *deny* can also be a ditransitive verb, as shown in (35a), which is semantically almost equivalent to a sentence using *give*, as in (35b):

(35) a. They denied Satoshi the victory.
   
   b. They \{did not / refused to\} give Satoshi the victory.

In contrast to the transitive *deny* in (33a), the ditransitive *deny* can license the NPI in either the indirect or the direct object position. Consider the following examples, found through Google search:

---

\(^{10}\) Ogawa (2001) assumes with Pesetsky (1995) that the DOC is headed by the empty preposition G, and attributed the affixal status to the empty G. On the other hand, we will identify the affixal head in the ditransitive verb complement as the empty C.
Given Laka's proposal and our claim that the Verbs of Future Having select a CP complement, the structures of (36a, b) will be given as in (37a, b), respectively:

(37) a. deny \[cP C (NEG) [IP [vp anyone [v' HAVE the right ...]]]]

b. deny \[cP C (NEG) [IP [vp him [v' HAVE any rights]]]]

In (37a, b), the negatively specified C c-commands the NPI in its complement and the latter properly satisfies the c-command requirement.

Instead of the negatively specified C, one might assume that the ditransitive deny selects a PP complement headed by HAVE (Harley (2004); cf. Pesetsky (1995)) and that its head, which is negatively specified here (cf. Beck and Johnson (2004: 103)), raises and adjoins to the matrix V, as in (38):

(38) a. deny+HAVE (NEG) [pp anyone [p, tHAVE the right ...]]

b. deny+HAVE (NEG) [pp them [p tHAVE any further scores]]

In both (38a) and (38b), the raised HAVE c-commands the NPI and the latter is properly licensed. However, if a prepositional head could in principle be negatively specified, it would remain unclear why there arises a contrast between (34a), with a CP modifier, and (34b), with a PP modifier.

An independent support for the CP complementation comes from the following data, found through Google search, showing that verbs of the deny type can also occur in the V NP 1 from-NP2 construction, where from has been known, since Postal (1974), to be a negative complementizer (see note 6; see also Landau (2002)):

(39) a. Sorry kids, mom has selfishly denied you from any vacation this year.

b. He wanted to spare her from any consequences of his actions.

In short, to the extent that arguments by Laka, Progovac, and Postal are

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11 An Anonymous proof-reader of EL suggests that (36a) is not natural English, and the source is clearly not a native speaker. If there is any such contrast between (36a) and (36b) for some speakers, we can account for this idiolectal variation by assuming that, for these speakers, the first object of the ditransitive deny must be overtly raised to the matrix [Spec, V] (Postal (1974)) or the embedded [Spec, C] (Landau (2002)) and gets out of the scope of the negative complementizer:

(i) *Any student I did not invite t to the party. (Hoeksema (2000: 130))

The movement of the first object out of the small clause complement in (36a) is not excluded in principle. See notes 7 and 19 for relevant discussion.
correct, we are forced to conclude that the complement of the ditransitive deny (and, similarly, spare, forbid, disallow, refuse) must be CP. Now that deny takes a CP complement, it is reasonable to apply the same analysis to its positive counterpart, give.

5. Excorporation of TO from HAVE

5.1. The Dative Alternation

In this section, exploiting (10), I propose a transformational account for the dative alternation. More specifically, I claim that the V-NP-PP construction is syntactically derived from the DOC, by the excorporation of the

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12 Horn and Lee (1995) critically review Progovac's proposal that the NPI in a non-negative context is licensed by a "polarity operator" in the CP domain, by pointing out data of the following kind, among others:

(i) a. He denied any involvement in the conspiracy.
    b. He avoided any responsibility for the defeat.

At first blush, there appears to be no room for positing CP in (ia, b). However, we would like to focus on the fact that the object NPs in (ia, b) imply the semantics of subject-predicate relationship. Thus, (ia) can be paraphrased such that he denied that he was ever involved in the conspiracy. Hence, we will analyze the verbs deny and avoid as taking a CP complement here. An independent chain of arguments can be constructed for this analysis. As the first step, let us assume that their complement contains the invisible gerundive verb HAVING, as in (ii), for essentially the same reasons as (iiiia) can be analyzed as in (iiib) (see Ross (1976), MacCawley (1979), Endo, Kitagawa and Yoon (2002) and Harley (2004) for this analysis of want):

(ii) He denied [xp PRO HAVING any involvement in the conspiracy].

(iii) a. John wants a car.
    b. John [vp wants [pp PRO [p' P (HAVE) a car]]]

The postulation of the invisible HAVING in (ii) is supported by the following data, found through Google search, showing that these verbs can take the overt having, even where they could directly take an NP complement:

(iv) a. Park officials deny having any connection with the official characters.
    b. I have avoided having any sort of relationship with him for decades.

Second, we assume that the small clause with the invisible HAVING in it is at least as large as IP, since the gerundive morpheme heads IP (cf. Milsark (1988)). Third, the complement of these verbs can realize all of the overt subject, the negative complementizer from, and the overt gerundive having:

(v) a. This can deny children from having a relationship with their siblings.
    b. Everything should be done to avoid unauthorised persons from having access to it.

