

# Arguments for a Lexical Ambiguity Approach to Restitutive Readings with *Again*

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## Abstract

The adverb *again* and its counterparts in other languages have been used to argue for the syntactic decomposition of apparently simplex verbs like *open*. The basis for this is the repetitive-restitutive ambiguity, where on the restitutive reading *again* can target just a result state. In this paper, we argue that the syntactic account of this ambiguity (e.g., von Stechow 1995; Beck and Johnson 2004) is not supported by the facts. The alternative lexical ambiguity analysis (Dowty 1979; Jäger and Blutner 2003) fares much better. First, we show that the arguments that have been given in favor of the syntactic account have independent explanations (scope and focus). Second, we discuss language-internal and cross-linguistic facts that favor the lexical ambiguity analysis. Third, we show that the syntactic structure that is required by the syntactic account for double object constructions is incompatible with the facts of double object constructions. In double object constructions, *again* can target just the

intended caused possession eventuality (Beck and Johnson 2004), but as we show, numerous patterns indicate that there is no syntactic constituent corresponding to this eventuality. Throughout, we contrast English with Japanese, and argue that ‘again’ in Japanese is not ambiguous the way English *again* is. This hypothesis makes numerous predictions, in both languages, which we argue are borne out. To the extent that our arguments are successful, some conclusions from prior research that hinges on the structural account of *again* must be re-thought.

*Keywords:* *again*, lexical decomposition, focus, double object constructions, ApplP analysis, small clause

## 1 Introduction

The adverb meaning ‘again’ in many different languages is known to have different readings. For instance, with verbs like *open*, *again* can introduce two different presuppositions: a *repetitive* one in (1a), presupposing that the entire event took place before; or a *restitutive* one in (1b), which presupposes that the result state of the verb held before:<sup>1</sup>

- (1) a. Otto opened the door. The wind blew it closed, so **he opened it again**.  
(*repetitive*: Otto previously opened the door)
- b. When Otto came in, the door was open. The wind blew it closed, so **he opened it again**. (*restitutive*: the door was open before)

Many authors have argued that these two readings of *again* are due to a structural ambiguity (Morgan 1969; McCawley 1971; von Stechow 1995, 1996; Beck and Snyder 2001;

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<sup>1</sup>There is in fact a third reading, a *subjectless* reading (Bale 2007). We will discuss it in sections 3 and 4.

Beck and Johnson 2004; Xu 2016; Beavers and Koontz-Garboden 2020; Smith and Yu 2021; Wilson 2021; Haddican 2024). In the structural ambiguity account, *again* adjoins to a node of type  $\langle v, t \rangle$  (a predicate of events) and introduces a presupposition to the effect that an event of the type described by its sister has occurred before (see the denotation in (2a) below). If this is correct, the ambiguity in (1) requires that verbs like *open* be syntactically complex, with a stative constituent [door open] embedded under a CAUSE or BECOME predicate (or both). If *again* adjoins to the low stative constituent [door open], it has the restitutive reading; if it adjoins higher, it has the repetitive reading.

However, the structural account of *again* is by no means the consensus. An alternative is the lexical ambiguity analysis (e.g., Dowty 1979; Fabricius-Hansen 1983; Jäger and Blutner 2003; Pedersen 2015). The analysis that we pursue is along the lines of Dowty (1979) and Jäger and Blutner (2003), according to which there are two different lexical entries for *again*. One (“Again1”) presupposes that an event of the type described by its sister took place before; the other (“Again2”) presupposes that the result of the type of event described by its sister held before. We give two (simplified) denotations below, based on Patel-Grosz and Beck (2019:4, (6a)) and Jäger and Blutner (2003:404, (26)). In these denotations, “ $\tau(e)$ ” is the run time of  $e$ . “Result” in (2b) is a function that takes an eventuality denoted by the sister of Again2 and yields a proposition denoting its result state.

- (2) a.  $\llbracket \text{Again1} \rrbracket = \lambda f_{\langle v, t \rangle} \lambda e.f(e): \exists e'. \tau(e') < \tau(e) \ \& \ f(e')$   
b.  $\llbracket \text{Again2} \rrbracket = \lambda f_{\langle v, t \rangle} \lambda e.f(e): \exists e'. \tau(e') < \tau(e) \ \& \ \text{Result}(f, e')$

Under the lexical ambiguity analysis, the different readings of *again* do not constitute evidence for the syntactic decomposition of simplex verbs, since it is not necessary to have a constituent in the syntax that corresponds to the result state. All that is necessary is for the

semantics of the verb to include a result state.

Proponents of the structural account have presented several arguments in favor of that account based on the effects that structure has on different readings of *again*. However, we show that these arguments do not go through. Apparent effects of structure on the availability of the different readings are actually due to one of two factors: (1) Scope. Everything that is in the sister of *again* has to be included in its presupposition. If an adverb is included in the scope of *again*, then this adverb has to be part of its presupposition, which in most cases precludes the restitutive reading. (2) Focus on *again*. This is independently known to be incompatible with the restitutive reading (Kamp and Rossdeutscher 1994; von Stechow 1996; Fabricius-Hansen 2001; Klein 2001; Jäger and Blutner 2003). In English, putting *again* to the left of the verb, and stranding it in ellipsis, makes it necessarily bear focus. This makes it lose the restitutive reading. We further show that this focus account explains the otherwise mysterious difference between *again* and *for X time* adverbials when stranded by ellipsis (Bruening 2018a:552–553). The contrast follows from the way focus alternatives are constructed. These two factors, scope and focus, are independently motivated and account for all of the apparent effects of structure without the need for the structural ambiguity account. This means that all the arguments in favor of that account dissolve.

We also present some considerations in favor of the lexical ambiguity account. One is the fact that we need to recognize lexical differences between different adverbs anyway (e.g., *again* versus *for the second time*). Another is cross-linguistic facts: Some languages have different lexical items for the repetitive and restitutive readings (e.g., Korean). We also argue that the adverb meaning ‘again’ in Japanese is not lexically ambiguous in the way that *again* in English is. We then show that, unlike English, the adverb for *again* in

Japanese can give a restitutive reading when focused. We argue that the contrast between the two languages can be explained only if we adopt the lexical ambiguity account of *again*.

Our main argument in favor of the lexical ambiguity analysis comes from a consideration of double object constructions. With predicates like *open*, there is little independent evidence that could confirm or disconfirm the structure required for the structural analysis of *again*. However, with double object constructions, there is considerable independent evidence for what the structure must be. We review this evidence, and show that it all converges on a structure that does not have a syntactic constituent corresponding to the resultant possession state. Yet Beck and Johnson (2004) showed that *again* can have a restitutive reading with double object verbs, where what is restored is the state of possession:

- (3) Mary started the game with the ball, but for a long time no one kicked it to her.  
Finally **I kicked her the ball again.**

We argue that this state of affairs is only compatible with the lexical ambiguity view. There is no syntactic constituent corresponding to the resultant possession state, but the semantics of double object constructions does include this resultant possession state. Only on the lexical ambiguity account of *again* can *again* target this state. Furthermore, Japanese ‘again’, which we argue is not lexically ambiguous, does not allow a restitutive reading in double object constructions, although Japanese double object constructions do include the semantics of intended caused possession, just like English.

We start with the apparent effects of structure in section 2. We show that all of these effects follow from either scope or focus, with no need for structural ambiguity or lexical decomposition. Section 3 gives some initial considerations in favor of the lexical ambiguity account, while section 4 gives the main argument in its favor, from double object

constructions. Section 5 concludes the paper. We also have two appendices. One critically evaluates two recent proposed structures for double object constructions, a multidominance analysis (Johnson 2018) and a “low applicative” analysis (Smith and Yu 2021). The other addresses an apparent problem for the analysis of ditransitives and refines the distribution and denotation of *again*.

## 2 Apparent Effects of Structure

Proponents of the structural ambiguity account have argued that effects of syntax on the availability of the restitutive reading require the structural account. The fact is that the restitutive reading disappears under various conditions. One is if *again* occurs anywhere but sentence-finally (e.g., Dowty 1979; Jäger and Blutner 2003; Bale 2007). If *again* appears anywhere to the left, the restitutive reading is not available:<sup>2</sup>

- (4) a. Otto opened the door again. (repetitive or restitutive)
- b. Otto again opened the door. (repetitive only)
- c. Again, Otto opened the door. (repetitive only)

A second context where the restitutive reading disappears is when *again* is stranded in VP ellipsis (Johnson 2004):

- (5) a. The wind blew the door open and no one closed it. Finally, #**Maribel did**  
— **again** (Johnson 2004:9, (30)).

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<sup>2</sup>The order in (4c) has an additional reading, one where it modifies the speech act and presupposes that the proposition has been asserted before. We ignore this reading here.

- b. Brightly colored mushrooms appeared in my garden one morning. I was expecting them to disappear, but **#none of them did — again**. (cf. They appeared and then disappeared again just as abruptly.)

Third, *again* loses the restitutive reading if it appears outside of another adverb (Bale 2007).

- (6) (Bale 2007:462, (26))

The rocket was built two days ago and launched into space yesterday ...

- a. At two o'clock today, it entered Earth's atmosphere again.
- b. # It entered Earth's atmosphere at two o'clock again.

- (7) The door was open when I came in and started to work. It shut with a bang and I looked up. Puzzled, ...

- a. I slowly opened the door again.
- b. # I opened the door slowly again.

Proponents of the structural account argue that all of these contexts force *again* to adjoin high, higher than the lowest stative constituent. If the lexical verb always moves to the head that projects the external argument (Voice or *v*) in English, then, whenever *again* adjoins to the left of the lexical verb, as in (4b–4c), it could not be adjoined to the lowest stative constituent and could only yield the repetitive reading. VP ellipsis presumably elides the constituent that includes CAUSE/BECOME as well as the lowest stative constituent, so when *again* is stranded, it could also only yield the repetitive reading. As for adverbs, if they necessarily adjoin higher—something that is plausible for a temporal adverbial like *at two o'clock* and a manner adverb like *slowly*—then *again* will also have to adjoin higher.

While these facts appear to strongly support the structural account, in fact they do not. As we will show, putting *again* on the left necessarily makes it focused, as does stranding it in VP ellipsis. Focus is independently known to preclude the restitutive reading, just because of the way focus alternatives work (Beck 2006). As for adverbs preceding *again*, we show that they have to be interpreted as being in the scope of *again*. They therefore have to be included in *again*'s presupposition, which is usually incompatible with the restitutive reading. If the adverb is compatible with the restitutive reading, then it is possible, as we show. Since the effects of focus and the effects of scope are independently necessary, there is no need for the structural ambiguity account. Lexical decomposition actually plays no role in explaining these effects.

We start with an initial reason to be skeptical of the structural account of the apparent effects of structure, and then turn to the details of the two factors at work. The effect of adverbials follows from scope, while the effect of ellipsis and placing *again* on the left follow from focus.

## 2.1 An Initial Reason to be Skeptical

The structural account initially appears well-supported. However, Bruening (2018a) points out an issue with the argument from ellipsis. Some researchers have argued that the same stative constituent [door open] can also be modified by other types of adverbials, in particular *for X time* adverbials (Harley 2008a; Copley and Harley 2015):

- (8) Rebecca opened the window for five minutes. (Piñón 1999:420, (1b))  
 (result state reading: window is open for five minutes)

The problem pointed out by Bruening (2018a) is that *for X time* behaves differently from



*again* in ellipsis. While *again* loses the restitutive reading when stranded by ellipsis, *for X time* is still able to modify the stative result even when stranded by ellipsis:

(9) (Bruening 2018a:552, note 7, (ii))

- a. A: Open the window for a few minutes to air the room out. B: **I only will — for one minute**, or it will get too cold.
- b. To keep the sun from making their rooms too hot, Sandy closes the curtains for a few hours every afternoon, and **Sam does — for the whole afternoon and evening**.

If both adverbials adjoin to the low stative constituent [door open] or [window closed] on the relevant reading, and being stranded by ellipsis makes this adjunction site impossible, then the discrepancy between *again* and *for X time* is not expected.

This means that one fact that initially appears to be strong support for the structural analysis (that other adverbials besides *again* are also able to target the hypothesized constituent) is actually problematic. As we will now show, all the other facts that apparently favor the structural account actually have independent explanations, and those independent explanations also explain the different behavior of *again* and *for X time*.

## 2.2 Intervening Adverbials

We begin our reanalysis of the apparent structural effects on disambiguation with intervening adverbials. We repeat two examples below, where *again* loses the restitutive reading if it follows another adverbial:

(10) (Bale 2007:462, (26))

The rocket was built two days ago and launched into space yesterday ...

a. At two o'clock today, it entered Earth's atmosphere again.

b. # It entered Earth's atmosphere at two o'clock again.

(11) The door was open when I came in and started to work. It shut with a bang and I looked up. Puzzled, ...

a. I slowly opened the door again.

b. # I opened the door slowly again.

We claim that this is just the effect of scope. Before we get into the details of this particular effect, it is important to make it very clear that the lexical ambiguity account does not say that there is no role for structure. On the contrary, on the lexical ambiguity account, *again*'s presupposition still depends on what it adjoins to. The presupposition of *again* is determined entirely by what its sister is. The lexical ambiguity account only claims that the *repetitive–restitutive* ambiguity is lexical and not necessarily structural. There are very clear effects of *again* appearing in different positions and taking different scopes. For instance, in the following pair, if *again* adjoins outside of *at six o'clock*, then what I did before was prepare dinner at six o'clock. If it adjoins inside *at six o'clock*, then all I did before was prepare dinner.

(12) a. I prepared dinner at six o'clock again.

b. I prepared dinner again at six o'clock.

Bale (2007) discusses the following example:

- (13) Esme and Seymour like to play sports in George's backyard. For example, last week Seymour played badminton in his backyard, then just yesterday Esme played soccer, **AGAIN in George's backyard**. (Bale 2007:456, (16))

In this example, *again* has adjoined to the PP *in George's backyard*, and it is only this that is presupposed (an event took place in George's backyard before). From this it is clear that the scope of *again* (what goes into its presupposition) is entirely determined by what it adjoins to (see especially Bale 2007 for discussion of this fact).

Going back to the effect of intervening adverbials on the availability of the restitutive reading, we contend that the restitutive reading being lost is due to nothing more than scope. Note first that neither *at two o'clock* nor *slowly* are able to modify the result state with *enter* and *open*. *At two o'clock* can only modify the punctual moment of entering, while *slowly* necessarily describes an event and cannot describe a state:

- (14) a. The rocket entered the earth's atmosphere at two o'clock.  
b. I opened the door slowly. (\*The door is open slowly.)

If we now adjoin *again* outside of these two adverbials, these interpretations are necessarily going to be a part of *again*'s presupposition. In (10), there must have been a previous crossing from outside of the atmosphere to inside of it which took place at two o'clock. In (11), there must have been a previous opening event (caused or not) that took place slowly. Both of these presuppositions are incompatible with the restitutive context. In the restitutive context with *enter* in (10) the rocket has never previously entered the earth's atmosphere (it was built there and only left once). Since the presupposition with the adverb is that the rocket previously crossed from outside to inside the atmosphere at two o'clock,

this presupposition is not met in the context. Similarly, if the context for the restitutive presupposition with *open* only provides the information that the window was previously open (as it does in (11)), then the presupposition that there was a previous opening event that took place slowly is not met.

In other words, the effect of the intervening adverbial follows entirely from the fact that the presupposition of *again* is due to its scope. There is no role for lexical decomposition in explaining the observed disambiguation.

Note also that if the intervening adverbial is a *for X time* adverbial, which is supposed to be able to modify the lowest stative constituent (see above), then *again* should be able to have a restitutive reading adjoined outside of *for X time*, on the structural account. Both adverbials should be able to adjoin to the stative constituent. This is not correct, however:

- (15) The door was open when I came in. The wind slammed it shut, so **#I opened it for an hour again.**

This is clearly a matter of scope: The presupposition of *again* has to include that the window was open for an hour before, and this presupposition is not met in the given context.

