Depictive Secondary Predicates, Light Verb *Give*, and Theories of Double Object Constructions*

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Abstract

The HaveP approach to double object constructions (Harley 2008) analyzes double object constructions as a causative v head embedding a small clause headed by Have. The two internal arguments are arguments of this small clause and are not participants in the causing event. Depictive secondary predicates show that this is wrong, and the two internal arguments must be participants in the event that culminates in the intended possession. Light verb uses of *give* are also incompatible with the HaveP analysis, as they can be shown to not involve a Have component at all. Both depictive secondary predicates and light verb uses of *give* receive a natural account within a proposed simplification to the ApplP analysis detailed in Bruening (2010a). This analysis explains why indirect objects cannot be modified by a depictive secondary predicate, except when they are passivized or when they occur with certain light verb uses of *give*. Additionally, the facts of secondary predicates argue against small clause approaches to verbal predicates in general, like those in Harley (2008) and Copley and Harley (2015).

1 Two Accounts of Double Object Constructions

Depictive secondary predicates, as in (1), can decide between competing analyses of double object constructions.

(1) Most people serve white wine chilled.

The two competing analyses of double object constructions to be compared here are the HaveP analysis and the ApplP analysis. The HaveP analysis is defended in Harley (1997, 2002, 2008) and Beck and Johnson (2004), among others. The ApplP analysis is due to Marantz (1993) but is developed most fully in Bruening (2001, 2010a, 2010b, 2014a).

In the HaveP analysis, the verb *give* is analyzed as a light verb vCAUSE taking a small clause headed by Have as its complement. *Give* is the pronunciation of vCAUSE combined with Have. The structure proposed is the following:

(2) Mary gave the car a new engine. (Harley 2008, (53))

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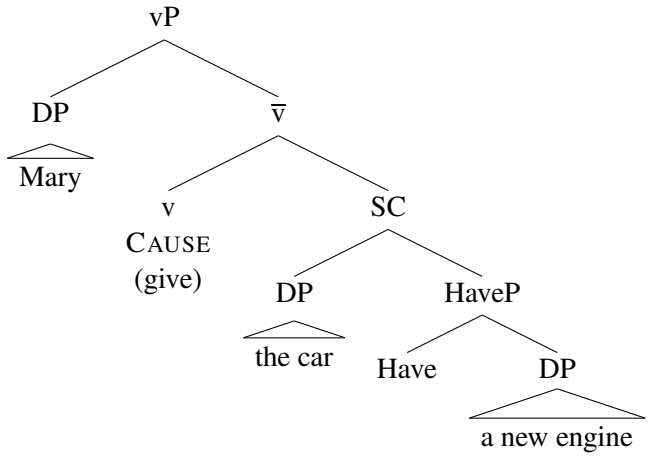
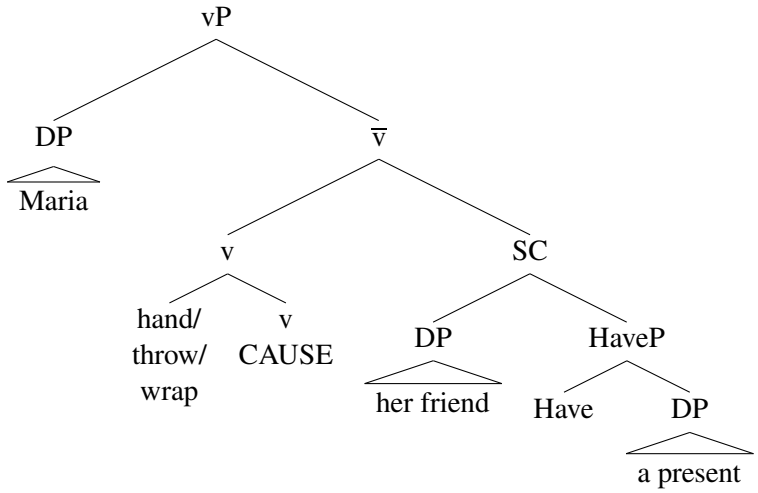


The proposed semantics has a causing event (vCAUSE) with a resulting having state (the small clause headed by Have). The result state is supposed to be equivalent in most respects to the verb of possession, *have* (technically, the verb *have* is Have + *be*, so *give* and *have* share a component, HaveP).

If the verb is some lexical verb other than *give*, that verb adjoins to vCAUSE as a manner modifier. While Harley does not explicitly give the structure for this manner adjunction, we can suppose it would look something like this:

(3) Maria handed/threw/wrapped her friend a present.