For these reasons, we identify the category XP in (ii) as CP, even if neither the head C, the subject PRO, nor the gerundive verb HAVING is phonetically realized.
adposition TO out of the verb HAVE and its movement to the head of CP.\textsuperscript{13}

Given this claim, (1a, b) will have the derivations in (40a, b), respectively:

\begin{enumerate}
\item [(40)]
\begin{enumerate}
\item a. \([\text{IP} \ NP1 \ [\text{vp} \ t_{\text{NP1}} \ [v' \ v \ [\text{vp} \ V \ (\text{give})] \ [\text{cp} \ C \ (\varphi)] \ [\text{IP} \ NP2 \ [v' \ I \ (\varphi)] \ [\text{vp} \ t_{\text{NP2}} \ \text{HAVE} \ \text{NP3}]]]]]]]]
\item b. \([\text{IP} \ NP1 \ [\text{vp} \ t_{\text{John}} \ [v' \ V \ (\text{give})+v \ [\text{vp} \ \text{NP3} \ [v' \ tv \ [\text{cp} \ \text{TO}+\text{I}+\text{C} \ (\text{to})] \ [\text{IP} \ NP2 \ [v' \ I' \ [\text{vp} \ t_{\text{NP2}} \ \text{BE} \ t_{\text{NP3}}]]]]]]]]]
\end{enumerate}
\end{enumerate}

In (40a), the invisible HAVE stays in situ and keeps its Case assigning ability. Hence, NP3 is Case-licensed in the complement clause. On the other hand, since the embedded INFL is nonfinite, NP2 in the Spec of the nonfinite IP cannot have its Case feature checked in the embedded clause. Given that the CP in (40a) is a strong phase, NP2 cannot have its Case checked, via Agree, by the matrix \(v\), which is another phase head, since it is in the complement domain of the phase head \(C\). Hence, we tentatively assume that it has its Accusative Case checked via Agree with the matrix \(V\), which is not a phase head (see sections 5 and 6 for a more detailed discussion).

In (40b), TO is excorporated from HAVE and spelled out in C as \(to\),\textsuperscript{14,15} and the invisible HAVE is changed into the invisible BE. Since the head of CP is occupied by \(to\), NP2 has its Case checked by the prepositional complementizer in an ECM fashion, just as in \(I\ \text{prefer for Mary to leave}\). If we assume that, just like the lexical \(be\), the invisible BE cannot check any

\textsuperscript{13} See Kayne (2001) for the proposal that \(\dot{a}\), the French counterpart of the preposition \(to\), is a prepositional complementizer that functions as an attractor. My proposal is similar to Kayne's in that \(to\) occupies the head of CP at some point in the derivation, and \(to\), when incorporated to \(V\), assumes an EPP feature and functions an attractor.

\textsuperscript{14} The obligatory phonetic realization of \(to\) under the I-to-C movement across the indirect object is probably for the same reason as that of the auxiliary \(do\) under the I-to-C movement across the subject, as in \(What\ did\ you\ buy?\)

\textsuperscript{15} As for the featural trigger of the TO excorporation, we will not make a specific proposal here. But a modal feature might reside in I/C and could attract the adposition TO in the invisible HAVE. Note that the preposition \(to\) can lose the original meaning of directional movement and assume a flavor of (future) modality in certain instances of the V-NP-PP construction (see also section 6.4), and that certain ditransitive verbs can also have the usage as the verbs that select an infinitive or gerundive clause:

\begin{enumerate}
\item [(i)]
\begin{enumerate}
\item a. She committed herself to helping him.
\item b. She committed herself to help him.
\end{enumerate}
\item [(ii)]
\begin{enumerate}
\item a. Leave the children to their play.
\item b. I will leave you to think it over.
\end{enumerate}
\item [(iii)]
\begin{enumerate}
\item a. His boring speeches sent me to sleep. (LDCE: 950)
\item b. I'll have to send my passport to be renewed. (LDCE: 950)
\end{enumerate}
\end{enumerate}
Case, then NP3 must move to the matrix [Spec, V] for Case licensing. If we assume that this movement, along with the overt movement of the verb give, takes place in overt syntax, we obtain the correct word order as in (1b).

In what follows, we will see how these analyses can receive empirical support.

5.2. The Connectivity Effect on Binding

In (40a), the so-called indirect object asymmetrically c-commands the so-called direct object, throughout the derivation. On the other hand, in (40b), the direct object moves across the c-commanding indirect object. Then, we predict that only the V-NP-PP construction in (41b) manifests the connectivity effect on binding. This prediction is borne out by the following contrast (((41a) is taken from Barss and Lasnik (1986: 347) and (41b) from Pesetsky (1995: 222)):

(41) a. *I showed each other's students the professors.
   b. Sue showed each other's friends to John and Mary.

On the other hand, neither an analysis in which the DOC is derived from the V-NP-PP construction nor an analysis in which the two constructions are based on different underlying structures have a straightforward way to account for the contrast in (41). In fact, the former analysis would make the

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16 As discussed in Takano (1998), among others, the connectivity effects as illustrated in (41) are part of a broader context, as illustrated in (ia–c):
   (i) a. ?I put each other's dresses on the girls.
      b. ?I borrowed each other's pictures from the boys.
      c. ?I bought each other's pictures for the boys. (Takano (1998: 827))

As for the acceptability of (ia–c), I have no specific proposal to account for it.

17 An anonymous reviewer refers to Lasnik's (2003: 127) suggestion that A-movement does not always show the connectivity effect, and asks how to reconcile this kind of fact with (41b), which we take to be evidence for the A-movement analysis:
   (i) a. The claim that John was asleep seems to him to be correct.
      b. *Which claim that John was asleep was he willing to discuss?