This scope account predicts that if the adverbial is one that is compatible with the restitutive context, then the restitutive reading will be available. This is correct:

- (16) When I came in, the window was open halfway. I closed it. Before I left, **I opened it halfway again.**

A context can also be set up where an intervening *for X time* adverbial can be true of the restitutive presupposition, for instance the following:

- (17) This wormhole was open from the beginning of time to 20 billion years after the beginning of time. It closed briefly, and then **opened for 20 billion years again**.

It should be clear that the effect of an intervening adverbial on the availability of the restitutive reading is due entirely to scope. There is no role for the central thesis of the structural ambiguity account, lexical decomposition, and therefore no support for that account from these facts.

### 2.3 Effects of Focus

It is independently known that putting focal stress on *again* also causes the restitutive reading to disappear (Kamp and Rossdeutscher 1994; von Stechow 1996; Fabricius-Hansen 2001; Klein 2001; Jäger and Blutner 2003):

- (18) Otto opened the door AGAIN. (repetitive only)

Klein (2001) and Beck (2006) argue that this is not actually disambiguation, but follows from the way focus works. Focus requires construction of a set of focus alternatives that are identical to the sentence except that the focused item is replaced with alternatives (Rooth 1992). According to Beck (2006), the alternatives to focused *again* include a null adverb, “Ø.”<sup>3</sup> *Again* also has a time variable argument; both *again* and its time variable are replaced in the focus alternatives, as follows:

- (19) Otto opened the door AGAIN (at t<sub>2</sub>).

Focus alternatives: {Otto opened the door Ø at t<sub>1</sub>}

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<sup>3</sup>Beck (2006) states that adverbs such as *still* can also be alternatives to *again*, but we ignore them here as considering them does not change the account of the facts.

For (18) to be felicitous, the context must provide a salient proposition that is a member of the focus alternatives. The context for the repetitive reading in (1a), repeated below as (20a), meets this requirement. In contrast, contexts for the restitutive reading do not provide such a proposition. In (1b), repeated below as (20b), there is no proposition *Otto opened the door  $\emptyset$  at  $t1$* . As a consequence, focus on *again* is incompatible with the restitutive context.

- (20) a. Otto opened the door. The wind blew it closed, so **he opened it again**.  
*(repetitive: Otto previously opened the door)*
- b. When Otto came in, the door was open. The wind blew it closed, so **he opened it again**. *(restitutive: the door was open before)*

The results are the same under the lexical ambiguity analysis of *again* that we argue for in this paper. The presupposition of *again* in (18) can be either (21a) or (21b), depending on whether *Again1* or *Again2* occurs, but the focus alternative is identical to the one in (19). The reason for this is the same as before: The focus alternatives have to be identical to the sentence except for the focused item. Again, this focus-semantic requirement cannot be satisfied by the context for the restitutive reading in (20b). Therefore, only the repetitive context is felicitous.

- (21) a. Presupposition of *Again1*: Otto opened the door before.
- b. Presupposition of *Again2*: The door had been open before.

We argue that the rest of the apparent effects of structure can now be reduced to the effect of focus. When *again* appears on the left, either before or after the subject (4b–4c), it bears audible focus stress:

- (22) a. Otto AGAIN opened the door.  
       b. AGAIN, Otto opened the door.

Given this clearly audible focus, the loss of the restitutive reading is not surprising. These sentences are only felicitous in a context for the repetitive reading, just like (18).

As for ellipsis, elements not included in VP ellipsis are often contrastive. If they are not contrastive, they are typically included in the ellipsis if they can be. As a low modifier, *again* certainly can be included in VP ellipsis (*I danced again and Mary did too*). In all examples where *again* is stranded by VP ellipsis, then, it will always be contrastive. This is certainly true in (5a), repeated below as (23). Note that if the restitutive reading is intended, it can be evoked by putting *again* on the antecedent for the VP ellipsis, as in (24).

- (23) The wind blew the door open and no one closed it. Finally, **#Maribel did — again**.

- (24) The wind blew the door open and no one closed it again. Finally, **Maribel did —**.

The fact that this is not done in (23) makes *again* contrastive, which means it is focused. It therefore cannot be interpreted as restitutive, for the reason given above.

The same is true of the other VP ellipsis example (5b), repeated as (25). If the restitutive reading is intended, *again* needs to go on the antecedent for the ellipsis (26):

- (25) Brightly colored mushrooms appeared in my garden one morning. I was expecting them to disappear, but **#none of them did — again**.

- (26) Brightly colored mushrooms appeared in my garden one morning. I was expecting them to disappear again, but **none of them did —**.

As before, stranding *again* makes it contrastive, which makes it incompatible with the restitutive context.

As can be seen, the focus account suffices to account for the disambiguating effect of putting *again* on the left and stranding it in ellipsis. The focus account is also independently necessary, for focused *again* when it occurs in a position where it normally could have the restitutive reading. The structural ambiguity account is unnecessary: There is no role for lexical decomposition in explaining the facts.

Moreover, the focus account can explain the contrast between *again* and *for X time* adverbials that is unaccounted for under the structural account. As was noted in section 2.1, while *again* loses the restitutive reading when stranded by ellipsis, *for X time* does not lose its ability to modify the resultant state when it is stranded:

- (27) A: Open the window for a few minutes to air the room out. B: **I only will — for one minute**, or it will get too cold. (Bruening 2018a:552, note 7, (ii))

Recall that, according to Beck (2006), the only alternative to focused *again* is the empty adverb as in (19) (and possibly *still*; see Beck 2006). In contrast, there are potentially infinite alternatives to *for X time*:

- (28) I only will ~~open the window~~ for one minute.

Focus alternatives: {I will open the window for a few minutes; I will open the window for ten minutes; I will open the window for twenty minutes; ...}

Importantly, in contrast with *again*, the subject can be the subject of the verb *open* in all the focus alternatives and still have the *for X time* adverbial modify the result state. With *again*, once the subject is the subject of the verb, the repetitive reading is true. An analogous disambiguation does not occur with *for X time*. So the result reading of *for X time* is still available. The context in (27) does make a proposition available that is one of the focus



alternatives. Hence, stranding by ellipsis (and focus in general) does not make the result reading of *for X time* disappear.

An important point to note here is that *for X time* could not be adjoined to the lowest stative constituent that is hypothesized to exist in the lexical decomposition account when it is stranded by ellipsis. It must be concluded that such adjunction is not necessary for *for X time* to have the result state reading; it can adjoin quite high, outside of the minimal VP, and still have that reading. We take this to be incompatible with the premises of the lexical decomposition account.

As can be seen, the effect of focus suffices to explain those apparent effects of structure that are not due to scope. It also explains the contrast between *again* and *for X time*, while *for X time* shows quite clearly that the result state can be modified even by a high-adjoining modifier.

Neeleman and van de Koot (2020) argue against Beck's (2006) account of the effect of focus. According to Neeleman and van de Koot (2020), the restitutive reading requires stress on the verb, not just lack of stress on *again* as would be predicted by Beck's account. They give the following example to back up this claim. The example is set up to make the entire clause all new, but with a restitutive reading for *again*. According to Neeleman and van de Koot (2020), stress on the object (the normal position for stress in an all-new sentence) is not allowed, only stress on the verb is.

- (29) [Shared knowledge: The window has been fixed open for many years. And for many years Mary has objected to this unsuccessfully, because John wanted the window permanently open and always got his way. As a result of a recent intervention by a conflict mediator, the window has finally been closed.]

[Situation: Bill comes into the office and finds Mary in tears.]

[Linguistic context: Bill asks Lucy “What happened?”]

- a. # Lucy: John opened the WINDOW again.
- b. Lucy: John OPENED the window again.

(Neeleman and van de Koot 2020:507, (20))

Neeleman and van de Koot (2020) did not provide any source for this judgment, and the second author of this paper strongly disagreed with it. We conducted a small survey of fourteen native speakers of English. Eight of the fourteen emphatically state that stress *must* go on the object in this context, contradicting Neeleman and van de Koot (2020). Six of the fourteen express a much weaker preference for stress on the verb. However, further discussion with two of these speakers revealed that, at least for them, stress is not really on the verb, there is just less stress on the object than there would be in a normal all-new context like, *What happened? John opened the window*. We are not certain what is going on with these speakers, but we find no support for the contention of Neeleman and van de Koot (2020) that restitutive readings require stress on the verb; in fact the majority of the speakers we polled strongly contradicted this. Importantly, the judgments of both groups of speakers are consistent with the focus theory we have presented here from Beck (2006), where the restitutive reading only requires that there not be focal stress on *again*.

We conclude that many of the apparent effects of structure on the (un)availability of the restitutive reading are actually due to focus. When *again* appears on the left (before or after the subject), and when it is stranded by VP ellipsis, it is necessarily focused. This makes it lose the restitutive reading, as an independent effect of focus. The contrast between

*again* and *for X time* also follows on the focus account, but is mysterious on the structural ambiguity account.

## 2.4 Summary

We have argued in this section that the arguments in favor of the structural account of the repetitive–restitutive ambiguity do not go through. All of the apparent effects of syntax on that ambiguity have independent explanations. Putting *again* outside of an adverb makes that adverb part of the scope of *again*, which is typically incompatible with a restitutive context. Putting *again* on the left or stranding it in ellipsis makes it focused, which is independently known to be incompatible with a restitutive context. Scope and focus are independently necessary, and there is no role for structural ambiguity or the lexical decomposition that goes along with it.

This does not mean that the structural account is incorrect; it only means that there are no arguments in its favor. In the next two sections we give positive arguments in favor of the lexical ambiguity analysis.

## 3 Some Considerations that Favor Lexical Ambiguity

In this section, we briefly outline three considerations that favor the lexical ambiguity analysis over the structural analysis. The first is the fact that lexical differences between (apparently synonymous) adverbs are going to be needed anyway. The second is cross-linguistic facts; we show that languages differ in ways that point to differences among lexical items. The third comes from a closer look at the account of focus on *again* that we presented in

the previous section.

### 3.1 Differences Among Adverbs

First, there is an adverbial phrase in English that appears to be a very close synonym of *again*, namely, *for the second time* (we thank a reviewer for bringing this phrase to our attention). However, while *again* has both repetitive and restitutive readings with many predicates, *for the second time* consistently lacks the restitutive reading with those same predicates:

- (30) a. The diver disappeared from view but then surfaced {again/#for the second time} almost immediately.
- b. This door has always been open. Someone closed it, so I opened it {again/#for the second time} immediately.
- c. Maria started with the ball, but then just ran back and forth for most of the first half while none of her teammates passed to her. Finally I kicked her the ball {again/#for the second time}.

*For the second time* is able to modify stative predicates, in fact the very statives that are hypothesized to be present in the above predicates by the structural account:

- (31) a. The diver is at the surface for the second time.
- b. The door is open for the second time.
- c. Maria has the ball for the second time.

The difference between *again* and *for the second time* is easy to state in the lexical

ambiguity account: Unlike *again*, *for the second time* is not lexically ambiguous. It cannot presuppose just the result of the type of event described by its sister.

In the structural account, one would have to say that *for the second time* is unable to modify the stative constituent just when that constituent is embedded under further structure like CAUSE and/or BECOME. This would boil down to some kind of stipulation: *for the second time* would have to be listed as the sort of adverbial phrase that can only attach high, to VP or higher, say, while *again* would not be so limited. Note that this would have to be either some sort of extrinsic statement in the grammar, or (which is more likely) it would be stated in lexical entries.<sup>4</sup> The structural ambiguity account therefore has to be enriched with exactly the same kind of statement that the lexical ambiguity analysis proposes. This means that the lexical ambiguity approach is independently necessary, while the kind of lexical decomposition required by the structural analysis is not.

### 3.2 Cross-Linguistic Facts

In the lexical ambiguity analysis, English *again* is ambiguous between Again1 and Again2. If this is correct, we might expect to see those two meanings being encoded by different lexical items in some language. In fact, such a language has been described. According to Ko (2011:756–757), Korean has three different versions of ‘again’. One, *tto*, only has the repetitive reading. Another, *tolo*, only has the restitutive reading. The third, *tasi*, is ambiguous between the two, just like English *again*. Having two different lexical items for the two meanings hypothesized by the lexical ambiguity account is expected in that

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<sup>4</sup>Note that there could not be some sort of principled difference between adverbials that are phrases and those that are not, since another close synonym, *once more*, is a phrase but allows the restitutive reading: *When I came in the window was open. The wind slammed it shut, but I opened it once more.*

account. It is not expected in the structural account (although it is not incompatible with it, either).

Other lexical ambiguities have also been described for other languages. For instance, Patel-Grosz and Beck (2019) show that Kutchi Gujarati ‘again’ has three readings: restitutive, repetitive, and counterdirectional (like English *back* in *I called her back*). Patel-Grosz and Beck (2019) propose that the counterdirectional one requires lexical ambiguity, but the difference between repetitive and restitutive is a structural ambiguity. However, they give no arguments that this is true, and in fact they show that all three occur in the same syntactic position. We think it makes more sense if there is a three-way lexical ambiguity in Kutchi Gujarati instead. If there is, we take this to support the lexical ambiguity hypothesis.

Additionally, we suggest that Japanese ‘again’, *mata*, is not lexically ambiguous the way English *again* is. It is just like English *for the second time*, which always presupposes that an event of the type described by its sister has occurred before. Our primary argument for this will come from double object constructions (section 4), but we can also point to some initial supporting data. If Japanese *mata* is not ambiguous, then we predict that it will lack restitutive readings with simplex predicates, and will only have a restitutive reading with verbs that are visibly complex, like causatives. This is correct. With morphologically complex verbs that include the causative suffix, both repetitive and restitutive readings are possible:

- (32) a. *Context for a repetitive reading:*  
Hanako-ga mado-o akete, sibiraku-sitekara simeta. Atode, ...  
‘Hanako opened the window. After a while, she closed it. Later, ...’  
b. *Context for a restitutive reading:*

Hanako-ga ie-no-mokei-o tukut-teiru. Saisyō-wa mokei-ni mado-o aita-jootai-de tukut-ta-no-da-ga, sikkuri-konai-node suguni simatta-jootai-ni-sita. Sikasi sore demo nattoku-ga ikazu, ...

‘Hanako was making a house model. At first, she made the model with one window open, but she didn’t like it. She then made it closed. However, she was not satisfied with that either so ...’

- c. Hanako-wa mado-o mata ak-e-ta.  
Hanako-TOP window-ACC again open-Caus-PST  
‘Hanako opened the window again.’

Below is another example with *husagu* ‘close’, illustrating the same point: Both repetitive and restitutive readings are possible.<sup>5</sup>

- (33) a. *Context for a repetitive reading:*

A-mura-no hitobito-ga tonneru-o tukut-ta-ga, tukat-tei-nakat-ta-node, husai-da. Kigakawat-te kaituus-ase-ta-ga, ...

‘People of Village A made a tunnel but closed it because they did not use it. Changing their mind, they opened it but ...’

- b. *Context for a restitutive reading:*

A-mura to B-mura-o tunagu tonneru-wa kensetu-ga utikir-are-te, husagat-ta mama dat-ta. Atode, kensetu-o hikitui-da hitotati-niyotte kaituus-are-ta-ga, mira-doosi-no araso-ga hazimat-ta-node...

‘The tunnel connecting Village A and Village B was left unfinished and

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<sup>5</sup>Out of ten people we have consulted, nine accept the restitutive reading with *akeru*, ‘open’, and eight accept the restitutive reading with *husagu*, ‘close’. It is commonly observed that not all people accept the restitutive reading across languages. All of those polled accept repetitive readings with these verbs.

closed. Later, a group who took over the construction opened the tunnel.

However, conflict between the villages began, so...’

- c. A-mura-no murabito-ga tonneru-o mata husai-da.  
A-village-GEN people-NOM tunnel-ACC again close-Pst  
‘The people of Village A closed the tunnel again.’