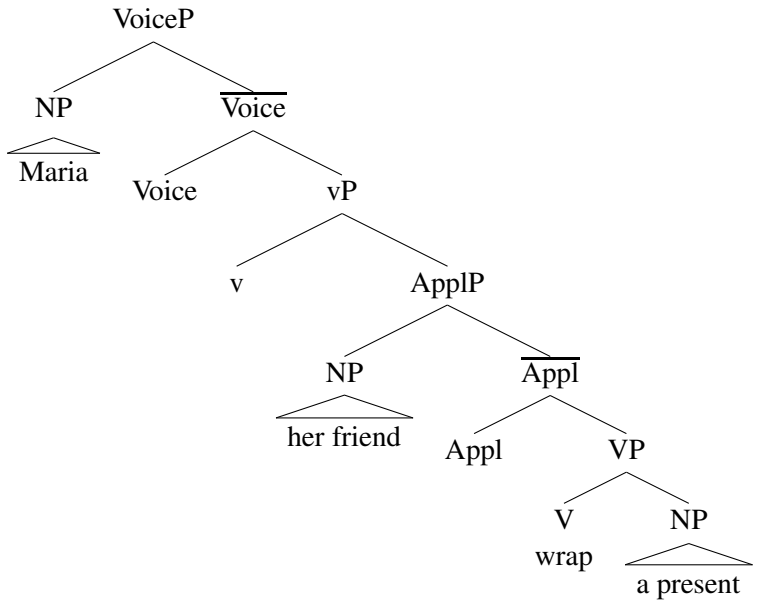
No formal semantics for manner modification is spelled out in any of the publications listed above, but a reasonable assumption is that the semantics is supposed to be something like the following paraphrase: 'Mary, acting in a handing/throwing/wrapping manner, caused a result state where her friend has a present'.[1]

The thing to note about this analysis is that there is no relation between the verb stem (acting as a manner modifier) and either of the two objects. Neither of the objects is a participant in the causing event which the verb stem modifies; they are only participants in the result state.

In contrast, the ApplP analysis treats the direct object, at least, as an argument of the verb stem. The first object or indirect object is introduced by an Appl(icative) head that takes the VP as its complement:

(4) Maria wrapped her friend a present.

[1] Copley and Harley (2015) give a proposal for the semantics of manner modification within a very different framework, but do not discuss double object verbs. See the conclusion for more discussion.



See below on the heads v and Voice. V moves through Appl and v to Voice.

The ApplP analysis also posits a having eventuality as a result state in double object constructions (see especially Bruening 2010a). This is spelled out in section 3, along with a proposed simplification to the analysis in Bruening (2010a). In contrast to the HaveP analysis, however, both objects are participants both in this result state *and* in the causing event that leads to it. This, we will see, is crucial. (For the moment, I use the terms "causing event" and "result state" for comparison between the two theories, since those are the terms used in both Harley's work and Bruening 2010a. In the revised proposal spelled out in section 3, however, these terms are inappropriate and are replaced with ones I believe to more accurately represent the semantics and concepts involved.)

Section 2 goes through depictive secondary predicates in detail and shows how they are incompatible with the HaveP analysis. In section 3, I propose a simplification of the ApplP analysis which, together with a proposal for depictive secondary predicates, explains the facts. Section 4 extends the account to light verb *give*. Section 5 concludes with discussion of implications for approaches that decompose verbal predicates into CAUSE (and BECOME) heads that embed small clauses.

2 Depictive Secondary Predicates

Secondary predicates are commonly divided into two categories, *depictives* and *resultatives*:

(5) a. She flattened the metal wet. *depictive*
b. She pounded the metal flat. *resultative*

Depictives characterize an NP throughout the duration of the verbal event (the main predicate); resultatives characterize a result state of an NP brought about by the verbal event. Thus, in (5b), the metal becomes flat as a result of the pounding. In (5a), in contrast, the metal is wet throughout the event of flattening.

There are numerous syntactic differences between depictives and resultatives. For instance, resultatives may only be predicated of underlying direct objects (see, e.g., Levin and Rappaport Hovav 1995, Rothstein 2004, Williams 2011). Depictives, in contrast, can be predicated both of direct objects and subjects. Interestingly, however, they may not be predicated of indirect objects in double object constructions, as was noted by Williams (1980):

(6) a. Sasha fed Melinda the meat raw.
b. Sasha fed Melinda the meat drunk. (Sasha but not Melinda is drunk)

There is, however, an exception to this ban. *Light verb* uses of *give* permit indirect object modification (Maling 2001, Pylkkänen 2008):

(7) (Maling 2001, (14c–d))

a. The nurse gave the patient his medication still-groggy/half-asleep.

b. Victorian doctors preferred to give their female patients a physical exam fully-dressed.

In light verb uses of *give*, *give* seems to have little semantic content; that content is instead provided by the direct object. Thus, *give medication* is interpreted as 'medicate' and *give an exam* is interpreted as 'examine'. It is crucially on these interpretations that the depictive can characterize the indirect object. *Give medication* could also be interpreted as transferring possession of the medication rather than medicating, but (7a) is not possible with this interpretation (Pylkkänen 2008). This would be a non-light use of *give* as a verb of transfer of possession.

Now, one could imagine that the HaveP analysis would have a ready explanation for these facts. Suppose that depictive secondary predicates can only modify events and may not modify states. Then they cannot normally modify the indirect object of a double object construction because that object is only a participant in a state, namely the resulting having state. If light verb uses of *give* instead involve an eventive use of Have, then we explain why they are exceptional. As support for this conjecture, it appears that the verb *have* does have eventive uses:

(8) a. The patient had an exam. (cf. The doctor gave the patient an exam.)

b. The car had a tuneup. (cf. The mechanic gave the car a tuneup.)

c. The visitor had a massage this morning. (cf. The masseuse gave the visitor a massage this morning.)

d. These tables have had a thorough scrubbing. (cf. I gave the tables a scrubbing.)