Essentially, the question posed by the contrast in (i) is this: if the raised NP in (ia) leaves its copy in the embedded clause, it should induce a violation of the Binding Condition (C), for the same reasons as (ib). We can resolve the apparent paradox between (41b) and (ia), if we assume that the copy created by A-movement can be totally deleted, and that Binding Condition (C) applies to the LF representation after the copy deleted in (ia). (ib) will be ruled out because the moved wh-operator is subject to the Preference Condition (Chomsky (1995)) and the original copy created by wh-movement cannot be deleted for this reason.
backward prediction of acceptability.\textsuperscript{18}

5.3. Scope (Un)ambiguity

Aoun and Li (1989: 106–107) observe that sentence (42a) has only the reading in which the first quantifier takes scope over the second, whereas ambiguity arises in sentence (42b):

(42) a. Mary gave someone every book. (someone > every book)
    b. Mary gave some book to everyone. (ambiguous)

If we assume with Aoun and Li (1989) that quantifier scope is determined by the principle to the effect that a quantifier A takes scope over a quantifier B iff A c-commands a member of the chain headed by B, then the above data are fully compatible with our proposal. On the other hand, here again, neither an analysis in which the DOC is derived from the V-NP-PP construction nor an analysis in which the two constructions are based on different underlying structures has a straightforward way to account for this asymmetry.

5.4. Nominalization

Now, consider the nominal counterpart of (1a, b), as shown in (43a, b):

(43) a. *Mary’s gift (of) Harry (of) a car amazed us.
    b. Mary’s gift of a car to Harry amazed us.

(Anderson (1979: 24))

As noted in section 2.1, Beck and Johnson (2004) take this asymmetry as evidence against a transformational analysis, based on the assumption that only arguments of verbs can be marked with Genitive Case in their nominal counterpart (cf. Chomsky (1986)), according to which neither the Goal NP nor the Theme NP in (43a) is an argument of the verb give (which means that give in the DOC takes a small clause), whereas the Theme NP in (43b)

\textsuperscript{18} Instead of assuming a small clause CP and the excorporation of TO out of HAVE, Aoun and Li (1989: 167) assume a structure like (i) for the V-NP-PP construction:

(i) \[ [VP V [YP NP3 \ldots [XP [PP P (= to) NP2] [X' X f_NP3]]]] \]

In (i), the to phrase is underlyingly in the Spec of the small clause head which selects the Theme NP as its complement. One problem with this analysis is that NP2, dominated by PP, does not c-command the trace of NP3. One cannot assume that the node of PP is simply ignored for the computation of c-command for binding. See (iiia–c), an instance of the time-honored problem (cf. Reinhart (1983: chapter 3)):

(ii) a. He talked to them, about each other.
    b. *To these people, he talked about each other.
    c. These people, he talked to about each other.

(Baltin (2006: 757))
is an argument of it, and that a syntactic transformation should not change the argument structure (or $\theta$-grid) of a verb.

However, their argument is not so strong as it appears for two reasons. First, as we have noted, the facts about the middle formation suggest that not only the verb *give* that occurs in the DOC but also the one that occurs in the V-NP-PP construction takes a small clause complement. Second, Ogawa (2001) argues that nominalization involves syntactic incorporation of a verb to the functional category Nz, which is an abbreviation of “Nominalizer,” and that the Genitive Case of a derived nominal is a structural Case checked in the same Spec-Head configuration as Nominative or Accusative Case is. If the Genitive Case is not an inherent Case, Beck and Johnson’s assumption is no longer valid.

Given the syntactic nominalization hypothesis, the derivations of (43a, b) are represented as in (44a, b), respectively, where the Spec of VP checks Accusative Case if it is selected by $v$, whereas it checks Genitive Case if it is selected by Nz:

\[
\begin{align*}
(44) & \quad a. \quad *[\text{DP Mary’s } [\text{Nzp } \text{V(give)+Nz } (= \text{gift}) ] [\text{VP of } \text{Harry } [v \, t_v \, [\text{CP C} (\phi)] [\text{IP I (\phi)} [\text{VP } t_{\text{Mary HAVE a car}}]]]]] \\
& \quad b. \quad [\text{DP Mary’s } [\text{Nzp } \text{V(give)+Nz } (= \text{gift}) ] [\text{VP of a car } [v \, t_v \, [\text{CP TO+I+C (to)} [\text{IP Harry } [I \, t_I \, [\text{VP } t_{\text{Mary BE to car}}]]]]]]]
\end{align*}
\]

Note that, in (44a), the head of CP remains empty, whereas in (44b), it is overtly realized as to. Given this distinction, the ill-formedness of (43a) can be attributed to the same morphological reason as the obligatoriness of *that* in (45b): the head of the CP-complement to a derived nominal cannot be empty (cf. Stowell (1981), Kayne (1984), Pesetsky (1995), Ogawa (2001)):

\[
(45) \quad a. \quad \text{John believed (that) Bill was guilty.} \\
& \quad b. \quad \text{John’s belief *(that) Bill was guilty}
\]

5.5. Extraction out of the (In)direct Object

Beck and Johnson (2004: 102) point out that extraction is possible out of the first NP in the V-NP-PP construction, but not in the DOC.\(^{19}\)