The two readings observed here are expected if *akeru* ‘open’ projects a result-state-denoting node embedded below CAUSE or BECOME (or both). This assumption is motivated by the fact that *akeru* is morphologically complex such that it consists of the root *ak* and the causative morpheme *e* (*ru* is the present tense morpheme with an epenthesized consonant *r*). The root heads the state-denoting projection while the causative morpheme heads a causative projection. If *mata* adjoins to the low node, the restitutive reading results. If it adjoins higher, the repetitive reading is obtained. *Husagu* ‘close’ is seemingly morphologically simplex (*u* is the present tense morpheme and *i* is epenthesized before the past tense morpheme), but it has an inchoative counterpart *husag-ar-u* with an inchoative morpheme *ar*. It is assumed that in this kind of case, the causative counterpart has a phonological null causative morpheme (e.g., Hasegawa 2001; Harley 2008b).

With verbs that are not complex and do not include the overt or null causative morpheme, restitutive readings are impossible. One case in point is *wasureru* ‘forget’. This is a morphologically simplex verb with no inchoative counterpart. When combined with *mata* as in (34c), the only possible reading is the repetitive reading with a context like (34a). The restitutive reading is impossible with a context like (34b), as evidenced by the fact that eight people out of ten we have consulted reject it.<sup>6</sup>

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<sup>6</sup>We are not sure why two people found the restitutive reading with *wasureru* acceptable. There could be differing idiolects, or they could be doing some kind of pragmatic accommodation. If there are differing



- (34) a. *Context for a repetitive reading:*  
 Taro-wa eigo-no tango-o hissi-ni oboete-mo, tesuto-de kanarazu wasure-ru.  
 Kono-mae-no tesuto-de-mo, ...  
 ‘Taro tries to memorize English words but always forget them in an English exam. In the prior exam, ...’
- b. *Context for a restitutive reading:*  
 Saikin, inu-o kai-hazimeta. Namae-wa Taro-da. Ikutuka tango-o oboesasetaga, itunomanika ...  
 ‘I have started having a dog these days. His name is Taro. I taught him some words, but later ...’
- c. Taro-wa tango-o mata wasure-ta.  
 Taro-NOM word-ACC again forget-Pst  
 ‘Taro forgot words again.’ (only repetitive)

Note that *forget* in English is known to allow the restitutive reading (Beck 2006). We give an example in (35).

- (35) She told me her name, but **I immediately forgot it again.**

Other monomorphemic non-alternating verbs in Japanese like *migaku*, ‘polish’, *soru*, ‘shave’, and *nuru*, ‘paint’, also disallow the restitutive reading. Of ten informants, ten reject *migaku*, nine reject *nuru*, and ten reject *nuru*.

- (36) a. *Context:* Taro-wa totemo kirei-na koin-o mot-tei-ta. Nagai nengetu-o hete, koin-wa kitana-ku nat-ta. Tuini, ...

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idiolects, then some speakers may have an Again2 meaning for *mata* in addition to Again1, just like English. We must leave this to future research. In this paper we describe the pattern of acceptability judgments that holds for the majority of speakers.

‘Taro had a very bright, shiny coin in his collection. Over the years it tarnished. Finally, ...’

- b. # Taro-wa koin-o mata **migai**-ta.  
Taro-TOP coin-ACC again **polish**-PAST  
‘Taro polished the coin again.’

- (37) a. *Context:* Taro-no kao-wa mattaku ke-ga hae-tei-nakt-ta-ga, saikin Taro-no kao-ni hazimete hige-ga haete-ki-ta. Ikkagetu nob-asi-ta-ato, ...  
‘Taro had no facial hair, but recently, Taro’s beard grew for the first time. After letting it grow for a month, ...’

- b. # Taro-wa kao-o mata **sot**-ta.  
Taro-TOP face-ACC again **shave**-PAST  
‘Taro shaved his face again.’

- (38) a. *Context:* Musume-ga karahuru-na hana-o mot-tei-ta no-da ga, iro-ga nukete-simat-ta. Nanto ...  
‘My daughter had a colorful flower, but it faded. Surprisingly, ...’

- b. # Musume-wa hana-o mata **nut**-ta.  
daughter-TOP flower-ACC again **paint**-PAST  
‘My daughter painted it again.’

In contrast, English permits the restitutive reading with the verbs *polish*, *shave*, and *paint*. An anonymous reviewer contested this, so we conducted a small email survey regarding the following three examples:

- (39) a. I won a very nice shiny medal. Over the years it tarnished. **I finally polished it again yesterday.**

- b. When I was a teenager and facial hair started growing, I thought a beard would look cool so I let it grow. After a few weeks I realized it looked really stupid so **I shaved my face again.**
- c. I had some very colorful flowers. They faded, so **I painted them again.**

Of eight respondents, seven found *polish* acceptable, five found *shave* acceptable, and six found *paint* acceptable. Assuming this sample is representative, the majority of English speakers accept the restitutive reading with these verbs, while almost all Japanese speakers reject the restitutive reading with their Japanese counterparts, as reported above. We contend that this is precisely because the Japanese verbs are morphologically (and therefore also syntactically) simplex. While it is possible that the corresponding English and Japanese verbs differ in whether they are lexically decomposable or not, we think it is more likely that Japanese *mata*, ‘again’, is not lexically ambiguous the way English *again* is. Further justification of this hypothesis will come from double object constructions in section 4.

### 3.3 Revisiting Focus on *Again*

Recall that in Beck’s (2006) account of the loss of the restitutive reading when *again* is focused, the rest of the clause has to be part of the focus alternatives. Beck just assumed that the scope of focus is the whole clause. But what ensures this? In particular, on the lexical decomposition account, a verb like *open* includes a stative [door open] constituent of a propositional type. If the scope of focus could be confined to that constituent, then focused *again* would still be able to have a restitutive reading. A sentence like *Otto opened the door AGAIN* would essentially have the proposition *The door is open AGAIN* embedded

inside it. It would assert that Otto opened the door, and it would presuppose that the door was previously open. There would also be a focus alternative with a null adverb (or maybe *still*), {the door is open  $\emptyset$  at  $t_1$ }. This is a coherent interpretation, and the context for the repetitive reading would include a proposition that is the sole member of the focus alternatives. So what rules this out?

One might stipulate that the scope of focus is minimally the clause. This could not be true, though. Recall the example from Bale (2007) where *again* can target an adverbial to the exclusion of the rest of the sentence:

- (40) Esme and Seymour like to play sports in George's backyard. For example, last week Seymour played badminton in his backyard, then just yesterday Esme played soccer, **AGAIN in George's backyard**. (Bale 2007:456, (16))

Importantly, in this example, focal stress falls on *again* (and a prosodic break occurs before it). It could not be the case that the rest of the clause, *just yesterday Esme played soccer*, is included in all of the focus alternatives, because the context does not include a salient proposition of that form. Rather, what is focused is just the adverbial. In this case, the scope of focus and the scope of *again* coincide, and, crucially, the scope of focus is less than the whole clause. Since this is possible, it is not clear on the syntactic decomposition account what would rule out the scope of focus being just [door open] in *Otto opened the door AGAIN*, coinciding with the scope of *again*. But then this example should have a restitutive reading, contrary to fact. More generally, focus on *again* should never take away the restitutive reading.

At this point we will bring in a third reading of *again*. This is the subjectless repetitive reading described by Bale (2007). In this reading, the event is repeated again, but with a

different subject:

- (41) Brendan kicked the soccer ball towards the net, but it didn't quite make it. So **Anne kicked it again**. (Bale 2007:464, (30a–b))

Bale (2007) accounts for this reading by adopting the hypothesis that the external argument is not an argument of the verb, as in, for instance, Kratzer (1996). On this account, the external argument is introduced by a higher functional head, Voice (see the tree in (43)). The maximal projection of the lexical verb, VP, is therefore also an available adjunction site for *again* (it is type  $\langle v, t \rangle$ ). If *again* adjoins to VP, the external argument is not included in its presupposition; if it adjoins higher, to VoiceP, then it is. We adopt this account here.

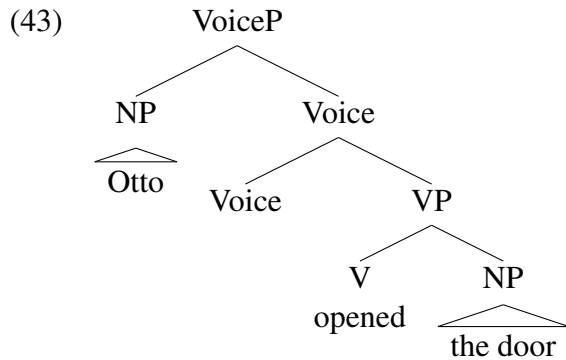
With this background, we can now note that subjectless presuppositions are possible when *again* is focused, for instance in the following example:

- (42) I told everyone not to close the window. John closed it so I opened it. Later, Mary closed it so I opened it again. 10 minutes later, **Jack closed the window AGAIN!**

This requires not only that the subject be excluded from the presupposition of *again*, but that it be excluded from the scope of focus, too. Otherwise the subject would have to be included in all the focus alternatives, and the subjectless reading would be impossible. One might think that the subject bears secondary focus in an example like this and so is also replaced with a variable in the focus alternatives, but in the judgment of the native-speaking author, such secondary focus is not necessary in an example like this (or at least the stress that would go with it is not necessary).

If the subject can be excluded from the scope of focus in the subjectless reading, then it and other parts of the clause should be able to be excluded from the scope of focus in other

cases, as well, and the restitutive reading should be possible when *again* is focused. We contend that the best explanation for this state of affairs is the lexical ambiguity hypothesis, coupled with a syntax that does not do lexical decomposition. We propose that an example like *Otto opened the door* includes only a VP and a VoiceP (in addition to higher Tense and so on):



If Again1 adjoins to VoiceP, we get the subject-ful repetitive reading. If Again1 adjoins to VP, we get the subjectless repetitive reading. If Again2 adjoins to either node, we get the restitutive reading. Consider now what happens if *again* is focused. We assume that the scope of focus has to be minimally the scope of the element that is focused (its sister, or everything dominated by its mother). Here it is *again* that is focused. If *again* is Again1 and it adjoins to VoiceP, and it is focused, then the scope of focus is minimally VoiceP. The subject in Spec-VoiceP must be included in all the focus alternatives (and it is included in the presupposition of *again*). If Again1 adjoins to VP and it is focused, then the scope of focus is minimally VP. If it is only VP, then the subject can be excluded from the focus alternatives. It is also excluded from the presupposition of *again*. This is the subjectless repetitive reading with focused *again* in (42). If Again2 adjoins to VoiceP, then it presupposes only the result of an opening. However, if it is focused, then the scope of focus is

necessarily VoiceP or larger, and the subject must be included in all the focus alternatives. Hence, we get the effect of disambiguation to the repetitive reading. If *Again2* adjoins to VP, then again it presupposes only the result of an opening. If it is focused, then the scope of focus is necessarily VP or larger. This includes the verb *open*, which is causative. This leads to a subjectless repetitive reading again. There is no way to get the restitutive reading.

In other words, Beck's (2006) account of focus on *again* still does the job, but *only* if we reject lexical decomposition. If a verb like *open* is syntactically complex and includes a low stative constituent [door open], then there is no way to exclude the restitutive reading when *again* is focused. The scope of focus should be able to be limited to this lowest constituent. The scope of focus is not generally required to be the whole clause, so we can see no non-stipulative way to require it to be just to exclude the restitutive reading.

Notice that we now make a prediction about Japanese. We claimed in the preceding subsection that morphologically complex verbs like *akeru*, 'open', and *husagu*, 'close', in Japanese do embed a stative node in the syntax. Otherwise, *mata*, which we hypothesize to lexicalize only *Again1*, could not introduce a restitutive reading with these verbs. It is then predicted that when *mata* is focused, the scope of focus can be limited to just this stative node. Our survey with 10 native speakers of Japanese reveals that 6 accept the restitutive reading of focused *mata* with *akeru*, 'open', (44), while 4 accept it with *husagu*, 'close' (45).

- (44) a. *Context*: Taroo-wa mado-ga ai-teriu jootai-no ie-no mokee-o tukut-ta-ga, ki-ni ira-naku-te, mado-ga simat-ta jootai-ni mokee-o tukuri-naosi-ta. Hodonaku-site, Taroo-wa Hanako-ni mokee-no kansee-o takusi-ta. Taroo-ga nando-mo mado-wa simat-ta jootai-ga ii-to rikisetu-sita-no-nimo kakawarazu, nanto ...

‘Taro built a model of a house with its window open, but he didn’t like it, so he rebuilt the model with its window closed. Before long, he left the completion of the model to Hanako. Despite Taro repeatedly emphasizing that it was better for the window to remain closed, surprisingly ...’

- b. Hanako-wa mokee-no mado-o MATA ak-e-ta.  
 Hanako-TOP model-GEN window-ACC again open-CAUS-PST  
 ‘Hanako opened the window of the model AGAIN.’

- (45) a. *Context*: A-mura to B-mura no aida-ni kansee-o tyokuzen-ni koozi-ga utikiri-ni-nat-ta tonneru-ga at-ta. Sibaraku tonneru-wa mikansee-de husagat-tei-ta-no-da-ga, koozi-o hikitui-da gyoosya-ga tonneru-o kansee-sase-ta. Sikasi, B-mura-no murabito-wa A-mura-no murabito-ga sukidat-ta-no-da-ga, hantai-ni A-mura no murabito-wa B-mura-no murabito-no-koto-ga daikirai-dat-ta. Hodonaku-site, B-mura-no murabito-no hantai-o musu-site, nanto ...

‘Between Village A and Village B, there was a tunnel whose construction had been halted just before completion. For a while, the unfinished tunnel was closed, but a new contractor took over and completed the tunnel. However, while the villagers of Village B liked the villagers of Village A, the opposite was true: the villagers of Village A absolutely hated those of Village B. Before long, ignoring the objections of the villagers of Village B, shockingly ...’

- b. A-mura-no murabito-ga tonneru-o MATA husai-da.  
 A-village-GEN people-NOM tunnel-ACC again close-PST  
 ‘The people of Village A closed the tunnel AGAIN.’

We take these judgments to indicate that the restitutive reading is not ruled out with focused *mata* in Japanese. This contrasts with focused *again* in English, where the restitutive



reading is never felicitous with a simplex verb like *open*.

Note that, as in English, subjectless repetitive readings are also possible with focused *mata*:

- (46) a. *Context*: Minna-ni mado-o akeru-na-to it-ta-ga, Taroo-ga mado-o ake-ta-no-de watasi-wa mado-o sime-ta. Atode, Hanako-ga mado-o mata ake-ta-node, mata sime-ta. 10-pun-go-ni, ...  
'I told everyone not to open the window, but Taro opened it so I closed it. Later, Hanako opened it so I closed it again. 10 minutes later, ...'
- b. Sachiko-ga mado-o MATA ak-e-ta.  
Hanako-<sub>TOP</sub> window-Acc again open-CAUS-Pst  
'Sachiko closed the window AGAIN.'

This fact follows naturally if the causative morpheme heads a projection which expresses a causative eventuality but does not introduce the external argument, as in Pylkkänen (2008). *Mata* adjoins to this projection, which excludes the external argument.

We also predict that, if *again* appears in a clause that *is* syntactically complex in English, then English should also allow the restitutive reading with focus on *again*. Resultative secondary predicates constitute an example of a syntactically complex phrase. *Again* can adjoin just to the resultative AP. If it is focused, the scope of focus should be able to be confined to the resultative phrase. We think that this is correct, although constructing a completely felicitous example is difficult (which is probably why we did not get 100% acceptance from the Japanese speakers). The following example seems to work:

- (47) The necromancer found a corpse and brought it back to life. A vampire hunter killed it with a knife. The necromancer brought it back to life a second time, but

then **the sheriff shot it dead AGAIN.**

In this example, *again* is able to adjoin to the AP headed by *dead*, and the scope of focus can also be limited to that constituent. The sheriff shooting the corpse does not need to have happened before.