In fact, as can be seen in these examples, light verb uses of *give* typically alternate with *have*. This appears to fall right in line with the HaveP analysis, where *give* and *have* both include HaveP.

2.1 Problem 1: The Direct Object

An immediate problem with this analysis is that the direct object in a double object construction can have a depictive secondary predicate predicated of it (repeated from 6a):

(9) Sasha fed Melinda the meat raw.

The problem is, the direct object is also only a participant in the having result state in the HaveP analysis. Like the indirect object, it is not actually a participant in the causing event. In the analysis suggested above, depictives may only modify events and may not modify states; this analysis therefore predicts that they could modify *neither* object in the HaveP analysis.

2.2 Problem 2: What Depictives Do

Moreover, when a depictive does modify a direct object, it clearly characterizes it throughout the causing event, and not during the result state. Consider the following examples:

(10) 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.

As these examples show, the property *wet* only has to hold of the ball during the causing event. In (10a), the ball can be wet during this event, but dry by the time the result having state is achieved. In contrast, in (10b), trying to have *wet* modify *the ball* only during the result having state, and not during the causing event, is not possible.

This is true of all cases of complex predicates, where the verb denotes a causing event plus resulting state. Depictives consistently only modify the causing event:

(11) a. He flattened the metal wet, but by the time it was completely flat it had dried.

b. He always shears the sheep asleep, although they usually wake up before they are completely shorn.

c. People usually cook lobsters alive. (by the time they achieve cooked state, they are dead)

In fact, this is simply true by definition: if the secondary predicate were to modify the result state, it would be a resultative secondary predicate, not a depictive.

What depictive secondary predicates do is modify an NP and an event. The depictive predicates a property of the NP that holds throughout the event (see Geuder 2000, Rothstein 2004, Pylkkänen 2008). As Williams (1980) and Rothstein (2004) note, the NP has to be a participant in the main event. Resultative secondary predicates can add NPs that are not arguments of the main predicate, as in (12a), but depictives cannot (12b):

(12) a. Gerald drank the pub dry.

b. John drove Mary drunk. (cannot mean, 'John drove, and throughout this event Mary was drunk'; Rothstein 2004, 70, (41))

This restriction follows from the analysis of depictives proposed below. Importantly here, if a depictive can characterize an NP during a certain event, that NP must be a participant in that event. In double object constructions, we have seen that a depictive can only modify the causing event. The depictive predicates a property of the direct object that holds throughout the causing event, and not during the resulting having state. What this tells us is that the direct object must be a participant in the causing event. This is not true in the HaveP analysis, and appears to be irreconcilable with it.

2.3 Problem 3: Light Verb *Give*

Turning back to light verb uses of *give*, which permit depictive modification of indirect objects, the same fact holds. The depictive, when it modifies the indirect object, modifies the causing event and not any result:

(13) a. The nurse gave the patient his medication asleep, but he woke up by the time it was all injected.

b. I always give the tables a scrubbing wet, but they're usually dry by the time they're fully scrubbed.

c. # The tables start out dry, but I always give them a scrubbing wet.

Moreover, if the only requirement on depictives is that they need an event to modify rather than a state, we would expect that indirect object modification in the following examples of light verb *give* would be possible, but it is not:

(14) a. He gave us a shout drunk. (only he and not we can be drunk)

b. He gave us a smile still groggy. (only he and not we can be still groggy)

Give a shout and *give a smile* are eventive, but they do not permit indirect object modification by a depictive.

The difference between the *give medication* type of light verb and the *give a shout* type is that the indirect object is interpreted as the logical object of the noun *medication*, but the indirect object is not interpreted as the logical object of *shout*. In *give medication*, *give an exam*, and *give a scrubbing*, the indirect object corresponds to the direct object of the corresponding simple verb:

(15) a. The nurse gave the patient his medication half-asleep.
≈The nurse medicated the patient half-asleep.

b. Victorian doctors preferred to give their female patients a physical exam fully-dressed.
≈Victorian doctors preferred to examine their female patients fully-dressed.

c. I always give the tables a scrubbing wet.
≈I always scrub the tables wet.

In contrast, with *give a shout* and *give a smile*, the indirect object does not correspond to the direct object of the corresponding simple verb construction:

(16) a. He gave us a shout drunk.
≠He shouted us drunk.

b. He gave us a smile still groggy.
≠He smiled us still groggy.

In fact, *give a shout* and *give a smile* do not fit into the HaveP analysis at all: there is no corresponding **have a shout*, and while there is a *have a smile*, its subject bears a different relation from that in *give a smile*. The subject of *have a smile* is the one with the smile on their face, while in *give a smile* the indirect object is not (they are the one smiled at).

A proponent of the HaveP analysis could suggest that *give a shout* has a different structure from *give medication*. This would undermine the conceptual appeal of the HaveP analysis, where *give* is uniformly vCause+Have.

2.4 Problem 4: Passives

An additional issue regarding depictives was pointed out by Koizumi (1994). Although indirect objects cannot be modified by depictive secondary predicates in the active, they can when they become the subject of a passive:

(17) (Pylkkänen 2008, 36, (57a–b))
a. He told me the news drunk. (I cannot be the one who is drunk)
b. I was told the news drunk. (I am the one who is drunk)

This is also true with light verb uses of *give* that do not allow depictive predication of the indirect object:

(18) a. He gave us a shout drunk. (we are not drunk)
b. We were given a shout drunk. (we are drunk)

This fact points to a syntactic analysis of the restrictions on depictive secondary predication rather than a semantic one. As far as anyone can tell, the semantics of a passive are identical to the semantics of the corresponding active. While it might be true that depictives can only modify events and not states, this restriction is not sufficient to explain the syntactic restrictions on depictives.