\(^{19}\) As an anonymous reviewer tells me, Hudson (1992: 258) points out that, while the extraction out of the subject of a finite clause is ruled out, extraction out of the indirect object of the verb *give* is acceptable to everyone he has asked:

\[
\begin{align*}
\text{(i) a. } & \quad *\text{Which books do you think [the authors of ___] will get prizes?} \\
& \quad b. \quad \text{Which book shall we give [the author of ___] a prize?}
\end{align*}
\]

However, my informant told me that (ia) and (ib) are equally ill-formed.
(46)  a. *Who did you send [a friend of ___] a book?  
    b. What did you send [a book about ___] to my friend?  
In our theory, as well as in Beck and Johnson's (2004), the ill-formedness of (46a) can be attributed to the same reason as that of (47a), that is, the Subject Condition, since the first NP occupies [Spec, IP]. The well-formedness of (46b) is due to the same reason as that of (47b), since the first NP is raised to the matrix [Spec, V], which is a position from which extraction is permissible (Beck and Johnson (2004: 102), cf. Diesing (1992)).

(47)  a.?*Who did you believe [[a friend of ___] satisfied]?  
    b. Who did you visit [a friend of ___] yesterday?  
An analysis that assumes that the first NP in both (46a) and (46b) occupies the subject position in the small clause complement would have no direct way to explain the contrast in acceptability between them.

5.6. Adverb Placement

The DOC and the V-NP-PP construction also differ with respect to adverb placement between the first and second objects. The latter allows it, whereas the former does not:

(48)  a. Greg gave Jan (*slowly) the present (slowly).  
      (Runner (2001: 29))  
    b. Opus gave the dandelions quickly to Rosebud.  
      (Harley (1995: 62))  

The adverbs slowly and quickly must be merged to the matrix VP, since it modifies the act of giving rather than the state of having. Given this, the contrast between (48a) and (48b) follows straightforwardly from our proposal, in which the first object in the DOC remains in the embedded CP (cf. For the speakers who accept (ib), two possibilities come to mind: first, the indirect object NP may be exceptionally raised to the matrix [Spec, V]; with the verb give, the C-to-V incorporation is not rejected in principle (cf. section 6.3 and note 8). We will argue in section 6.4 that the C-to-V incorporation is banned from the complement of the ditransitive verb buy. As predicted, (ii) is ill-formed:

(ii) *Who did Mary tell John bought [friends of ___] a book?  
     (Oba (2002: 63))  
An alternative way to account for (ib) is to assume that, for these speakers, give is selecting a stage-level predicate, whose subject Basilico (2003) argues remains in the Spec of VP. Then, extraction in (ib) will be ruled in for the same reason as (iii):

(iii) Which planet did you see [[a picture of ___] appear on your computer screen]?  
     (Basilico (2003: 5))  
20 The Accusative NP in (47a) may be raised to the matrix [Spec, V] at LF. However, we assume that, if it remains in the small clause in overt syntax, overt extraction out of it inevitably leads to a violation of the Subject Condition.
(40a)), whereas the first object in the V-NP-PP construction is overtly raised to the Spec of the matrix VP. Now, let us adopt Chomsky's (1995) claim that, other things being equal, the operation of (External) Merge is preferred over Move (or Internal Merge). Then, on our proposals, the structure of (48b) is given as follows:

\[
(49) \quad [vP \ V (\text{give}) + v \ [vP \ NP3 \ [v' \ tv \ [cP \ C \ (\text{to}) \ [iP \ NP2 \ ...]]]]]
\]

6. The Dative Alternation and the PIC

We have seen so far that the Give verbs and Verbs of Future Having select a small clause headed by the null C and that the so-called dative alternation, as the derivation of the V-NP-PP construction from the DOC, should be analyzed as involving the excorporation of TO out of the invisible HAVE and the A-movement of the Theme NP out of a CP, as in (50b):

\[
(50) \begin{align*}
& \quad \text{a. John gave a picture to Mary.} \\
& \quad \text{b.} \quad [iP \ NP1 [I' I \ [vP \ t_{NP1} [v' \ V (\text{gave}) + v \ [vP \ NP3 \ [v' \ tv \ [cP \ C \ (\text{to}) \ [iP \ NP2 \ [I' (\varphi) \ [vP \ t_{NP2} \ BE \ t_{NP3}])))]]]]
\end{align*}
\]

In this section, we will discuss what these proposals will predict when they are coupled with Chomsky's (2000, 2001) Phase Impenetrability Condition (PIC).

6.1. A-movement out of a CP and the PIC: Preliminary Remarks

Chomsky (2000: 108) proposes that every instance of movement is subject to the following condition:

\[
(51) \quad \text{Phase Impenetrability Condition (PIC):} \\
\quad \text{In phase } a \text{ with head } H, \text{ the domain of } H \text{ is not accessible to operation outside } a, \text{ only } H \text{ and its edge are accessible to such operations.}
\]

Suppose, for simplicity, that every C and every v are strong phase heads. Then, at the point when phrase structure is constructed up to vP, the probe v can have access to the edge of CP, but not into the domain of the phase head. This means that in (52), WP is visible for v, but neither ZP nor KP is:

\[
(52) \quad [vP \ v \ [vP \ V \ [cP \ WP \ [c' \ C \ [iP \ ZP \ [I' \ BE \ KP \ ...]]]]]]
\]

Now that NP3 in (50b) corresponds to KP in (52), it should be invisible from the matrix v. Then, the A-movement to matrix [Spec, v] should violate the PIC.