As can be seen, the lexical ambiguity hypothesis, with no lexical decomposition for simplex predicates, gets the facts in English and Japanese exactly right. The syntactic ambiguity hypothesis with lexical decomposition does not. In particular, the account of the effect of focus on *again* given by Beck (2006) would require some sort of stipulation to preclude the restitutive reading in English, if lexical decomposition is true. If lexical decomposition is correct, then the structure of an English verb like *open* is in relevant respects exactly like that for the morphologically complex Japanese verb meaning ‘open’, or a resultative in English like (47). However, focused ‘again’ is compatible with the restitutive reading in Japanese, and with a resultative in English, while it is not for a simplex predicate like *open* in English. We take this to show that lexical decomposition is not correct for English. There is no stative constituent in English the way there is in a Japanese causative, or an English resultative.

We admit that our findings here are preliminary, and that there could be something independent that forces the scope of focus in English to be larger with a verb like *open*. However, taken together with all the other considerations and arguments in this paper, we believe that it is the lexical ambiguity hypothesis that is best supported by all of the facts.

### 3.4 Summary

To summarize the paper so far, we have shown first that the arguments in favor of the structural account do not go through; and second, that there are English-internal and cross-linguistic facts that support the lexical ambiguity analysis. We turn now to our main argument against the structural account, which involves double object constructions.

## 4 Double Object Constructions

As noted in the introduction, there is little independent evidence that could confirm or disconfirm the structure required for verbs like *open* on the lexical decomposition/structural ambiguity account of *again*. In this section we look in detail at double object constructions. They have been shown to also allow a restitutive reading with *again*, where what is restored is the state of possession (Beck and Johnson 2004):

(48) Thilo gave Satoshi the map again. (Beck and Johnson 2004:113, (48))

(49) *Context for restitutive reading:* Satoshi had the map and was guiding the group. Frustrated at their slow progress, Thilo took the map and started leading the way. When he realized he had gotten them all lost, he grudgingly gave Satoshi the map again.

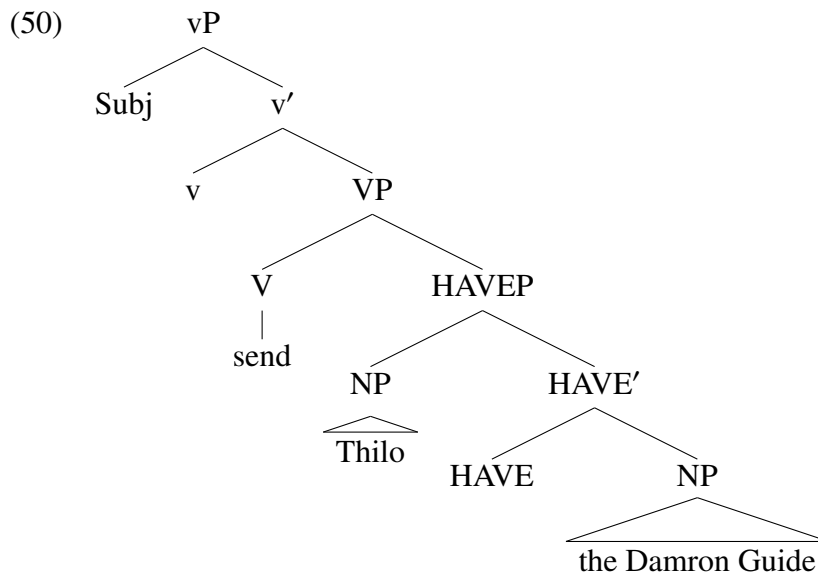
We show here that there is a significant amount of independent evidence for what the structure of a double object construction is. All of this evidence converges on a structure in which there is no syntactic constituent corresponding to the resultant possession state, contra Beck and Johnson (2004) and much other work. We take this to show that the lexical

ambiguity analysis is correct, and the structural ambiguity analysis is not. Only the lexical ambiguity analysis is compatible with the facts of double object constructions, since they do not have a constituent that could yield the restitutive reading on the structural account.

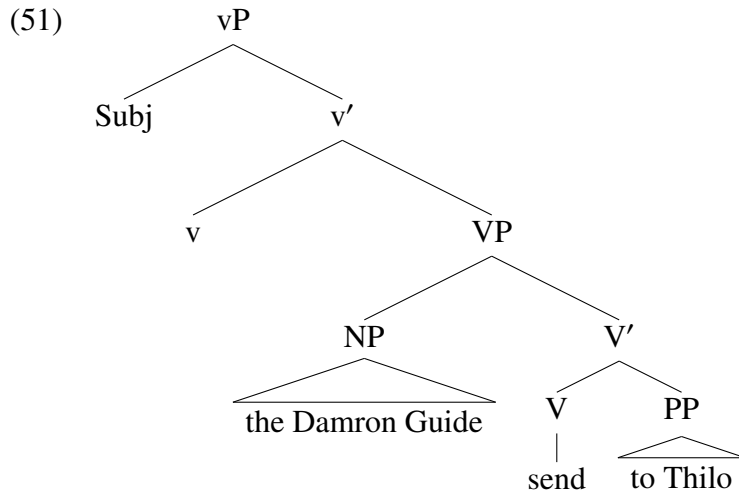
We start by presenting the structure that seems to be motivated by the facts of *again*, versus the one that we defend. We then proceed to give multiple arguments in favor of the analysis that does not have a syntactic constituent corresponding to the possession state.

## 4.1 Structures

On the basis of the *again* facts, Beck and Johnson (2004) propose that double object constructions include a small clause (as first proposed by Kayne 1984). The head of the small clause is a HAVE predicate (Beck and Johnson 2004:104, (17)):

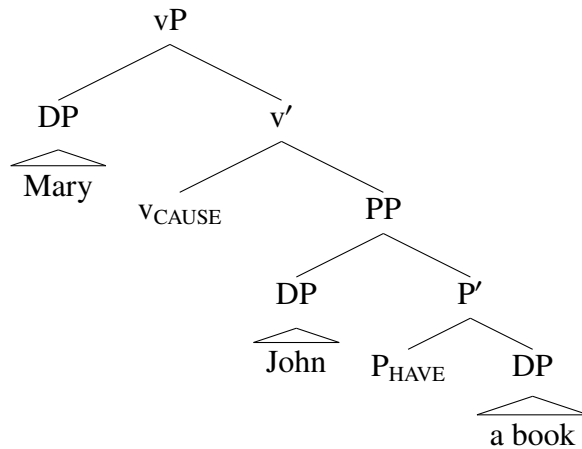


In contrast, in the PP frame, Beck and Johnson (2004) propose that both the NP and PP arguments are arguments of the lexical verb (Beck and Johnson 2004:105, (18a)):



Harley (1997, 2002, 2008a) and Harley and Jung (2015) propose a similar small clause structure for double object constructions, except that in their work, the verb that embeds the small clause is a functional head expressing causation rather than the lexical verb:

(52) (Harley and Jung 2015:705, (5))

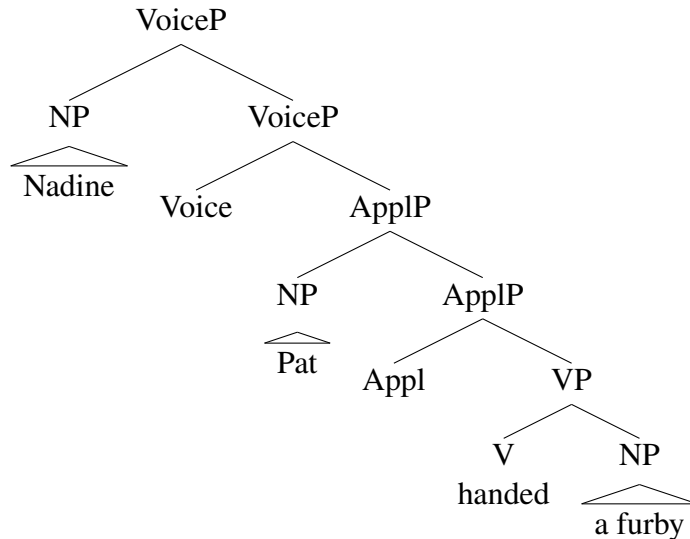


The HAVE predicate is viewed as a type of preposition in this account. The causative *v* itself is not a lexical verb; if the verb is a lexical verb other than *give*, that verb adjoins to *v<sub>CAUSE</sub>* as a manner modifier. The verb *give* is the spellout of *P<sub>HAVE</sub>+v<sub>CAUSE</sub>*, after *P<sub>HAVE</sub>* moves to *v<sub>CAUSE</sub>*.

The difference between these two small clause analyses is not important here. What matters is the presence of the small clause. In both structures in (50) and (52), the small clause structure straightforwardly allows *again* to have a restitutive reading with double object constructions, where what is restored is the state of possession. On this interpretation, *again* adjoins to HAVEP in (50) or to PP in (52).

We will show here that all the evidence other than *again* indicates that this small clause structure is not correct. The second object must be a selected argument of the lexical verb in the double object construction, the same way it is in the PP frame. We argue in favor of the structure proposed by Bruening (2001, 2020, 2021). In this structure, the second object is the complement of the lexical verb, while the first object is introduced in the specifier of a higher head, Appl(icative) (as first proposed by Marantz 1993):

(53) Nadine handed Pat a furby. (Bruening 2021:1046, (78))

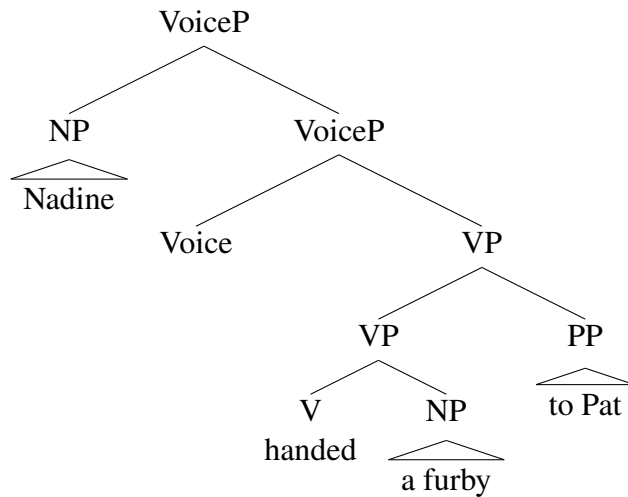


Note that in this structure, there is no constituent that corresponds to the resultant possession state. It is therefore incompatible with the structural account of *again*, and requires

the lexical ambiguity account. We will argue that this is correct.

Note also that in Bruening’s proposal, the double object frame and the PP frame share a constituent consisting of the lexical verb plus the direct object ([handed a furby] in these examples):<sup>7</sup>

(54) Nadine handed a furby to Pat. (Bruening 2021:1043, (70), slightly modified)



Most of the arguments presented here are aimed at this aspect of the analysis. They show that the verb and the second object form a constituent excluding the first object in the double object construction. This is incompatible with the small clause structure, which requires a constituent consisting of the two objects and HAVE/P<sub>HAVE</sub>, excluding the lexical verb.

## 4.2 Argument 1: Base Transitive Verbs

The first argument comes from verbs that are simple transitives in their basic use, like *bake*, *melt*, *sew*, and *kick*. These do not entail any intended caused possession when used

<sup>7</sup>Smith and Yu (2021) present an apparent problem with the analysis of the PP frame by Bruening (2021). We address it in Appendix B.

as simple transitives (or even a goal with *kick*). However, they can be used productively in the double object construction, with the same semantics as all double object constructions, namely, intended caused possession:

- (55) a. I baked her some cookies. (intent: she has the cookies)  
b. I melted her some ice cream. (intent: she has the melted ice cream)  
c. I sewed her a flag. (intent: she has the flag)  
d. I kicked her the ball. (intent: she has the ball)

In the ApplP analysis, these verbs and their objects can be embedded under Appl in (53).

Beck and Johnson (2004:115) show that such verbs can have a restitutive reading with *again*, where what is restored is possession, just like all double object constructions. We give two examples here with restitutive contexts:

- (56) Tom started the game with the ball. He kicked it to a teammate, but then didn't touch it again for most of the half. Finally, **a defender kicked him the ball again.**  
(57) After the power outage, Sally found some melted ice cream in the freezer. She was very excited to try eating it, but it spilled all over the floor. She kept talking about it, so finally **I melted her some ice cream again.**

At the same time, however, the semantic relation between the verb and its direct object has not changed. This can be seen in entailment patterns:

- (58) a. I kicked Tom the ball, but #I did not kick the ball.  
b. I melted Sally some ice cream, but #I did not melt any ice cream.



Trying to deny the basic transitive while asserting the double object construction that includes that transitive is a contradiction.

On the simplest assumptions, the structural relation between the verb and its object has not changed from the simple transitive to the double object construction. This lack of change is expected on the ApplP analysis in (53), since it simply embeds the transitive VP of the base transitive verb under Appl. It is not expected on the small clause analysis, where the structure changes entirely. In the base transitive use, the NP is the complement of the V; but in the double object construction, the verb has to either take a small clause complement as in (50), or it takes no complement at all and is only adjoined as a manner modifier to  $v_{\text{CAUSE}}$  in (52). In neither case should the semantic relation between V and the NP be preserved. Verbs that alternate between taking a single NP object and taking a small clause object do not show the same preservation of semantic relations. In particular, the single NP object does not correspond to anything in the predicate part of the small clause, and certainly not the object of a preposition:

- (59) a. I want the ship.  
b. I want her off the ship.  
c. I want her off the ship, but I do not want the ship.
- (60) a. I considered myself.  
b. I considered her beneath me.  
c. I considered her beneath me, but I did not consider myself.
- (61) a. I imagined their cages.  
b. I imagined those fearsome predators out of their cages.

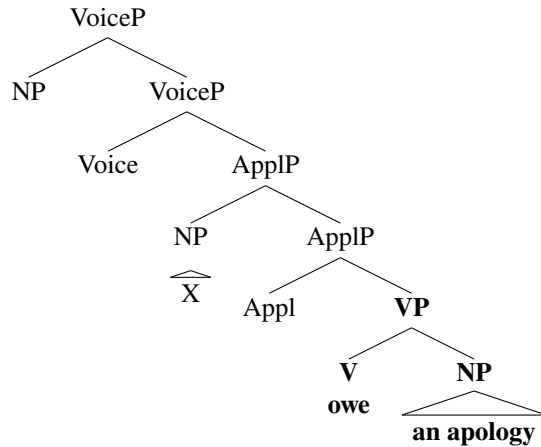
- c. I imagined those fearsome predators out of their cages but I did not imagine their cages.

Base transitive verbs like *melt* therefore indicate that the lexical verb takes the second object as its complement in the double object construction. This is compatible only with the Appl analysis, and is incompatible with the small clause analysis. Moreover, if the verb takes the second object as its complement and they thereby form a constituent, it is impossible for there to be a constituent corresponding to the resultant possession state. Any constituent that includes the second object and other material in addition will necessarily include the lexical verb as well.