Furthermore, passives show us that the indirect object of non-light verbs must be a participant in the causing event, just like the direct object:

(19) She was thrown the ball blindfolded, but she managed to get the blindfold off before it arrived and caught it.

Since indirect object modification is not possible in the active, depictives could not tell us whether the indirect object is a participant in the causing event. Such modification is possible in the passive, and it shows that all indirect objects are participants in the causing event, not just indirect objects of light verb *give*.

2.5 Summary

This section has shown that depictive secondary predicates are inconsistent with the basic premises of the HaveP analysis. In that analysis, neither object is a participant in the causing event. Yet this is exactly what depictive secondary predicates require. Since they predicate a property of one of the objects throughout the causing event, both NPs must be participants in the causing event. This is clearly true for all direct objects,[2] and it also must be true for indirect objects of light verb uses of *give* that allow depictive secondary predication of the indirect object. The passive, furthermore, shows that *all* indirect objects are participants in the causing event. Again, these facts are inconsistent with the HaveP account and cannot be reconciled with it.

In the next section, I show how we can account for all of the facts of depictive secondary predicates within the ApplP analysis. In the ApplP analysis, both objects are participants in both the causing event and the having result. This means that it is possible within this account to have a depictive characterize one of the objects throughout the

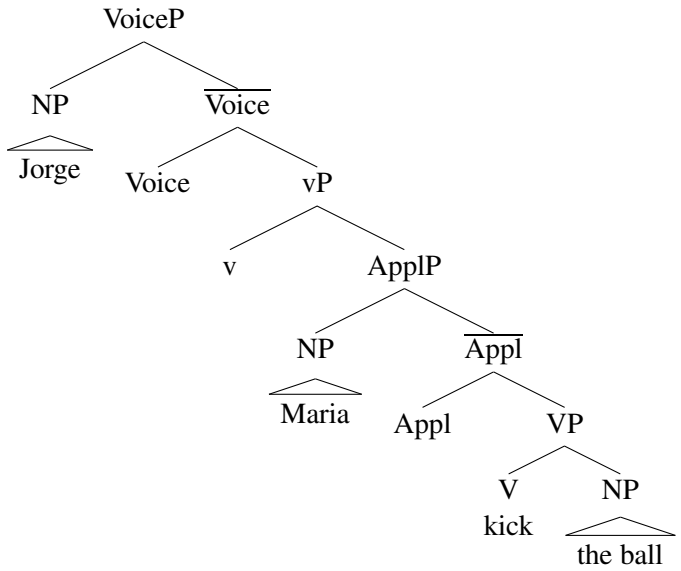
[2]It should be pointed out that the findings here are consistent with the idiom data in Bruening (2010a), which show that the verb and the direct object form a unit together in double object constructions.

causing event, in contrast with the HaveP analysis. It is also possible to build an account of light verb uses of *give* that captures both the commonalities and the differences between the *give medication* type and the *give a shout* type.

3 An ApplP Account of Depictives

The structure for a double object construction in the ApplP account is repeated below (Bruening 2010a):

(20)



The direct object is an argument of the lexical verb, while the indirect object is projected by the head Appl. The external argument is projected by Voice (Kratzer 1996). There is also a head v that, in Bruening (2010a), is semantically contentless but is involved in case assignment and in ensuring that the semantics combines in the right way. The head V moves through Appl and v to Voice.

I will first offer a simplification of the syntax and semantics proposed in Bruening (2010a) that still captures all the facts discussed in Bruening (2010a) and Bruening (2014b). The proposed simplification then permits a simple account of the facts of depictive secondary predication. The current section details such an account, and shows how it rules out depictive modification of the indirect object, except in the passive. Section 4 will turn to light verb *give*. I start by explaining the syntax and semantics proposed in Bruening (2010a) before proposing a simpler and more empirically satisfying account. I then propose an analysis of depictive secondary predicates that captures their behavior in double object constructions and in passives.

3.1 Syntax and Semantics in Bruening (2010a)

The semantics of VoiceP proposed in Bruening (2010a) is shown below:

(21) Jorge kicked Maria the ball.
$[\![\text{VoiceP}]\!] = \lambda e.\text{KICK}(e) \,\&\, \text{THEME}(e,\text{ball}) \,\&\, \text{GOAL}(e,\text{Maria}) \,\&\, \text{AGENT}(e,\text{Jorge}) \,\&\, \exists s\, [\text{HAVE}(s) \,\&\, \text{TH}(s,\text{ball}) \,\&\, \text{POSSESSOR}(s,\text{Maria}) \,\&\, \text{CAUSE}(s)(e)]$

Paraphrasing, the VoiceP denotes a set of kicking events with theme *the ball*, agent *Jorge*, and goal *Maria*; this event causes a resulting having state with possessor *Maria* and theme *the ball*.