However, let us adopt the following procedure according to which the PIC is applied (Chomsky (2001: 13)): 
(53) Ph1 is interpreted/evaluated at the next relevant Ph2.
Given (53), the complement of a strong phase head C is not Spelled-Out before the matrix light verb v, which is another phase head, is merged with the matrix VP. This means that, if the matrix V can be qualified as an attractor of a c-commanding NP, the A-movement from inside the complement of the C to the matrix [Spec, V] across CP and without moving through [Spec, C] is applicable without violating the PIC.

One potential problem in postulating such a derivation is that the matrix V, which is a lexical category, is not usually qualified as an attractor. In this respect, Ogawa (2007) proposes that, when the selecting C is incorporated to the matrix V, the C+V complex can be assigned an EPP feature and it can be qualified as an attractor; however, the C-to-V incorporation is possible only when the temporal reference of the embedded T is equated with that of the matrix T.\(^{21}\) In addition to the Japanese data discussed in Ogawa (2007), this proposal can also account for the following contrast in the possibility of the raising operations, as in (54), (55) and (56):

(54) a. The defendant seems to the DA [___ to be guilty].
    \hspace{1cm} (Martin (2001: 147))
    b. *The defendant seems to the DA [___ to steal the car].
       \hspace{1cm} (ibid.: 150)

(55) a. John believes [Ronald to be the best].
    \hspace{1cm} (ibid.: 147)
    b. *Geno believed [Rebecca to win the game].
    \hspace{1cm} (ibid.: 150)
    c. ??Sara convinced [Bill to have gone to the party].
    \hspace{1cm} (ibid.: 148)

(56) a. *I forgot [him to be bald].
    \hspace{1cm} (Kiparsky and Kiparsky (1970: 359))
    b. *I resent [Mary to have been the one who did it].
    \hspace{1cm} (ibid.: 348)
    c. *There is tragic [___ to have been a snowstorm].
    \hspace{1cm} (ibid.: 346)

(54a, b) show that, when the event time of the embedded clause is not equated with that of the matrix clause but is posterior to it, the embedded subject cannot be raised to the matrix subject position. (55a–c) show that the so-called “raising-to-object” construction requires that the event time of the embedded clause cannot be either posterior or prior to that of the matrix clause. (56a–c) show that the factive predicate, whose complement denotes the event presupposed to have taken place prior to the matrix event, is incompatible with either the “raising-to-object” (ECM) or the “raising-to-
subject” construction. Given Ogawa’s (2001) assumption that both the raising and ECM complements are CPs headed by the empty C, the ill-formed sentences in (54) to (56) leads to the generalization that raising across the CP-boundary is possible only when the temporal reference of the embedded T is equivalent to that of the matrix T. We now claim that this generalization is explained by the PIC and the semantic restriction on the syntactic C-to-V incorporation.22

6.2. The Derivation of the V-NP-PP Construction and the PIC

Now, let us return to the V-NP-PP construction in English and discuss its temporal properties. The structure in (50b) is interpreted at the LF interface in such a way that John’s act of giving caused the result state of a picture belonging to Mary. What matters here is whether the temporal point at which John’s act of giving takes place in (50a) is identical to the temporal point at which Mary comes into possession of a picture. As far as the verb give in (50a) is concerned, the answer to this question seems positive: the two temporal references are identical (see note 8). Hence, on our assumptions, the head of the small clause CP can be incorporated to the matrix V and the latter can be assigned an EPP feature. When the EPP feature on the matrix V triggers the dative alternation, the derivation of (50a) proceeds as follows:

(57) a. merger of the direct object NP3 and the invisible HAVE:

\[ vP \text{HAVE} (= BE + TO) \text{NP3} \]

b. merger of the embedded v and the indirect object NP2:

\[ [vP \text{NP2} [v' v [vP \text{HAVE} (= BE + TO) \text{NP3}]]] \]

c. excorporation of TO and movement of NP3 to the edge of vP:

\[ [vP \text{NP3} [v' \text{NP2} [v' \text{TO} + v [vP BE t_{\text{NP3}}]]]] \]

d. merger of the embedded Infl and movement of NP2 to [Spec, I]:

22 An anonymous reviewer suggests the possibility that, although the applicability of the C-to-V incorporation is blind to semantic interpretation, its application results in the identification of the two temporal references. The choice between the two possibilities will ultimately be a matter of how to formulate the “semantic selection.” However, we may note that, in this reviewer’s proposal, we need to postulate a purely formal feature that triggers the C-to-V incorporation, and at the same time, we have to say that sentences like (54b) are syntactically well-formed and semantically gibberish. A “more syntactic” solution to the issue at hand will be to argue, as we do in the text, that these ill-formed sentences are syntactically “underivable.”
e. merger of the embedded C and movement of TO to C:
\[
[\text{IP NP2 } [\text{I' TO+v+I } [\text{vP NP3 } [\text{v' tNP2 } [\text{v' tv } [\text{vP BE tNP3}]]]]]]
\]
e. merger of the matrix V and C-to-V incorporation:
\[
[\text{VP TO+v+I+C+V } [\text{cp tC (to) } [\text{ip NP2 } [\text{I' tI } [\text{vP NP3 } [\text{v' tNP2 } [\text{v' tv } [\text{vP BE tNP3}]]]]]]]23
\]
g. A-movement of NP3 to the matrix [Spec, V]:
\[
[\text{VP NP3 } [\text{v' TO+v+I+C+V } [\text{cp tC (to) } [\text{ip NP2 } [\text{I' tI } [\text{vP NP3 } [\text{v' tNP2 } [\text{v' tv } [\text{vP BE tNP3}]]]]]]]]]]
\]
Since, at the point in (57f), the matrix v is not merged yet, the attractor C+V can look into the edge of the second highest phase in the tree, that is, the embedded [Spec, v]. Since NP3 resides in the search space, it can be attracted. Note also that, since NP2 has its Case licensed by the inherent Case assigner to, it does not count as the actual intervener that blocks the Agree relation between the matrix V and NP3, even if it appears to intervene between them (see note 6). Hence, NP3 can be successfully attracted to the matrix [Spec, V], as in (57g).