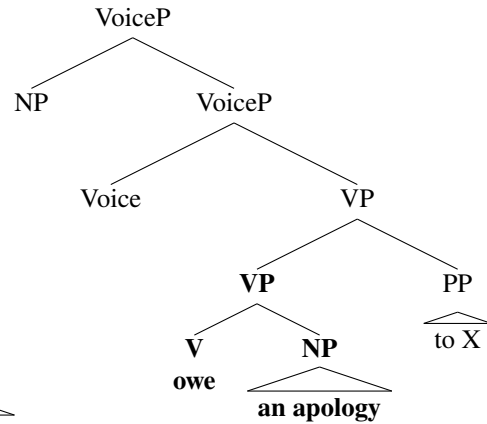
### 4.3 Argument 2: Alternations in Conventionalized Expressions

Patterns of conventionalized expressions also indicate that the verb and the second object form a constituent, as was shown by Bruening (2010, 2020). We will concentrate on one particular pattern here, namely, conventionalized expressions that alternate. An example is the collocation *owe X an apology ~ owe an apology to X*. The diagram below repeats the proposed double object structure and PP structure in the ApplP analysis:

(62) a. *double object construction*



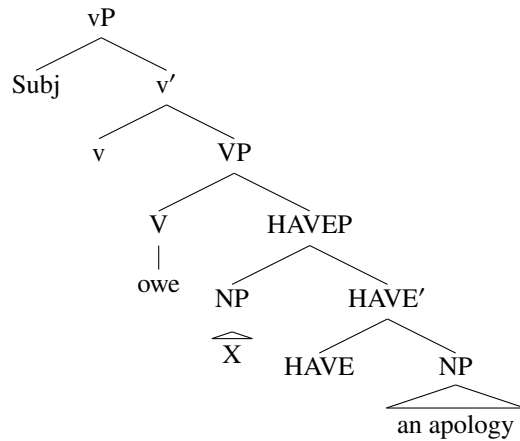
b. *PP frame*



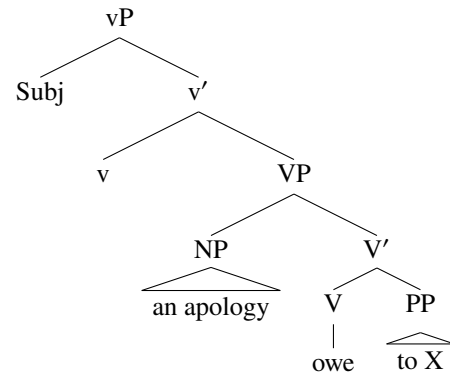
An expression like *owe an apology* consists of just the V and its complement NP in this analysis. This structure is shared between the double object construction and the PP frame in the analysis depicted in (62) (as indicated by the boldface). A stored expression of the form [V NP] like *owe an apology* can therefore be inserted into either structure.

The small clause analysis has no way of capturing this alternation. In the small clause analysis, there is no structure that is shared between the double object construction and the PP frame. Beck and Johnson (2004) propose that the NP and PP are both arguments of the lexical verb in the PP frame; see (51). Harley (2008a) proposes something similar, although it is not entirely clear whether the NP in the PP frame is an argument of the lexical verb or of something else (see her example (54), where the node dominating the NP is labeled “SC”). Harley and Jung (2015) say that they do not treat the PP frame as a small clause, but do not give a structure. In any case, it is clear that the structure of the PP frame in the HaveP approach is completely different from the HaveP structure of the double object construction in (52). We repeat Beck and Johnson’s structures below:

(63) a. *double object construction*



b. *PP frame*



These two structures have nothing in common that would enable a conventionalized expression to alternate. If the conventionalized expression is stored as the constituent [<sub>VP</sub> owe an apology to X], that constituent could not be inserted into the double object frame. If it is instead stored as the smallest constituent that includes the lexical verb and the second object in the double object frame (VP), that constituent could not be inserted into the PP frame.

Harley and Jung (2015) attempt to deny the existence of such expressions, but Bruening (2020) lists many more expressions than the ones they address, both collocations and idioms, all of which fit this pattern and alternate for many if not most speakers. These include *owe X an apology*, *pay X a visit*, *save X a seat*, *pay X any mind*, *do X a favor*, etc. (and note that Bruening 2020 shows that idioms and collocations occur in exactly the same patterns, meaning that they should not be distinguished).

Note furthermore that the facts here are consistent with those in the previous subsection. Both patterns indicate that the second object in the double object construction is an argument of the lexical verb. This is what enables conventionalized expressions to alter-

nate: The stored expression consists of [V NP], which can be inserted into both the double object and the PP frame, since both frames include that constituent. The small clause analysis denies that any NP is an argument of the verb in the double object construction, and so it cannot account for any of these facts. Most importantly for our overall argument, if the V and the second NP form a constituent, there can be no constituent in the syntax that corresponds to the resultant possession state.

#### 4.4 Argument 3: Patterns of Implicit Arguments

The patterns of implicit arguments described and analyzed in Bruening (2021) also show that the second object is the selected argument of the verb in double object constructions. Briefly, the two objects behave differently. The second object acts like it is a selected argument of the verb, in that the verb determines whether it can be implicit and how it is interpreted when it is (as a definite or an indefinite). For instance, the verb *serve* allows an implicit indefinite second object (which can be implicit out of the blue, as in (64a)); the verb *tell* allows an implicit definite object (which can be implicit only when the discourse includes a salient entity that can be interpreted as the second object, as in (64b)); and the verb *loan* does not allow its second object to be implicit at all (64c):

- (64) a. They don't serve customers before noon. (Bruening 2021:1029, (23a))  
b. A: I have bad news. B: Tell me. (Bruening 2021:1030, (24a))  
c. I need a phone. Loan me \*(yours), will you?

In other words, the second object behaves like it is a selected argument of the lexical verb, as it is the lexical verb that determines everything about it regarding implicitness.

The first object behaves differently: The lexical verb determines whether it can be implicit or not, but all implicit first objects are interpreted as definites. In addition, an implicit first object does not permit sluicing, while an implicit second object does. We illustrate the contrast in sluicing below:

(65) (Bruening 2021:1026–1027, (10a), (11a))

- a. She is going to serve the guests now, but I don't know what.
- b. They accidentally charged \*(someone) way too much, but we can't figure out who.

Bruening (2021) proposes that the contrasts between the two objects arise from the second object being an argument of the lexical verb, but the first object is introduced by a functional head, Appl. Lexical verbs determine whether their own complements can be left implicit and how they are interpreted when they are. Since the second object is the complement of the lexical verb, the lexical verb determines whether it can be implicit and how it is interpreted when it is. In contrast, it takes a syntactic head like the passive (a head Pass(ive) in Bruening 2013) to make the argument of a functional head be implicit, and these syntactic heads always have a uniform interpretation. The head Pass that makes the argument of Voice implicit in the passive always has an existential interpretation. In contrast, there is a head Appl<sub>pass</sub> that makes the argument of Appl implicit, and it always imposes a definite interpretation on it. The failure of sluicing then follows as a voice mismatch. Voice mismatches are known to be disallowed in sluicing (e.g., Merchant 2013). In (65b), the antecedent clause with an implicit first object is “passive,” with the head Appl<sub>pass</sub> suppressing the argument of Appl, but the elided clause has to be “active,” with *who* projected in the specifier of ApplP and no Appl<sub>pass</sub>. This violates the identity requirement on

ellipsis. Thus, the proposed structure is able to explain patterns of implicit arguments (see Bruening 2021 for details).

In the small clause analysis, the two objects are equivalent in that neither is an argument of the lexical verb. They are both arguments of a functional head (the same one). There does not appear to be any way to distinguish their behavior as implicit arguments. One might stipulate that the specifier and complement of HaveP behave differently, but this would just be a restatement of the facts. It is also not the case that all double object constructions behave the same, which is what this stipulation would imply; rather, whether either argument can be implicit depends on the lexical verb. But the lexical verb is outside of the HaveP constituent and takes neither NP as its argument. If one were to allow the lexical verb to determine the behavior of the second object in the small clause structure, then it should be able to determine the behavior of the first object just as easily, if not more easily because it is closer to it. (The problem is compounded in the Harley analysis, where the lexical verb is just a manner modifier adjoined to  $v_{\text{CAUSE}}$ ; as an adjunct, it should have no say in the behavior of the arguments embedded in the complement of the head it is adjoined to.) Bruening (2021) also points out that verbs that actually do occur with small clauses never license an implicit argument in any NP position inside the small clause:

(66) (Bruening 2021:1041, (66))

- a. I want [the workers at their desks]!
- b. \* I want [at their desks]!
- c. \* I want [the workers at]!

(67) (Bruening 2021:1041, (67))

- a. I consider [him beneath contempt].

- b. \* I consider [beneath contempt].
- c. \* I consider [him beneath].

(68) (Bruening 2021:1041, (68))

- a. We can never permit [adults on the playground].
- b. \* We can never permit [on the playground].
- c. \* We can never permit [adults on].

This is expected, since the verb does not take any of those NPs as its argument, it only takes the small clause itself as its argument. Since double object constructions behave quite differently, they could not involve a small clause. In particular, the second object at least must be a selected argument of the lexical verb. Bruening (2021:1042) also notes that the verb *consider* can license an implicit NP argument, when it takes just an NP argument: *I will consider (the request) and get back to you*. This is expected, if the NP is the selected argument of the verb in this frame, and it highlights the contrast between the behavior of small clauses and NP arguments. Given the pattern of implicit arguments in double object constructions, a small clause analysis is untenable.

The pattern described here is the same as that of the previous subsections: the second object in the double object construction is the selected complement of the lexical verb. This means that they form a constituent together. If they do, then again there can be no constituent corresponding to the resultant possession state.



## 4.5 Argument 4: Depictive Secondary Predicates

Bruening (2018a) shows that the small clause analysis of double object constructions makes entirely wrong predictions for depictive secondary predicates. In the small clause analysis, neither NP object names a participant in the verbal event, they only name participants in the resulting possession eventuality. Depictive secondary predicates show that this is incorrect, as they can only modify the NPs in the verbal causing event, and cannot modify either NP exclusively in the resulting possession eventuality. This is shown by examples like the following:

(69) (Bruening 2018a:547, (25))

- a. I threw him *the ball* **wet**, but when he got it it was dry.
- b. As it left my hand it was wet, #but I threw him *the ball* **dry**.

In (69a), *wet* can characterize the ball during the throwing event, but then the ball can change to a dry state by the time the possession state is achieved. In (69b), in contrast, *dry* is incapable of characterizing the ball only during the resulting possession state; in this example, it is inconsistent with the characterization of the ball during the throwing event. These two examples show that depictive secondary predicates can only characterize the second object during the verbal event, and cannot characterize it during the resulting possession state. This is exactly the opposite of what the small clause analysis would predict, since in that analysis the second object does not name a participant in the verbal event, it only names a participant in the resulting possession eventuality.

In contrast, in the analysis of double object constructions in Bruening (2021), both NPs name participants in the verbal event, with verbs that take goal arguments, like *throw*, and

the second NP names a participant in the verbal event with *every* double object verb. Both NPs (with a verb like *throw*) can therefore be modified by a depictive secondary predicate and be characterized during the event named by the verb (but the first object can only be modified under certain conditions; see Bruening 2021).

We take these facts to show that there is no constituent in the syntax corresponding to the resultant possession state. If there were, it would have to look something like the small clause proposed by the small clause analyses. However, as Bruening (2018a) shows, if there were such a small clause, it would allow a depictive secondary predicate to modify it, since depictive secondary predicates can modify NPs inside small clauses:

(70) (Bruening 2018a:549, (32))

- a. I want [*the soldiers on the parade ground* **fully dressed**]!
- b. [*Maxwell in a dress* **drunk**] is a sight to see!
- c. With [*Hope in the hospital* **hurt**], we're likely to lose the match.
- d. I consider [*him beneath contempt* **drunk**].
- e. What we can never permit is [*adults on the playground* **naked**].
- f. We can't let there be [*adults on the playground* **naked**].

Depictive secondary predicates, then, also show that there is no constituent in the syntax of a double object construction that corresponds to the resultant state of possession.

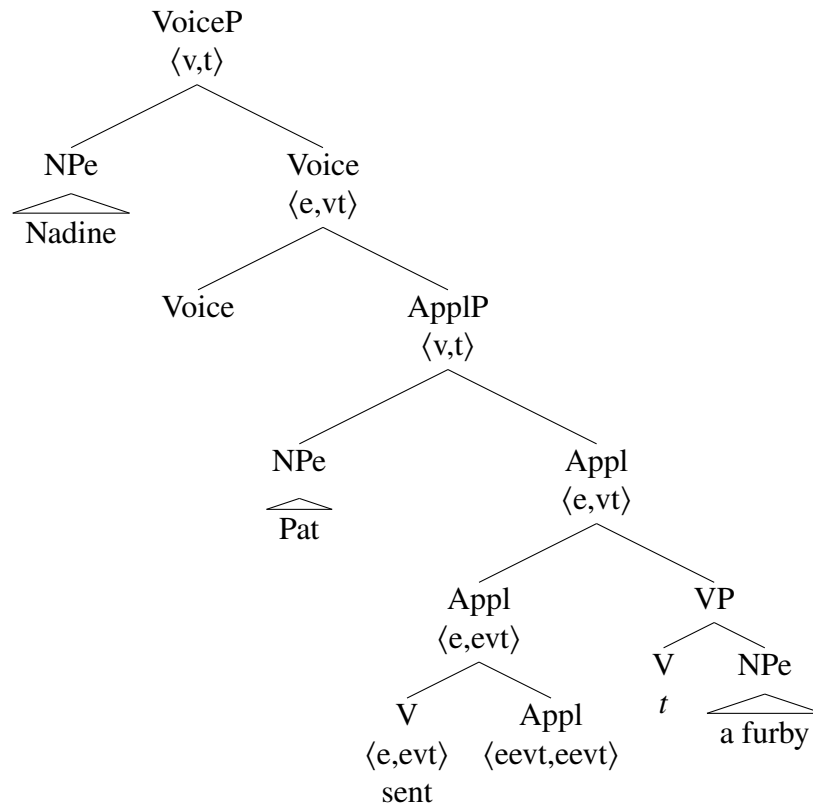
## 4.6 The Semantics of the ApplP Analysis and *Again*

We have one more argument that the structure of the double object construction does not include a constituent corresponding to the resultant state of possession, but before pre-

sending it, we spell out the semantics of the ApplP analysis and how the lexical ambiguity hypothesis for *again* accurately captures the facts.

We repeat the ApplP structure below, but in this depiction we show the semantic type of each node. We also show where the verb is interpreted. Bruening (2021) proposes that the verb moves through Appl to Voice. Although it is pronounced at Voice, it is interpreted at Appl. Appl is a higher-order function that takes V as its first argument. The structure below shows V where it is interpreted (note that there is no constituent corresponding to the possession state even after verb movement):

(71) Nadine sent Pat a furby.



According to Bruening (2021:1046, (79)), Appl has the denotation in (72). An “i-

world” stands for an inertia world (Dowty 1979; Portner 1998): if the event  $e$  is not interrupted, it will lead to (or cause) a further eventuality. Here, a sending event results in a possession eventuality if it is not interrupted. The inclusion of the  $i$ -world in the denotation is necessary because the possession eventuality is intended but is not always entailed (e.g., *Nadine sent Pat a furby but she never got it*; see Oehrle 1976; Beck and Johnson 2004; Beavers 2011; Harley and Jung 2015; Bruening 2021).

$$(72) \quad \llbracket \text{Appl} \rrbracket^{w,g} = \lambda f_{\langle e, (e)_{vt} \rangle} \lambda x \lambda y \lambda e. f(e, x, y) \text{ in } w \ \& \ \forall w' [w' \text{ is an } i\text{-world for } w \text{ w.r.t. } e \\ \rightarrow \exists e' [\text{possession}(e', x) \text{ in } w' \text{ and } \text{possessor}(e', y) \text{ in } w' \ \& \ \text{CAUSE}(e, e') \text{ in } w']] ]$$

Appl takes an  $f$  as its first argument, which comes from *send* in this case, and unifies its own arguments with those of the verb. Consequently, the two individual arguments  $x$  and  $y$  serve as participants in two eventualities:  $x$  is the theme of  $V$  and possessum of the possession eventuality;  $y$  is the goal of  $V$  and possessor of the possession eventuality. In the structure in (71), *a furby* in the complement of  $V$  saturates the first argument, and then *Pat* in the specifier of ApplP saturates the second argument. As a result, ApplP in (71) has the following denotation:

$$(73) \quad \llbracket \text{ApplP} \rrbracket^{w,g} = \lambda e. \text{send}(e, \text{furby}) \text{ in } w \ \& \ \text{goal}(e, \text{Pat}) \text{ in } w \ \& \ \forall w' [w' \text{ is an } i\text{-world for } w \text{ w.r.t. } e \\ \rightarrow \exists e' [\text{possession}(e', \text{a furby}) \text{ in } w' \text{ and } \text{possessor}(e', \text{Pat}) \text{ in } w' \ \& \ \text{CAUSE}(e, e') \text{ in } w']] ]$$

Voice will introduce an external argument by combining with ApplP either by a rule of Event Identification (Kratzer 1996) or by Function Application (Bruening 2013).