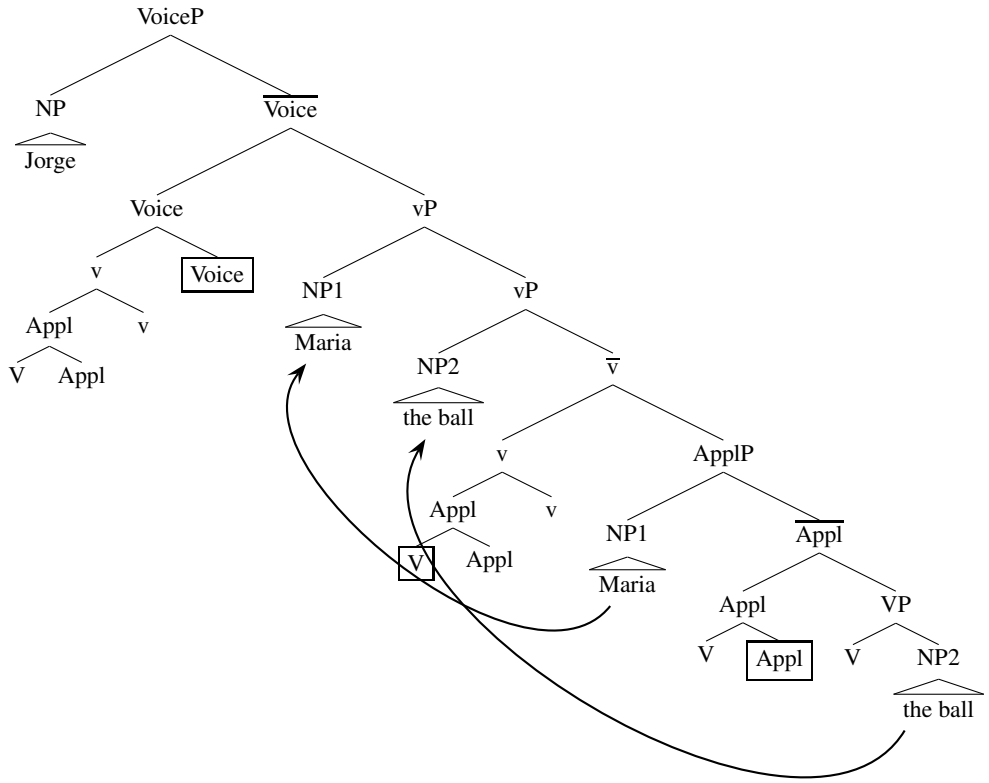
Getting to this semantics is not straightforward, however. One of the facts that Bruening (2010a) wanted to account for was the possibility of adverbs like *again* modifying just the resulting having eventuality (Beck and Johnson 2004). In the following example, for instance, *again* is felicitous even though no one had previously kicked Maria the ball:

(22) Maria started the game with the ball, but kicked it to someone else. For ten minutes, others had the ball. Finally, someone kicked her the ball again.

What *again* says is instead that the state [Maria HAVE the ball] held before. This is often referred to as a *restitutive* reading of *again* (as opposed to the *repetitive* reading, where the whole event happened before).

In Bruening (2010a), it was thought that the possibility of the restitutive reading required a syntactic constituent consisting only of [Maria HAVE the ball] (following von Stechow 1995, 1996; Beck and Johnson 2004). To get that constituent, Bruening (2010a) posited a series of movements. The two NPs move to multiple specifiers of v, while, as stated above, the verb moves through Appl and v to Voice:

(23)



The heads in the head movement chain are only interpreted in the boxed locations in the tree. The lowest trace of the moved verb is not interpreted, nor is it interpreted in the position adjoined to Appl. Appl *is* interpreted in its base position. This results in the desired constituent [Maria HAVE the ball]: the elements interpreted within ApplP are just the two NPs and Appl, which is interpreted as HAVE (abbreviating "TH" for THEME and "PSSR" for POSSESSOR):

(24) a. $[\![\text{Appl}]\!] = \lambda x \lambda y \lambda e.\text{HAVE}(e) \,\&\, \text{TH}(e,x) \,\&\, \text{PSSR}(e,y)$

b. $[\![\text{ApplP}]\!] = \lambda e.\text{HAVE}(e) \,\&\, \text{TH}(e,\text{ball}) \,\&\, \text{PSSR}(e,\text{Maria})$

As can be seen, ApplP is a constituent denoting just the resulting having eventuality.

ApplP and V (v is contentless) then combine by the interpretive rule proposed by von Stechow (1995) and called "Principle R" by Beck and Johnson (2004):[3]

(25) Principle R (modified from von Stechow 1995, 104, (57))
If $\alpha = [_X\, [_V\, \gamma]\, [_{SC}\, \beta]]$ and β' is of type $\langle s,t\rangle$ and γ' is of type $\langle e,\ldots\langle e\langle s,t\rangle\rangle\rangle$ (an n-place predicate), then $\alpha' = \lambda x1\ldots\lambda xn.\lambda e.\gamma'(x1)\ldots(xn)(e) \,\&\, \exists e'\, [\beta'(e') \,\&\, \text{CAUSE}(e')(e)]$

This results in the following denotation for $\overline{v}$:

[3]Principle R is simplified by leaving out the BECOME component of von Stechow's rule.