6.3. The Derivation of the DOC and the Temporal Equivalence Condition

Next, let us consider the DOC in (58a), whose relevant structure is given in (58b):

(58) a. John gave Mary a picture.

b. \[
[\text{vp' v } [\text{vp V (give) [cp C (φ) [ip NP2 [I' I (φ) [vp tNP2 HAVE NP3]]]]]]]
\]
We have assumed in section 5.1 that NP2 has its Accusative Case checked via Agree with the matrix V, rather than with the matrix v. Such a long-distance Agree relation is subject to the PIC even if the embedded CP is a strong phase, since the matrix V is not a phase head (see (53)).

Now, let us consider whether the embedded C in the DOC can incorporate to the matrix V. We have just seen that the derivation of the V-NP-PP construction involves A-movement of the direct object to the matrix [Spec, V] and that the latter movement presupposes the C-to-V incorporation, which in turn requires temporal equivalence between the initiation of the causing event and the establishment of the result state. Note that this sys-

\[23\] We assume, following Ogawa (2007), that the C overtly incorporated to the V is pronounced in the original position, for morphological reasons.
tem says nothing about the derivation of the DOC. To the extent that the indirect NP in the DOC does not raise to the matrix [Spec, V] (or the matrix [Spec, v]), the C-to-V incorporation may or may not take place in the DOC (but see note 8). Given the asymmetry between the DOC and the V-NP-PP construction, we will make the prediction that the DOC, but not the V-NP-PP construction, permits the embedded clause to have an independent temporal reference. In other words, when the embedded clause must, for independent reasons, have a temporal reference distinct from that of the matrix clause, we can have the DOC, but not the V-NP-PP construction. The next section is devoted to the confirmation of this prediction.

6.4. A PIC-based Account of Certain Restrictions on the Dative Alternation

Note, first, that, under some interpretation, even the DOC with the verb give resists alternation with the V-NP-PP construction, as shown in (59):

(59) a. The war years gave Mailer his first big success.
   b. *The war years gave his first big success to Mailer.

The verb give used here does not have the semantics of performing an action. Oehrle (1976) identifies this reading as 'causative.' The contrast in (59) is not a phenomenon limited to the verb give but is generally observed with verbs that show dative alternation, and the generalization seems to be that, "if we replace the matrix subject with a NP that cannot be the Agent of an action, but can only be a Causer, the alternant with to lacks any non-deviant reading." (Pesetsky (1995: 193)).

Pesetsky (1995) assumes that the ditransitive verbs with the causative reading take a small clause complement with abstract affixal CAUS head in the most deeply embedded position, and attributes the contrast between (59a) and (59b) to the interaction of the affixal status of the CAUS on the one hand and, on the other hand, the difference between the affixal status of the null preposition G alleged to head the DOC and the non-affixal status of the overt preposition to that heads the V-NP-PP construction.

Since we are assuming neither the null affixal G in the DOC (see note 10) nor the null affixal CAUS, I have to take a different road. Specifically, I will attribute the ill-formedness of (59b) to the PIC. Note first that, when the subject of give is not Agent but Causer, the temporal reference of the causing event does not have to be identified with the temporal point at which the result state of possession comes up: the former event (i.e. the act of giving) has usually taken place (or started) long before the latter is established. This point is more obvious in (60a). In the relevant reading of (60a), as in (60b) Nixon, or some event that involves Nixon, may
have given Mailer an idea for writing a book, with which Mailer completed writing the book some time later; when Nixon counts as the Agent of the giving event, no such temporal discrepancy may lie between the matrix and embedded events, since the moment at which the agentive act of giving is established is necessarily identical to the moment at which the result state of possession is established (see note 8):

     b. Mailer wrote a book which he wouldn’t have been able to
        write if it hadn’t been for Nixon.
     c. *Nixon gave a book to Mailer. (in the reading in (60b))

Now, recall that, when the embedded C incorporates to the matrix V, the temporal equivalence is required between the initiation of the causing event and the establishment of the result state. This means that the C-to-V incorporation is not applicable in the causative usage of give in (59b) and (60c). Without the C-to-V incorporation, the matrix V cannot have an EPP feature, and hence it cannot attract the Theme NP to [Spec, V]. Even if the matrix v, as a phase head, can have an EPP feature independently, A-move- ment to the matrix [Spec, v] across the CP phase violates the PIC. Hence, the dative alternation as in (59b) and (60c) is ruled out.

Next, consider the following contrast:

(61)  a. Carmen bought Mary a dress.
     b. *Carmen bought a dress to Mary.24 (Levin (1993: 142))

In Levin’s (1993) classification, the ditransitive verb buy in (61a) belongs to Get Verbs, which include verbs like the following:

(62)  get, book, buy, call, catch, earn, fetch, find, get, order, ...