In the example above, the  $V$  took two arguments, a theme and a goal. Appl may also combine with a verb that does not take a goal PP argument by itself. The verb *melt* is one

example (e.g., \**John melted some ice cream to me*). If Appl combines with *melt* to form the double object construction, *y* is only interpreted as the possessor in the possession eventuality (it is not a participant in the melting event).

(74) John melted me some ice cream.

$$\llbracket \text{ApplP} \rrbracket^{w,g} = \lambda e. \text{melt}(e, \text{ice cream}) \text{ in } w \ \& \ \forall w' [w' \text{ is an i-world for } w \text{ w.r.t. } e \rightarrow \exists e' [\text{possession}(e', \text{ice cream}) \text{ in } w' \text{ and } \text{possessor}(e', \text{me}) \text{ in } w' \ \& \ \text{CAUSE}(e, e') \text{ in } w'] ]$$

We turn now to *again*. Pretend for the moment that the structural analysis of the repetitive–restitutive ambiguity is correct. The structure in (71) has two  $\langle v, t \rangle$  nodes that *again* can adjoin to: ApplP and VoiceP. Neither of these corresponds to the possession eventuality. The denotation of ApplP is shown in (73). If *again* were to adjoin to ApplP, it would presuppose a sending event that is intended to cause a possession eventuality. This is not the restitutive reading. The denotation of VoiceP is the same, except that it would include an agent for the sending event. Both of these readings are possible; the former corresponds to the “subjectless” reading described by Bale (2007). We give an example of each below. In (75), Elena had not previously kicked the ball to Maria, but others had. This is the subjectless reading, where *again* adjoins to ApplP. In (76), the entire event of Elena kicking Maria the ball took place before. This corresponds to *again* adjoining to VoiceP.

(75) No one can get the ball to Maria. First Angel kicked her the ball, but missed. Then Emilio kicked her the ball, but it was intercepted. A few minutes later, **Elena kicked her the ball again**, but this time Maria stepped out of bounds before she got it. (Bruening 2010:555, (76))

- (76) Elena kicked Maria the ball, and Maria kicked it back. A few minutes later, **Elena kicked Maria the ball again.**

These are the only two readings that should be possible on the structural analysis. There is no constituent that *again* can adjoin to and yield the restitutive reading.

Let us now consider the lexical ambiguity account. On that account, there is an Again1, which presupposes that an event of the type denoted by its sister occurred before, and there is an Again2, which presupposes that a state that is the result of the type of event denoted by its sister held before. Again1 can adjoin to ApplP or to VoiceP and yield exactly the two readings in (75–76). If Again2 adjoins to either of those nodes, it will have the restitutive reading. The result of a kicking event in the double object construction is a possession eventuality. This is the following part of the denotation of Appl:  $\exists e'$  [possession ( $e'$ ,  $x$ ) in  $w'$  and possessor( $e'$ ,  $y$ ) in  $w'$  & CAUSE( $e$ ,  $e'$ ) in  $w'$ ].

Note that the structure in (71) also has no node of type  $\langle v, t \rangle$  that corresponds only to the event described by the lexical verb. We therefore predict that *again* in a double object construction cannot presuppose just a kicking event or a sending event, for instance. In the double object construction, the intended caused possession must always be included. This is correct, as was observed by Bruening (2010):

- (77) I kicked the ball once, then **#I kicked Maria the ball again.** (Bruening 2010:556, (80))

As can be seen, the ApplP analysis, combined with the lexical ambiguity hypothesis, explains the readings that exist with *again*. There are exactly three: a repetitive reading that includes the subject, a repetitive reading that does not include the subject, and the restitutive reading.

Importantly, the ApplP analysis does not include a syntactic constituent corresponding to the intended caused possession. It does have a syntactic constituent consisting of the lexical verb and the second object. This makes it compatible with all of the facts discussed in the previous subsections. Now that we have the semantics, we can also explain why depictive secondary predicates cannot describe one of the objects solely during the resulting possession eventuality. Depictive secondary predicates are also adjuncts and we assume that their interpretation is given by what they adjoin to. There is no syntactic constituent consisting of the possession eventuality. It is only part of the semantics, and its event variable,  $e'$ , is bound within the denotation of Appl (see (72)). We assume that depictive secondary predicates are not lexically ambiguous the way *again* is and they cannot target the event variable  $e'$ . If a depictive adjoins to either VP or ApplP, it will only be able to modify the event variable  $e$ , which corresponds to the causing event described by the verb. Thus, we explain why the resultant possession eventuality cannot be modified by a depictive secondary predicate.

Having presented the semantics of the double object construction, we can now present our remaining argument that there is no constituent corresponding to the resulting possession eventuality. This argument comes from Japanese.

## 4.7 Argument 5: Double Object Constructions in Japanese

Recall that we suggested in section 3.2 that the Japanese version of *again*, *mata*, is not lexically ambiguous. In particular, *mata* has only the denotation of Again1, not Again2. If this is correct, and the language's double object constructions have the same ApplP structure that we have proposed for English, then Japanese double object constructions should not

permit restitutive readings with *mata*.

This is correct. Japanese *mata* cannot presuppose just the result state of a double object construction (possession), as shown in (78). Out of ten informants, eight reject this example. Note that the English translation is fine in the given context.

- (78) a. *Context*: Tinpanzii-no Ayumu-wa dokoka-de mituke-te-ki-ta nuigurumi-o mot-tei-ta. Aruhi, Ayumu-wa nuigurumi-o nakusi-te kanari dooyoo-si-ta. Siikuin-no Takashi-ga ori-o soozi-si-teiru-tokini nuigurumi-o mituke-ta.

‘Ayumu the chimpanzee had a stuffed animal that he found somewhere. One day, he lost it and got really upset. Takashi, a zookeeper, found it while cleaning the cage.’

- b. Takashi-ga Ayumu-ni nuigurumi-o (#mata) ageru-to, Ayumu-wa Takashi-NOM Ayumu-DAT stuffed.animalACC again give-after Ayumu-TO<sub>P</sub> otitui-ta.  
calm.down-PST

‘After Takashi gave Ayumu the stuffed animal again, he calmed down.’

We provide an additional example to illustrate the same point below. This time, all ten informants reject this example. Again, the English translation allows the restitutive reading.

- (79) a. *Context*: Hanako-ga Tokyo-ni iru Yoshiko-o tazune-ta. Sun-deiru Osaka-ni modot-ta ato-ni Hanako-wa Yoshiko-no ie-ni pasokon-o wasure-ta koto-ni kizuita. Totemo sinsetu-na-no-de ...

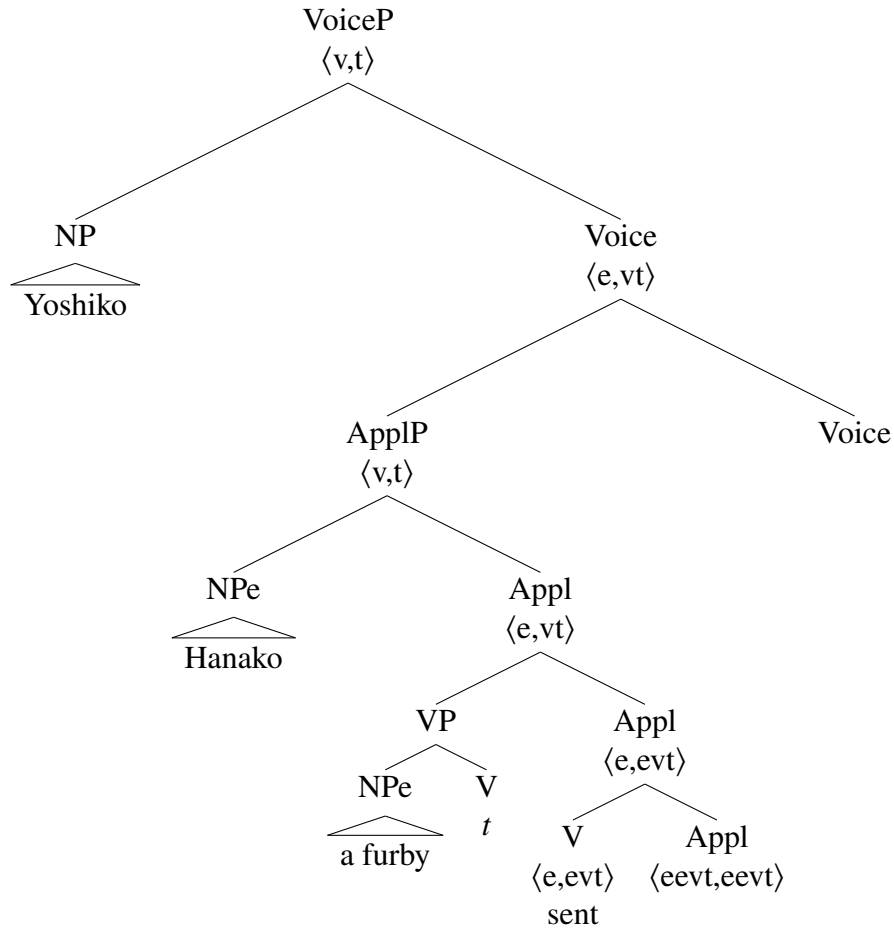
Hanako visited Yoshiko in Tokyo. After she went back to Osaka, where she lived, Hanako noticed she forgot her laptop in Yoshiko’s house. Being very nice ...



- b. Yoshiko-ga Hanako-ni pasokon-o (#mata) okut-ta.  
Yoshiko-NOM Hanako-DAT laptop-ACC again send-PST  
'Yoshiko sent Hanako the laptop (again).'

The difference between English and Japanese is exactly what our proposal predicts. In our proposal, English *again* lexicalizes Again1 and Again2 but Japanese *mata* only has the meaning of Again1. The syntax of the double object construction in Japanese is a head-final version of (71), as shown in (80).

- (80) Yoshiko-ga Hanako-ni faabii-o okut-ta.  
Yoshiko-NOM Hanako-DAT furby-ACC send-PST  
'Yoshiko sent Hanako a furby.'



This structure has no  $\langle v,t \rangle$  node denoting only the possession eventuality. There are exactly two nodes that are type  $\langle v,t \rangle$ , namely, VoiceP and ApplP, as in English. Since only Again1 can adjoin, we expect only the subjectful repetitive and subjectless repetitive readings. Japanese *mata* does allow these two readings:

(81) a. *Context for subject-ful repetitive reading:*

Yoshiko-ga Hanako-ni faabii-o kat-ta-ga, Hanako-wa faabii-o nakusi-ta. Atode,

...

‘Yoshiko bought Hanako a furby but she lost it. Later, ...’

b. *Context for subjectless repetitive reading:*

Taro-ga Hanako-ni faabii-o kat-ta-ga, Hanako-ga faabii-o nakusita. Atode, ...

‘Taro bought Hanako a furby but she lost it. Later, ...’

- (82) Yoshiko-ga Hanako-ni faabii-o mata kat-ta.  
 Yoshiko-NOM Hanako-DAT faabii-ACC again buy-PST  
 ‘Yoshiko bought Hanako a furby again.’

Additionally, the intended caused possession must always be included in the presupposition of *mata* in Japanese double object constructions. This is as expected by the structure in (80) where there is no node for the verbal event to the exclusion of the intended possession. Japanese is just like English in this respect (which we take to support extending the ApplP analysis to Japanese), as shown below. Out of ten people, nine reject the following example with *mata*.<sup>8</sup>

- (83) a. *Context:* Taro-ga tekitoo-ni booru-o ket-te, Jiro-ga hirot-ta. Sonoato, ...  
 ‘Taro just kicked the ball and Jiro picked it up. Later, ...’  
 b. Jiro-wa Hanako-ni booru-o (#mata) ket-ta.  
 Ziro-TOP Hanako-DAT furby-ACC (again) kick-PST  
 ‘Jiro kicked Hanako the ball (again).’

Thus, all the possible readings of *mata* in Japanese fall into place under the ApplP analysis of double object constructions, if *mata* has only the meaning of Again1 and not Again2.

One could argue that the ApplP analysis is not the right structure for Japanese double object constructions. Miyagawa and Tsujioka (2004), however, present many independent

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<sup>8</sup>It is more natural to use *kette-ageta* with the auxiliary verb *ageru* ‘give’ than *keru* ‘kick’ alone. Since *ageru* introduces some complication in syntax and semantics (e.g., Tomioka and Kim 2017), we avoid using it in our examples.

arguments that it is (see also Miyagawa 2012). We add some further considerations here. First, Japanese behaves exactly like English with respect to depictive secondary predicates. A depictive secondary predicate can only describe the second object during the main verbal event and cannot characterize it solely during the resulting possession eventuality:

- (84) a. watasi-wa Hanako-ni *taoru-o* **bisyonure-de** okut-ta-ga, Hanako-ga  
 I-TOP Hanako-DAT towel-ACC wet-COP send-PST-but Hanako-NOM  
 uketo-ta koro-ni-wa kapikapi-ni-nat-tei-ta.  
 receive-PST when-DAT-TOP be.dried-COP-become-STATE-PST  
 ‘I sent Hanako the towel wet but when she got it it was dry.’
- b. yuusoosi-ta-toki-wa bisyonure-da-ta-ga, #watasi-wa Hanako-ni  
 send.by.post-PST-when-TOP wet-COP-PST-but I-TOP Hanako-DAT  
*taoru-o* **kapikapi-de** okut-ta.  
 towel-ACC dry-COP send-PST  
 Intended: ‘When I posted it it was wet, but I sent Hanako the towel dry.’

Additionally, Bruening (2010) shows that *again* is not the only adverb that is capable of picking out the possession eventuality. The focus-sensitive adverb *too/also* can do the same:

- (85) Johnny came to school with a lollipop. All the other kids were jealous, so the teacher gave each of them a lollipop too. (Bruening 2010:549, (60))

We assume that this is because *too* is lexically ambiguous between a Too1 and a Too2, in the same way as *again* is ambiguous between Again1 and Again2 in English. It turns out that Japanese ‘too/also’ (the particle *-mo*) is also ambiguous, even though Japanese ‘again’ is not. It is possible to have this particle pick out just the possession part of the double object construction:

- (86) a. Taro-no sensei-kara morat-ta minimaristo puroguramu-toiu hon-o mi-te, Hanako-ga urayamasi-sooni sitei-ta-node, ...  
           ‘Hanako looked jealous of Taro having the book, Minimalist Program, that his professor gave to him, so ...’
- b. Hanako-ni-mo minimalist proguramu-o kat-ta.  
    Hanako-DAT-also Minimalist Program-Acc buy-Pst  
    ‘(I) bought Hanako Minimalist Program, and as a result Hanako also had it.’

Setting aside the exact semantic and syntactic properties of this particle, we take (86) to strongly support our thesis. It shows that we are justified in positing the syntax and semantics of ApplP for Japanese, since the semantics of Japanese clearly includes intended caused possession. At the same time, however, it is incompatible with the small clause approach. If we were to posit a small clause for ‘too/also’ to target, then Japanese *mata*, ‘again’, should also be able to target it. It cannot, however. Only on the lexical ambiguity analysis do the facts make sense: While the syntax does not include a constituent corresponding to the possession eventuality, there is such an eventuality in the semantics which is in principle accessible to adverbs. However, different adverbs are lexically specified as being able to pick it out, or not.<sup>9</sup>

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<sup>9</sup>Spathas and Michelioudakis (2021) argue that this stative result reading with *too/again* must be due to a structural ambiguity. However, the arguments that they give are exactly the same as those that we have already addressed for *again*, namely, that we see disambiguation with a left-peripheral position and with intervening adverbials. These facts just seem to be about scope, as we have already shown for *again*. The only other argument they give is that the lexical ambiguity analysis overgenerates, since, according to them, the stative reading is available with Greek ‘open’ and ‘die’ but not ‘fix’ or ‘kill’. Spathas and Michelioudakis (2021) claim that ‘fix’ and ‘kill’ have a different syntax such that the resultant state is not available. We note, first, that the reading is available with English *kill*, and second, if there are some predicates that do not allow the stative reading (perhaps ‘fix’), analyzing their semantics as being different is just as plausible as claiming that their syntax is. We do not view this as an argument that distinguishes the lexical ambiguity analysis from the structural ambiguity analysis.