(26) $[\![\overline{\text{v}}]\!]$= λxλyλe.KICK(e) & TH(e,x) & GOAL(e,y) & ∃e' [HAVE(e') & TH(e',ball) & PSSR(e',Maria) & CAUSE(e')(e)]

Non-standardly, the two NPs have to be interpreted in both their base and moved positions. This leads to the following computations, where Voice combines with the vP as usual, by the rule of Event Identification (Kratzer 1996):

(27) a. $[\![\text{vP}]\!]$= λe.KICK(e) & TH(e,ball) & GOAL(e,Maria) & ∃e' [HAVE(e') & TH(e',ball) & PSSR(e',Maria) & CAUSE(e')(e)]

b. $[\![\text{Voice}]\!]$= λxλe.AGENT(e,x)

c. $[\![\overline{\text{Voice}}]\!]$= λxλe.KICK(e) & TH(e,ball) & GOAL(e,Maria) & AGENT(e,x) & ∃e' [HAVE(e') & TH(e',ball) & PSSR(e',Maria) & CAUSE(e')(e)]

d. $[\![\text{VoiceP}]\!]$= λe.KICK(e) & TH(e,ball) & GOAL(e,Maria) & AGENT(e,Jorge) & ∃e' [HAVE(e') & TH(e',ball) & PSSR(e',Maria) & CAUSE(e')(e)]

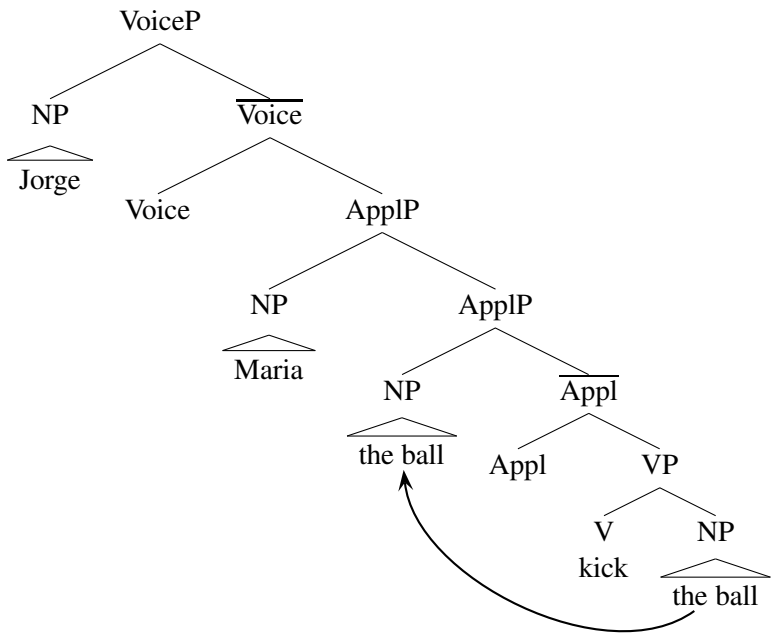
As can be seen, the whole VoiceP is a set of kicking events with theme *the ball*, recipient *Maria*, and agent *Jorge*, which causes a having eventuality with theme *the ball* and possessor *Maria*. At the same time, there is a constituent, ApplP, to which *again* can adjoin and be interpreted as modifying just the having eventuality. It can also adjoin higher, and have a repetitive reading.

As pointed out by Williams (2015) (and originally by Dowty 1979), the restitutive reading of *again* does not actually require a corresponding constituent in the syntax. So long as the semantics includes a resulting eventuality, *again* ought to be able to pick out just that end eventuality. Recognizing this enables us to simplify the syntax and semantics of the ApplP account enormously, as I now show.

3.2 Proposed Simplified Analysis

First, we can do without v entirely, although it would also be possible to have it, if we had reason to think it was there and involved in case assignment. I will leave it out, to keep things maximally simple. The verb still moves to Voice, but all heads are interpreted in their base positions. The only movement that is relevant to interpretation is that the object of V moves to an inner specifier of Appl. As in Bruening (2010a), I propose that this movement is implemented by Case, but it has the side effect of permitting the semantics to compute. Appl is endowed with a Case feature that attracts the object of V. As discussed in Bruening (2001) and Bruening (2010a), the object of V can never cross the argument of Appl, so it "tucks in" (Richards 2001) below the argument of Appl:

(28)



As in Bruening (2010a), V is a function taking either one or two NP arguments and an event argument. *Kick* takes two arguments, the goal optionally (I follow Kratzer to appear in treating the theme as a direct argument rather than as a separate predicate):

(29) $[\![\text{kick}]\!] = \lambda x \lambda y \lambda e.\text{KICK}(e,x) \ \& \ \text{GOAL}(e,y)$

Appl takes a function that may have an open individual argument as its first argument. It then takes two individual arguments. It introduces the having eventuality, and says that this eventuality is the culmination of the verbal event:

(30) $[\![\text{Appl}]\!] = \lambda f_{\langle (e)vt \rangle} \lambda x \lambda y \lambda e.f(e(,y)) \ \& \ e \text{ culminates in } e'.\text{HAVE}(e',x) \ \& \ \text{PSSR}(e',y)$

I use "e culminates in e′" as shorthand for the following, stated mostly in prose:

(31) e culminates in $e' = \forall w'$ [w' is identical to the actual world except that $\exists$e in w' and no outside forces interrupt e in w'] $\rightarrow \exists e'$ in w' [the starting point of e precedes or is synchronous with the starting point of e']

This notion of culmination is basically the same as the idea of *inertia worlds* in Dowty (1979), Portner (1998), Koenig and Muansuwan (2000), Bar-el, Davis, and Matthewson (2005), and Tatevosov (2008).[4] The idea is that, if the event is not interrupted, it will lead to a further eventuality. Here, the kicking event will culminate in a having eventuality, if it is not interrupted. (The having eventuality is only intended and does not have to be realized; see Beck and Johnson 2004 for some discussion, and an example below illustrating.)