These verbs can also be used as transitive verbs with only Theme NP as their internal argument. When they are used in the DOC, as in (61a), the Goal argument is added and they assume the meaning that the actor takes the type of getting action denoted by the matrix verbs and subsequent cau- sation of change of possession: for instance, (61a) can be paraphrased in

24 The following variant with for is acceptable:

(i) Carmen bought a dress for Mary.

We leave the question of how sentences like (i) are derived open for future research (cf. Beck and Johnson (2004: 105)). We have no explanation, either, for the fact that what Levin (1993: 138–139) calls Contribute Verbs does not have the DOC variant. Readers are referred to a discussion on this issue in Green (1974: 80–81):

(ii)  a. We contributed our paycheck to her.
     b. *We contributed her our paycheck. (Levin (1993: 139))
such a way that Carmen bought a dress and gave it to Mary. Importantly, the act of giving is implied in the ditransitive usage of the Get Verbs. If the DOC and the V-NP-PP construction were based on different underlying structures (Pesetsky (1995), Beck and Johnson (2004), Harley (2004)) or if they are related by a passive-like operation (Aoun and Li (1989)) or preposition incorporation to the copula (den Dikken (1995), Oba (2002)), then there will be no obvious way to rule out (61b).

In our system, on the other hand, we can attribute the ill-formedness of (61b) to the PIC, paying attention to the fact that the buying event must be temporally prior to the establishment of the change of possession. Given the discrepancy in temporal reference between Carmen’s buying subevent and Mary’s getting subevent, the C-to-V incorporation is prohibited by the temporal equivalence condition, and without the C-to-V incorporation, the Theme NP cannot move to the matrix [Spec, V]. Movement to the matrix [Spec, v] would inevitably violate the PIC. Hence, (61b) is ruled out.

The PIC-based solution can also account for the following contrast in passive, between give and buy (see also the contrast between (ib) and (ii) in note 18):

(63) a. John was given a book.
    b. *John was bought a book. (Green (1974: 70))

Passivization is an instance of A-movement that targets the matrix [Spec, I], and such a movement cannot stop by the embedded [Spec, C], due to the prohibition against improper movement. The one-fell-swoop movement to the matrix [Spec, v] violates the PIC. Thus, such a movement across CP must target the matrix [Spec, V]. If the C-to-V incorporation cannot apply in (63b), this step of movement is not applicable, either. Hence, (63b) is ruled out for the same reasons as (62b).

Next, let us consider (64), which shows the dative alternation in the complement of the verb promise:

(64) a. I promised Bill an apple.
    b. I promised an apple to Bill. (Green (1974: 78))

In (64), my act of promising must temporally precede the event of Bill’s getting an apple. The temporal precedence usually occurs with what Levin (1993) calls Verbs of Future Having. If we apply our logic to these verbs, they should not allow the dative alternation, contrary to fact.

Note that many, if not all, of the Verbs of Future Having can take a control complement whose PRO subject is controlled by either the matrix subject or the matrix object (see also note 14):

(65) a. He promised (me) [PRO to help]. (PRO = he)
b. The boss assigned him [PRO to interview the applicants].

(PRO = him)

One salient property of many of the control verbs, which holds cross-linguistically, is that the boundary of their infinitive complement is transparent to a number of movement operations which are otherwise clause-bound, such as Extraposition, Heavy NP Shift, Quantifier Raising, Clitic Movement, etc.25

\[(66) \quad \begin{align*}
  a. & \quad *I \text{ have expected } [\text{that I would find } t] \text{ since 1939 } [\text{the treasure said to have been buried in that island}] . \quad \text{(Postal (1974))} \\
  b. & \quad I \text{ have expected } [\text{PRO to find } t] \text{ since 1986 } [\text{the treasure said to have been buried on that island}] .
\end{align*} \]

At first sight, the C/T in the control complement seems to have an independent temporal reference distinct from that of the matrix T: the temporal point at which the event denoted by the complement verb could take place is necessarily posterior to the one at which the matrix event takes place. Therefore, if the control complement is analyzed as CP (cf. Chomsky (1981)), and if we are correct in assuming with Ogawa (2007) that the CP is always a strong phase, then (66b) should be ruled out by the PIC.

However, there are reasons to assume that the T in the control complement lacks an independent temporal reference. First, note that the T in the control complement cannot be modified by a punctual time adverb related to the speech time, as shown in the following example cited from Kartunnen (1971: 346):

\[(67) \quad *\text{John remembered } [\text{PRO to lock his door tomorrow}] . \]

Second, as Martin (2001) points out, the "future orientation" interpretation of a control complement is not the "future" in relation to the speech time but one in relation to the matrix event time, which may be prior to the speech time. Thus, the interpretation of (68a) is equivalent to that of (68b), rather than (68c):

\[(68) \quad \begin{align*}
  a. & \quad \text{Ginny remembered to bring the beer.} \\
  b. & \quad \text{Ginny remembered that she would bring the beer.} \\
  c. & \quad \text{Ginny remembered that she will bring the beer.}
\end{align*} \]

Therefore, it is reasonable to claim that the "future-oriented" interpretation of the control complement is not a result of the independent temporal speci-

25 However, as is often noted, what kinds of verbs trigger the transparency effects varies among native speakers of a single language, and the exact membership of the verbs that trigger the effects varies across languages.
ification on the C/T in a control complement, but is triggered by the interaction between the matrix (modal) verb, the matrix T, and a modal feature assigned to the selected C.