## 4.8 Summary

To summarize this section, the syntactic ambiguity hypothesis for *again* requires a constituent in the syntax that corresponds to the intended caused possession eventuality in a double object construction. We have gone through numerous facts in this section that have shown that this is not correct. There is no such constituent in the syntax. The facts of double object constructions are only compatible with the lexical ambiguity hypothesis.

Additional arguments against the small clause approach to double object constructions can be found in Bruening (2018a). That work also addresses arguments that have been given in favor of the small clause analysis, like subextraction, and shows that none of them are valid. In Appendix A, we also address two recent proposals for the structure of double object constructions, namely, a multidominance structure (Johnson 2018) and a “low applicative” analysis (Smith and Yu 2021). We show that both of these are deficient as well.<sup>10</sup>

## 5 Conclusion

This paper has argued for the lexical ambiguity approach to the repetitive-restitutive ambiguity with *again*, and against the structural ambiguity approach. We have argued that all apparent effects of structure are actually effects of either scope or focus. This hypothesis also explains the contrast between *again* and *for X time* adverbials. We have investigated

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<sup>10</sup>We do not even address derivational theories like those of Larson (2014) and Hallman (2015). These relate the double object frame to the PP frame derivationally. Such analyses fail on conventionalized expressions because they cannot rule out one pattern that is systematically missing from double object constructions (*\*throw the wolves X*) without also ruling out the corresponding prepositional dative one (*throw X to the wolves*), which is robustly attested. They also have problems with patterns of implicit arguments; see Bruening (2021). Additionally, Bruening (2018b) gives many reasons to reject derivational theories.

double object constructions in detail and argued that all of the facts indicate that there is no constituent in the syntax corresponding to the intended caused possession, and yet *again* can presuppose this possession eventuality. This, we argue, is only compatible with the lexical ambiguity hypothesis. We have also shown that the lexical ambiguity hypothesis is supported by cross-linguistic facts, and by the contrast between Japanese and English in particular.

One consequence of this paper is that, if we are correct that the lexical ambiguity hypothesis is correct, then some research that hinges on the structural ambiguity hypothesis will have to be re-thought. To give one example, Haddican (2024) presents experimental evidence showing that *again* can have restitutive readings with English particle verbs, in either order of NP and particle. He draws theoretical conclusions from these results. None of these conclusions are valid if the lexical ambiguity hypothesis is correct. His evidence does not show anything about the structure of particle verbs, since in the lexical ambiguity approach *Again* can adjoin anywhere within VoiceP and yield the restitutive reading, regardless of what we might take the structure to be on either order of NP and particle.

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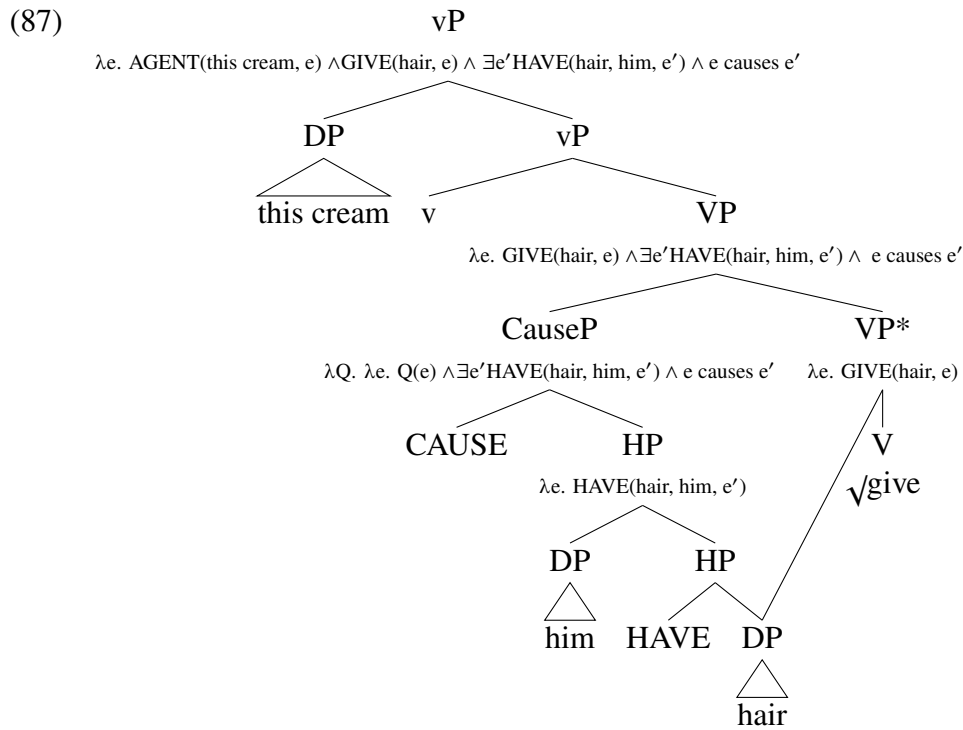
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## A Other Unsuccessful Analyses of Double Object Constructions

### A.1 Multidominance

Recognizing that the second object must be a selected argument of the lexical verb, Johnson (2018) tries to reconcile this with the structural analysis of *again* by proposing a multidominance structure for double object constructions. According to Johnson (2018:228, (44)), the structure of *this cream gave him hair* is the following:



In this structure, the second object is the complement of two heads simultaneously: HAVE, and the lexical verb *give*.

This analysis better captures the facts about conventionalized expressions and implicit arguments than the small clause analysis. In the proposed structure above, the direct object NP and the main verb form a constituent, VP\*. This can explain the pattern of conventionalized expressions in conjunction with the view that the same constituent is shared by the structure of the PP frame. Additionally, in the structure, the second object is an argument of V but the first object is not: it is an argument of a functional head HAVE. Thus, one can conceive of an account in which a functional head suppresses an argument of HAVE whereas the lexical verb determines whether a second object can be implicit and how it is interpreted when it is, in an analogous way as in Bruening (2021).

Despite these improvements over the pure small clause analysis, the multidominance analysis still runs into problems with *again* and depictives. First, the multidominance structure still involves a small clause (H(ave)P). As a consequence, while it correctly predicts that *again* can adjoin to HAVEP to give rise to the restitutive reading, this structure also incorrectly predicts that VP\*, consisting of the second object and V, is an appropriate node for *again* to adjoin to. This would yield the reading shown above to be missing, the one where an event involving only the verb and the second object took place before, without any (intended) caused possession. As we saw above, such a reading is unavailable:

- (88) I gave Mary my old books. Mary didn't like them and returned them to me. **#Later, I gave Jack my old books again.**

Second, the first object is the argument of the small clause denoting a stative possession eventuality. Without some additional restriction, this analysis predicts that depictive secondary predicates should be able modify the first object in this eventuality. This prediction is not correct, as was shown by Bruening (2018a). We provide passivized examples here,



since the first object cannot be modified by a depictive in the double object construction in the active but it can be if it is promoted to subject position in the passive (Koizumi 1994).

- (89) She saw the ball coming and caught it, but simultaneous with her catching it an opponent threw a scarf over her eyes, so *#she* was thrown the ball **blindfolded**.  
(Bruening 2018a:548, (28a))

Note that a depictive can modify the promoted first object during the causing event:

- (90) *She* was thrown the ball **blindfolded**, but she managed to get the blindfold off before it arrived and caught it. (Bruening 2018a:548, (28a))

But this should not be possible in the multidominance structure, since the first object does not name a participant in the event denoted by the verb. It is only an argument of HAVE.

These two problems make this analysis much less successful than the ApplP analysis.<sup>11</sup> As we have shown in this paper, the facts of *again* do not require a constituent in the syntax corresponding to the (intended) caused possession eventuality, and positing one only leads to problems.<sup>12</sup>

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<sup>11</sup>The multidominance structure may also suffer from the binding problem that besets small clause analyses. As Pesetsky (1995) and Bruening (2010, 2018a) discuss, small clauses are always opaque domains for anaphora, but the putative small clause in the double object structure is not. It is not clear in the multidominance structure how binding should work; since it does involve a small clause, one might expect that small clause to constitute the binding domain for the second object. The onus is on the proponent of multidominance to work out how binding domains should be calculated (and to show that multidominance will not massively overgenerate by violating standard constraints on trees).

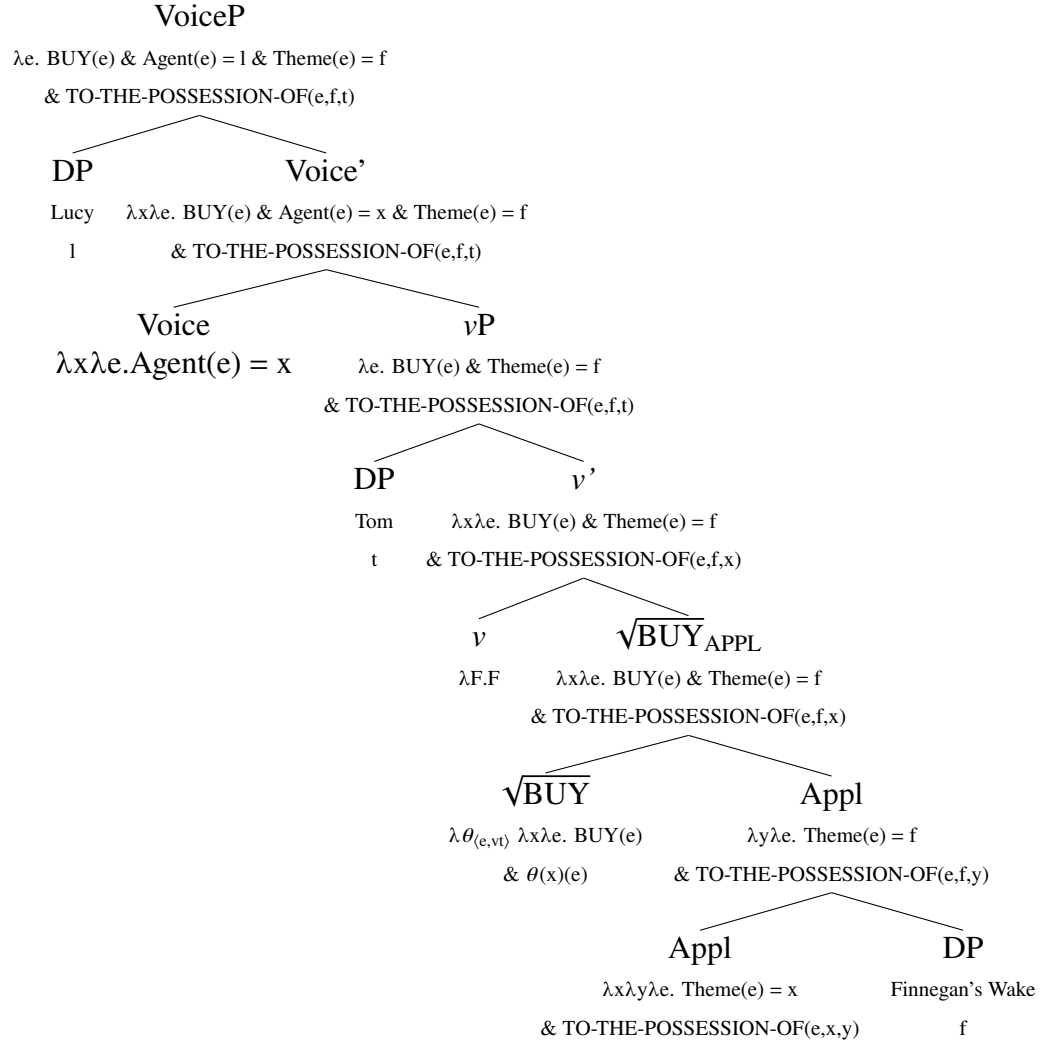
<sup>12</sup>Johnson (2018) also argues that double object constructions with motion verbs such as *kick* and *send* should have a different structure from those with other verbs such as *give* and *lend*. His basis for this is one example with *send* that is not felicitous with the restitutive reading (his example (48), page 230). As we have shown here, restitutive readings are fine with verbs like *kick* and *send* (and this was already shown by Beck and Johnson 2004). We can see no motivation for distinguishing different double object structures in English.

## A.2 A “Low Applicative” Alternative

In a recent publication, Smith and Yu (2021) propose that double object constructions should be analyzed using a modified version of the “low applicative” analysis of Pylkkänen (2008). Pylkkänen’s original low applicative analysis was a variety of small clause analysis and had all the problems that small clause analyses do (see above and especially Bruening 2018a). The modification proposed by Smith and Yu (2021) does not involve a small clause. However, as we will show, it still encounters difficulties, both from the proposed syntax and even more from the proposed semantics.

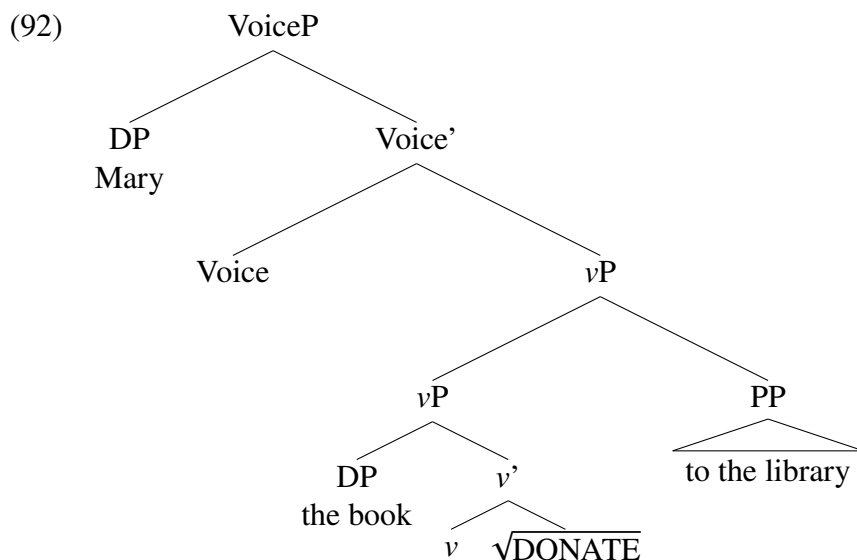
We reproduce the proposed structure and semantics below (Smith and Yu 2021:895, (55)).

- (91) Lucy bought Tom Finnegan’s Wake.



In this analysis, neither NP is an argument of the verb. The second NP is the complement of Appl, while the first NP is the specifier of a  $v$  head. The actual verb does take an NP argument ( $\lambda x$ ), but its thematic relation is not specified; the verb is also specified as having to combine with a thematic role predicate ( $\lambda \theta$ ), which specifies the role that the NP argument has. The actual roles are specified by Appl, which says that the lower NP is a theme and the higher NP is (we assume) a possessor. The head  $v$ , which introduces the first NP, is just an identity function; the role of the NP is specified by Appl.