Appl will combine with VP and then with the two NPs in turn. Note that the moved NP is interpreted in both positions, and plays two roles (theme of both the kicking event and the having eventuality).

(32) a. $[\![\overline{\text{Appl}}]\!] = \lambda x \lambda y \lambda e.\text{KICK}(e,\text{ball}) \ \& \ \text{GOAL}(e,y) \ \& \ e \text{ culminates in } e'.\text{HAVE}(e',x) \ \& \ \text{PSSR}(e',y)$

b. $[\![\text{ApplP}]\!] = \lambda e.\text{KICK}(e,\text{ball}) \ \& \ \text{GOAL}(e,\text{Maria}) \ \& \ e \text{ culminates in } e'.\text{HAVE}(e',\text{ball}) \ \& \ \text{PSSR}(e',\text{Maria})$

If the verb has two arguments, the second usually a goal or recipient, then the second NP also plays two roles (here, goal of the kicking event and possessor in the having eventuality).

ApplP is then a predicate of events. It can combine with Voice, which adds an agent ("AG"). I do without Kratzer's (1996) rule of Event Identification and instead have Voice combine with a function of type ⟨v,t⟩ and add an agent to it, but this is not crucial:

(33) a. $[\![\text{Voice}]\!] = \lambda f_{\langle v,t \rangle} \lambda x \lambda e.f(e) \ \& \ \text{AG}(e,x)$

b. $[\![\text{VoiceP}]\!] = \lambda e.\text{KICK}(e,\text{ball}) \ \& \ \text{GOAL}(e,\text{Maria}) \ \& \ \text{AG}(e,\text{Jorge}) \ \& \ e \text{ culminates in } e'.\text{HAVE}(e',\text{ball}) \ \& \ \text{PSSR}(e',\text{Maria})$

The resulting semantics is a set of kicking events with theme *the ball*, goal *Maria*, and agent *Jorge*, which (if not interrupted) culminate in a having eventuality where *Maria* is the possessor of *the ball*.

To account for the facts of *again*, I assume that *again* adjoins to nodes of type ⟨v,t⟩. Following Dowty (1979), there are two different versions of *again*:

(34) a. $[\![\text{again1}]\!] = \lambda f_{\langle v,t \rangle} \lambda e.f(e)\text{: } \exists e'.e' <_e \& \ f(e')$

b. $[\![\text{again2}]\!] = \lambda f_{\langle v,t \rangle} \lambda e.f(e)\text{: } \exists e'.e' <_e \& \ e' \text{ is the culmination of } f(e)$

Again is an identity function, but adds a presupposition, given after the colon. Again1 says that an event of the same type as e happened before. Again2 says that an event of the same type as the culmination of e happened before.

ApplP is a predicate of events. It is a suitable place for *again* to adjoin. Either Again1 or Again2 can adjoin to ApplP. If Again1 adjoins, we get the a subjectless repetitive reading (Bale 2007, Bruening 2010a). On this reading, the event occurred before, but possibly with a different subject, since, at ApplP, the external argument has not been added yet. This reading is possible:

[4] I formulate the semantics in terms of events, but the same idea could be expressed in terms of forces, as in Copley and Harley (2015).

(35) 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 2010a, 555, (76))

In this example, Elena had not previously kicked the ball to Maria, but others had. This example also highlights the fact that the culmination does not have to take place in the actual world.

If Again2 adjoins to ApplP, we get the restitutive reading discussed above: only the culmination of e took place before. Here the culmination of e is a having eventuality, where Maria has the ball.

VoiceP is also of type ⟨v,t⟩. If Again1 adjoins to it, we get the full repetitive reading, where the entire event of Jorge kicking Maria the ball took place before.

As in Bruening (2010a), there is no way to get a fourth reading, where all that took place before was the kicking of the ball, minus an intended possessor. This reading is not possible, as Bruening (2010a) shows:

(36) I kicked the ball once, then #I kicked Maria the ball again. (Bruening 2010a, 556, (80))

In the proposed structure, there is no place to adjoin either Again1 or Again2 such that it could target just the kicking event.

Note that, in principle, Again2 could also adjoin to VoiceP, with the restitutive reading. If this were possible, however, we would expect that *again* would always be ambiguous, wherever it adjoins. However, the literature on *again* has shown over and over again that this is not true. The syntactic context often leads to the loss of the restitutive reading. For instance, only the repetitive reading is permitted if *again* is adjoined to the left of the subject (Bale 2007), outside a subject-oriented adverb, or is stranded by VP ellipsis (Johnson 2004):

(37) Maria started with the ball, but then no one kicked it to her for a long time. Finally,...

a. ...#again Jorge kicked Maria the ball.

b. ...#Jorge kicked Maria the ball deliberately again.

c. ...#Jorge did again.