On the basis of these considerations, let us propose that the head C with a modal feature can incorporate to the matrix V without violating the temporal equivalence condition, since the C with a modal feature lacks an independent temporal reference and the lack of such a feature on the embedded C enables the C-to-V incorporation to avoid a violation of the temporal equivalence condition. In fact, we may assume that the modal feature on the C/T in the control complement is a kind of anaphoric feature that needs to be checked against the matrix V/T. If the C-to-V incorporation is possible, the C+V complex can assume an EPP feature and trigger A-movement of some NP inside the CP to the matrix [Spec, V]. This is why (66b) is ruled in.

Now, let us extend what we have argued about the control verbs to the ditransitive verb promise. Then, we can readily account for why (64b) is well-formed:

(64) b. I promised an apple to Bill. (Green (1974: 78))

The C-to-V incorporation is possible here, because the modal feature assigned to the embedded C enables it to incorporate to the matrix V, and the resulting C+V complex can be assigned an EPP feature, which triggers A-movement of the Theme NP to the matrix [Spec, V]. We conclude that this is the nature of the dative alternation in the complement of Verbs of Future Having.

An independent support for this conclusion comes from the fact that the punctual time adverbs such as on Thursday can modify the event denoted by the complement of the verb promise, only when it occurs in the DOC, but not in the V-NP-PP construction:

(69) a. Tricky Dick promised Judy a new car on Thursday.
   b. Tricky Dick promised a new car to Judy on Thursday.

(ibid.: 135)

Green (1974) points out that, while (69a) (= (29a)) is acceptable on the interpretation in which the adverb modifies the have component, (69b) is ruled out on the same reading, and it can only have the interpretation that T.D. said on Tuesday that Judy would or could have a new car. This is the very contrast that the PIC and our proposals on the dative alternation should predict. Suppose that, in contrast to the control verb remember, the ditransitive verb promise selects a CP complement whose temporal reference may be either independently referential or independently nonreferential and
anaphorically dependent on the matrix clause. In the latter case, the embedded C can incorporate to the matrix clause. This will result in the well-formed sentence in (64b). In the former case, on the other hand, it may be modified by the punctual time adverb *on Thursday*. In this case, however, the embedded C cannot incorporate to the matrix V, since it would result in a violation of the temporal equivalence condition. In the absence of the C-to-V incorporation, the Theme NP cannot move to the matrix [Spec, V]. Movement to the matrix [Spec, v] should violate the PIC. Hence, (69b) is ruled out, on the relevant reading.

Finally, let us return to (27a–c). The first two examples are repeated below:

(70) a. Yesterday Bill lent me his bicycle until tomorrow.
    b. I gave Ted my keys until tomorrow.

We argued in section 3.2 that (70a, b) support our analysis of the DOC complement as involving IP. This argument remains intact. However, we must say that these examples do not support any particular analysis of the dative alternation, since the adverb can also modify the embedded event in the V-NP-PP construction:

(71) a. John lent his hoe to Jill until Monday. (Green (1974: 142))
    b. I gave my keys to Ted until tomorrow. (H. R. Rosszell (p.c.))

One may wonder whether the temporal equivalence condition is met or not if the C-to-V incorporation takes place in (71). If what matters for the computation of the temporal equivalence condition is the identity between the temporal interval over which the matrix event continues to hold (which may be as small as a moment) and the one over which the resultant state denoted by the embedded event continues to hold, then the condition is clearly violated here. Note, however, that the semantic function of the adverbial phrase *until tomorrow* in these sentences is not to specify the independent temporal reference of the embedded event, but simply to delimit the otherwise open-ended temporal interval of the result state of having that is directly caused by the event denoted by the matrix verb. Given this interpretative fact, we can define the notion of “temporal equivalence” as follows:

(72) When the embedded C/T has an independent temporal reference, the temporal equivalence condition on the incorporation of the embedded C to the matrix V is met, only if the temporal point at which the event or state denoted by the embedded clause begins is located somewhere in the temporal interval over which the matrix event is on-going.
Given (72), we can maintain that the temporal equivalence condition is met even if the C-to-V incorporation is applied in (71a, b) (even if the verbs give and lend are not modal verbs). The specific definition in (72) keeps intact our account of (59b), (60c), (61b) and (63b), as the readers can easily verify.

7. Conclusion

In this article, we have developed a set of proposals on the double object construction (DOC) and the dative alternation. First, we have argued that the small clause complement of the Give Verbs and Verbs of Future Having should be the CP which dominates the invisible verb HAVE and IP. Second, assuming that the possessive have is decomposable into the copula be and the adposition to, we have argued that the so-called dative alternation is a syntactic derivation of the V-NP-PP construction from the DOC, by the excorporation of to out of the invisible HAVE and A-movement of the Theme NP across the Goal NP and the CP-boundary. Third, adopting Ogawa’s (2007) mechanism of C-to-V incorporation, which is constrained by the temporal equivalence condition on the matrix and embedded clauses, we have discussed why the A-movement of the Theme NP across CP can satisfy the PIC in the agentive usage of Give Verbs, but not in the causative usage of Give Verbs and the Get Verbs. Finally, we have suggested that Levin’s (1993) Verbs of Future Having permit the dative alternation in spite of the apparent temporal disjoint reference, because assignment of a modal feature to the embedded C is incompatible with the existence on the embedded C of the semantic feature relevant to the determination of the temporal reference of the embedded event.

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