There are still multiple issues with this analysis. As discussed above, both the facts of implicit arguments and the facts of conventionalized expressions indicate that the second object is an argument of the lexical verb. That is not the case in this analysis, any more than it is in the HaveP analysis. In this analysis, both NPs are arguments of functional heads, just like the external argument. We see no way to distinguish the two objects in order to capture the patterns of implicit arguments and sluicing (see example (65)). In particular, since the lexical verb has no say in whether the external argument can be implicit, it should have no say in whether either of the two internal arguments can be implicit, either, since they are just like the external argument in being introduced by functional heads. We also do not see any way to capture alternating conventionalized expressions like *owe X an apology* ~ *owe an apology to X*. The structure proposed by Smith and Yu (2021:892, (46)) for the PP frame is the following (we omit the semantics):



There is no structure shared between the double object construction and the PP frame in

this analysis. The NP and the verb do form a constituent in the PP frame (that labeled “vP”), but that constituent does not appear in the double object construction in (91). The corresponding NP is the complement of Appl instead. We can see no way to capture the fact that [*owe an apology*] is a conventionalized expression that can be inserted into both the double object frame and the PP frame.

An additional problem is that the proposed semantics is nonsensical. It is not clear what kind of predicate “to-the-possession-of” is. It is never defined, either by Smith and Yu (2021) or by Pylkkänen (2008). One might think it is supposed to be an event description, like a verb, but in Pylkkänen’s (2008) original analysis it did not even take an eventuality argument (see Larson 2010). Smith and Yu modify Pylkkänen’s analysis so that it does have an eventuality argument. However, the event variable *e* is described by both this predicate and the verb, “buy.” So the event is simultaneously a buying event and a “to-the-possession-of” event (whatever that is). This leads to two problems, one with *again* and the other with depictive secondary predicates.

The problem with *again* is that the analysis cannot capture the restitutive reading that double object verbs have in English. This analysis has only one event variable, and this is simultaneously characterized as a buying event and a “to-the-possession-of” event. There is no way to pick out just the possession part. This is true whether one adopts the structural ambiguity analysis or the lexical ambiguity analysis. What is necessary is to have one event described by the verb, and a separate resulting possession eventuality, as in the analysis of Bruening (2021) described above. Smith and Yu’s event semantics does not do this and is therefore inadequate. If they were to try to say that *again* can pick out just the “to-the-possession” part of the event description, then it should be able to pick out just the “buy”

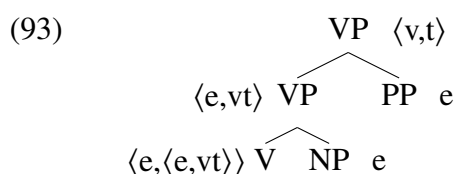
part, too. The two are completely on a par. However, as was shown in (77), this reading is not possible. We conclude that Smith and Yu’s semantics is incompatible with the facts of *again*.

The problem with depictive secondary predicates arises from the same issue. We saw in (69) that depictive secondary predicates can only characterize the second object during the event described by the verb, and do not characterize it during the resulting possession eventuality. But, since in Smith and Yu’s analysis there is only a single event that is described simultaneously by the verb and by “to-the-possession-of,” any depictive secondary predicate would have to characterize the NP throughout *both* eventualities (since they are the same eventuality). This is not correct.

Now, one could alter this analysis to keep the same syntax, but incorporate the semantics proposed by Bruening (2021) instead (or at least something with a resulting possession eventuality that is separate from the event described by the verb). It would then be able to account for the facts of depictive secondary predicates, and the facts of *again*, in combination with the lexical ambiguity hypothesis (since there is no syntactic constituent corresponding to just the possession eventuality). However, the analysis would still face the issues of implicit arguments and conventionalized expressions. Both of these show that the second object is an argument of the lexical verb, which is not true in this analysis. We conclude that the “low Appl” syntax, whether it is coupled with an adequate semantics or not, is incapable of capturing all the facts.

## B An Apparent Problem with the PP Frame

In this section we discuss an apparent problem with the analysis of the PP frame by Bruening (2021), which leads us to a refinement of the distribution of *again*. The problem is pointed out by Smith and Yu (2021), and concerns the analysis of the PP frame in Bruening (2021). As described above, in this analysis, the NP and the PP are both arguments of the lexical verb in the PP frame. According to Bruening (2021), a verb like *donate* takes two arguments, a theme and a goal, and thus it is type  $\langle e, \langle e, vt \rangle \rangle$  (the preposition is semantically vacuous). This verb then should occur in the following structure (Voice not shown).



Smith and Yu (2021) show that the goal PP of certain ditransitive verbs can escape the scope of *again*, allowing a “PP-less” reading. Below is their example with *donate*.<sup>13</sup>

- (94) Lucy donated some books to the library, but the library returned them, saying they were too old and fragile. Later on **Mary donated them again to the local museum, where they are now on display.** (Smith and Yu 2021:893, (50a))

The problem for the analysis of ditransitives in Bruening (2021) is that the structure of the PP frame in (93) has only one node of type  $\langle v, t \rangle$ , VP, which dominates both arguments.

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<sup>13</sup>Note that this example also excludes the subject from the presupposition. This is not particularly relevant, only the exclusion of the PP is. Nevertheless, in our analysis, *again* must be adjoining below Voice, to a projection of VP, so we expect the presupposition to exclude the subject (of course, the subjects of the two events *can* be the same, it is just not required).

Hence, it is predicted that the presupposition of *again* cannot exclude the PP, contrary to fact.

Smith and Yu (2021) propose instead that the PP is an adjunct, and as an adjunct it can freely adjoin either inside or outside the scope of *again*. This analysis predicts that verbs that take obligatory PPs will not permit the PP to escape the presupposition of *again*, and this seems to be true. Verbs like *put*, *set*, *hand*, *lend* do not allow their PP to be implicit. They do allow the PP to follow *again*, but it does not escape the presupposition of *again* by doing so (without a large pause):<sup>14</sup>

- (95) I put the flowers on the table. Then I picked them up and put them on the shelf.  
#The next day, I picked them up and **put them again on the windowsill.**
- (96) I set the candle on the dresser. #Then **I picked it up and set it again on the bedside table.**
- (97) I handed the book to Tom. He looked at it and gave it back. #Then **I handed it again to the person on the other side of Tom.**
- (98) I loaned my car to Tom for a day. #The next day **I loaned it again to Tom's brother-in-law.**

This appears to support Smith and Yu's proposal. Obligatory PPs would be arguments, and would have to be merged inside adverbs like *again*. They are able to move across *again*, but since they have a representation inside the constituent that *again* adjoins to, they are necessarily interpreted in *again*'s presupposition (work by the authors (submitted))

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<sup>14</sup>A few of the speakers we have polled do not like the word order where the PP (obligatory or optional) follows *again*. These speakers require a large pause after *again*. This is true of Smith and Yu's example in (94) for these speakers, as well.



shows that movement does not enable a constituent to escape the presupposition of *again*). Adjuncts would be able to merge outside *again*, with no representation inside the sister of *again*.

Unfortunately, the proposal that the PP is an adjunct with verbs like *donate* is not tenable. The preposition has to be *to*, meaning it is selected, and the PP cannot be iterated:

(99) \* I donated my car to a charity (yesterday) to Goodwill.

Additionally, when the PP is omitted, the existence of an entity that receives the donation is still entailed:

(100) I donated my car, #but there was no one I donated it to.

Moreover, other verbs that allow their PPs to be implicit also allow those PPs to escape the presupposition of *again*. Here are some examples:

(101) a. That con man sold the Brooklyn Bridge to an unsuspecting tourist yesterday.  
**He sold it again today to a recent immigrant from Kazakhstan.**

b. Sally was telling jokes to her co-workers and bosses yesterday. **She's telling jokes again today to her roommates.**

(102) a. Mary has been very helpful lately. Last week, she contributed to Ted's project on sea level rise. A few days ago she contributed to my project on sand sharks. Yesterday **she contributed again to Frida's project on ice pack melt.**

b. The teacher assigned an essay to the first-year students. In the next class, **he assigned an essay again to the second-year students.**

c. Barry introduced himself to a couple hanging out by the wall. Then **he introduced himself again to a group by the piano.**

- d. Samantha explained the contract to her secretary. Then **she explained it again to her boss.**

All of these verbs entail a goal when the PP is implicit. *Sell* and *tell* take an implicit *indefinite* PP (Bruening 2021:1033–1034), while *contribute*, *assign*, *introduce*, and *explain* take implicit *definite* PPs (Bruening 2021:1035–1036). As discussed by Bruening (2021), whether a verb assigns a definite or an indefinite interpretation to a missing PP has to be lexically specified (as originally argued by Fillmore 1986). It is not clear how this can be done if the PP is an adjunct. Verbs do not impose restrictions on adjuncts or specify how they are to be interpreted when they are missing. The PPs of all of these verbs are behaving like arguments.

*Donate* also appears to behave like *pay* and *sell* as discussed in Bruening (2021:Appendix B): How the implicit arguments are interpreted changes depending on whether they are both implicit, or only one is. If only the PP is implicit, it appears to be indefinite, in that it is fine in an out-of-the-blue context, with no need for a contextually salient entity to receive the donation (103a). However, if the NP argument is also implicit, then the implicit PP seems to be definite, as it does require a contextually salient recipient (103b–103c):

- (103) a. A: What should I do with my car? B: You could donate it (to a charity).  
b. A: I need a tax writeoff. B: You could donate #(to a charity).  
c. A: We're all going to give money to Doctors without Borders. You should donate too.

We see no option but for this to be encoded in the lexical entry for *donate*, which means that the PP must be an argument of *donate*.

For all of these reasons, we think it is not possible to maintain that the PP that occurs with *donate* (and comparable verbs) is an adjunct. However, we think that there is something right about the idea. We propose instead that optional PPs, while they are selected arguments of verbs, are more “adjunct-like” than obligatory PPs. We will attempt to spell this out in a formal model. To do so, we adopt the theory of selectional features in Bruening (2013, 2021). In this theory, selection is encoded as a feature that is checked off by merging something of the appropriate type. For instance, a verb that selects an NP has a selectional feature [S:N]. This feature is satisfied by merging the verb with something of category N. What it means to be checked off is to not project. So when a verb with the feature [S:N] merges with an NP, the mother of the two nodes (here, VP) does not have an [S:N] feature:



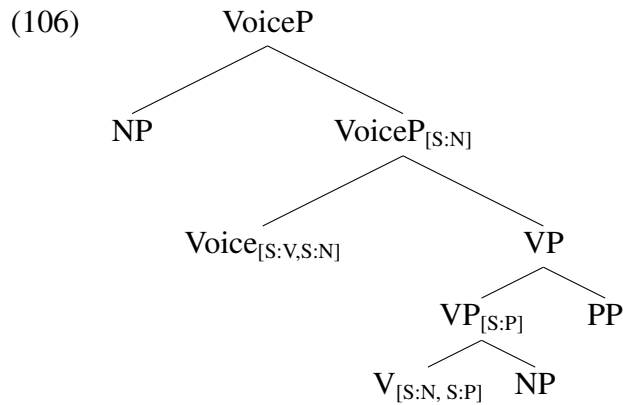
Turning back to verbs that take optional PPs, we propose that they take the PP as a semantic argument, as illustrated here for *donate*:

(105)  $\llbracket \text{donate} \rrbracket = \lambda x \lambda y \lambda e. \text{donating}(e, x) \ \& \ \text{goal}(e, y)$

However, the verb can optionally c-select the PP. That is, it can have the features [S:N,S:P], or just [S:N]. If the verb has only the feature [S:N], then no PP will be merged inside VP. The verb does require a semantic argument, which will have to be saturated at some point. We propose that a PP can adjoin later and saturate the goal argument. (But note that if the PP is to be implicit, then V must have the features [S:N,S:P], as in Bruening 2021.)

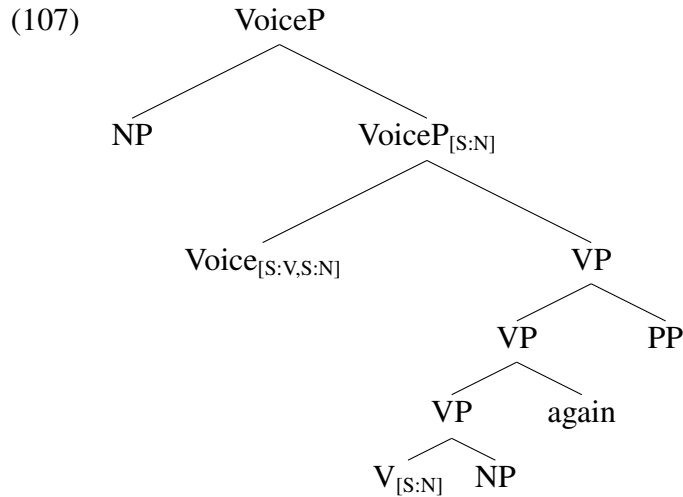
We now propose that where *again* can adjoin is specified in syntactic terms, not semantic ones. Instead of saying that *again* can adjoin to any node of type  $\langle v, t \rangle$ , we say that *again*

can only adjoin to nodes that do not have any unchecked selectional features. In most cases these two describe the same set of nodes. Consider the PP frame where the V has the full set of selectional features, [S:N,S:P]:



VP and VoiceP are the two nodes without any unchecked selectional features. These are also the two nodes that are type  $\langle v, t \rangle$ ; see (93).

Just when the verb takes a PP argument semantically, but only has the selectional feature [S:N], will there be a divergence between nodes of type  $\langle v, t \rangle$  and those that have no unchecked selectional features. In the tree below, once the NP has combined with the verb, all its selectional features have been checked (since its only feature is [S:N]). This is then a valid location for *again* to adjoin.



After *again* has adjoined, a PP headed by *to* can also adjoin, as shown, and saturate the open goal argument of the verb (more than one cannot adjoin, because the argument will have been saturated by the first one).

Note that this requires that *again* be able to adjoin to a node of type  $\langle e, vt \rangle$  as well as  $\langle v, t \rangle$ . In (107), the verb takes two arguments, a theme and a goal, but only one of them has been saturated when *again* adjoins. The goal argument is still open. We propose a rule of Presuppositional Existential Closure:

(108) Presuppositional Existential Closure:

If there are any open variables in the sister of *again*, bind them with the existential quantifier in *again*'s presupposition.

This can also be stated by modifying the lexical entry of *again* to allow for an optional individual argument, as follows (we only discuss Again1 since the repetitive reading is the one at work in the relevant examples). We first repeat the denotation of Again1, and then modify it to Again1'.

(109)  $\llbracket \text{Again1} \rrbracket = \lambda f_{\langle v, t \rangle} . \lambda e . f(e) : \exists e' [\tau(e') < \tau(e) \ \& \ f(e')]$

$$(110) \quad \llbracket \text{Again}' \rrbracket = \lambda f_{\langle e, vt \rangle}.(\lambda y.)(\lambda e.f(e, y)): \exists e'(\cdot, x)[\tau(e') < \tau(e) \ \& \ f(e'(\cdot, x))]$$

In Smith and Yu's example, repeated below, we will derive the presupposition in (112). This says that there was a previous donating of them (the books) event where there was some goal. The context satisfies this presupposition: Lucy previously donated the books to the library.

(111) Lucy donated some books to the library, but the library returned them, saying they were too old and fragile. Later on **Mary donated them again to the local museum**, where they are now on display. (Smith and Yu 2021:893, (50a))

(112) Presupposition of *again*:

$$\exists e', x[\tau(e') < \tau(e) \ \& \ \text{donating}(e', \text{them}) \ \& \ \text{goal}(e', x)]$$

This appears to adequately capture the semantics of the PP-less reading in all of the examples we have investigated in this section. Note that no existential closure takes place in the assertion. Rather, the PP, when it merges outside of *again*, saturates the open argument of the verb. The at-issue or asserted meaning is then that Mary donated the books to the local museum, while the presupposition is that shown in (112).

To summarize, the proposal that PPs that can be omitted can be optionally c-selected enables them to escape the presupposition of *again*. It is likely that it will have other desirable consequences as well, for instance in enabling such PPs to more easily escape processes like VP fronting, VP ellipsis, and replacement by VP pro-forms. We leave exploration of these topics to future work.