The loss of the restitutive reading in certain contexts was von Stechow's (1995) argument that the repetitive-restitutive ambiguity is a syntactic one. In the current analysis, the ambiguity is a lexical ambiguity, not a syntactic one, so something has to be added to account for this syntactic disambiguation.

I propose that disambiguation occurs because the syntactic derivation takes place in *phases*, as in Chomsky (2000). Certain heads are phase heads, and the complement of a phase head is inaccessible outside that phase. In the structure here, Voice is a phase head. Its complement, ApplP, is inaccessible outside of ApplP. In particular, I propose that the internal semantics of ApplP is invisible to anything adjoined to VoiceP or higher. At that point, all that is visible is the semantics of Voice, given in (33a). The semantic denotation of Voice does not include any culmination. Therefore, Again2 cannot adjoin to VoiceP or any higher node because, as far as it can see, there is no culmination eventuality. Only Again1 can adjoin, which always has the repetitive reading. In the examples in (37), *again* must be at least as high as VoiceP because of the syntactic context, and so it must be Again1 and cannot be Again2. In this account, the ambiguity of *again* is a lexical ambiguity, but one of the two lexical items is restricted to only appearing in certain syntactic contexts (Again2 can only adjoin within the complement of the phase head Voice).

Note that there are no syntactic contexts that permit only the restitutive reading and do not allow the repetitive reading (see von Stechow 1996 on German and the references cited above on English). Complete syntactic decomposition accounts that have a constituent for the result state, like the accounts of von Stechow (1996), Beck and Johnson (2004), Harley (2008), and Bruening (2010a), predict that there should be such contexts. In actual fact, the repetitive reading is always available, it is only the restitutive one that is restricted. The current account predicts this asymmetry, coupled with a phase theory that only permits Again2 to adjoin low, within the lowest phase. Again1, which always has a repetitive reading, is unrestricted.

This simplification of the ApplP account therefore accounts for all of the facts discussed in Bruening (2010a), plus an additional one (that restitutive readings occur in a subset of environments that repetitive readings occur in).

The previously accounted for facts include the peculiar behavior of the *deny* class of double object verbs analyzed there. In Bruening (2010a), these verbs are different in that the verb is a complex function that takes Appl as its argument, rather than the other way around. This analysis can be transposed to the current account. I amend the analysis proposed in Bruening (2010a, 558, (81)) for the verb *spare* as follows:

(38) $[\![\text{spare}]\!] = \lambda x \lambda f \lambda y \lambda e.\text{DO}(e)$ & e does not culminate in e'.HAVE(e',x) & PSSR(e',y)

As can be seen, *spare* has the semantics of Appl built into it and necessarily combines with it (the function f in the denotation). This is why verbs of the *deny* class, like *spare*, are obligatorily double object verbs. Most of them are also negative, like *spare*, saying that the verbal event (here, a bare action predicate DO) prevents culmination in a having eventuality.

Adapting this analysis from Bruening (2010a) preserves all of the benefits described there, like accounting for NPI licensing and facts of *again* modification. An additional benefit is that, as noted by Bruening (2014b), the semantic difference between the *deny* class of double object verbs and other double object verbs can explain their contrasting behavior as adjectival passives. In the analysis proposed here, movement of the object of the verb to Spec-ApplP is crucial in order to have that NP serve as an argument of Appl. This movement is not necessary with the *deny* class of verbs: the *deny* class combines with this NP first, then with Appl, and then with Appl's argument. We can assume that the movement still takes place for case reasons, but it is semantically vacuous. Now, if the movement of the object is blocked in an adjectival passive (see Bruening 2014b), we predict that most double object verbs will be semantically ill-formed as an adjectival passive. The *deny* class of verbs, in contrast, will be interpretable. As Bruening (2014b) shows, this is correct: double object verbs do not form adjectival passives, *except* for those of the *deny* class. The following examples from Bruening (2014b) illustrate, where *un-* prefixation is only possible with adjectival and not verbal passives (Wasow 1977):

(39) a. The Victoria was unspared the horrors of World War II. . . (Bruening 2014b, 401, (102a))
b. * customers unpoured drinks (Bruening 2014b, 402, (104b))
c. * the only player unkicked the ball

To summarize, the proposed analysis greatly simplifies the syntax and semantics of the ApplP account, while still capturing all of the facts discussed in Bruening (2010a) and Bruening (2014b). It has the added benefit of explaining why restitutive readings of *again* obtain in a subset of the syntactic contexts where the repetitive reading obtains. The analysis in Bruening (2010a) predicted that they should be completely disjoint (but some word orders would be structurally ambiguous).

Importantly for the topic of this paper, the proposed semantics has both NPs as participants in both the kicking event and the having eventuality that is its culmination (if the event is uninterrupted). This is crucial for accounting for the distribution of depictive secondary predicates, to which we now turn.

3.3 Proposal for Depictives

To remind the reader, we want an analysis of depictive secondary predicates that captures the following facts, now stated in terms of culmination rather than cause and result:

1. A depictive can modify the main event but not its culmination.
2. A depictive cannot modify the indirect object, unless the verb is passivized.
3. If the direct object of light verb *give* has a logical argument, the indirect object serving as that argument can be modified by a depictive.

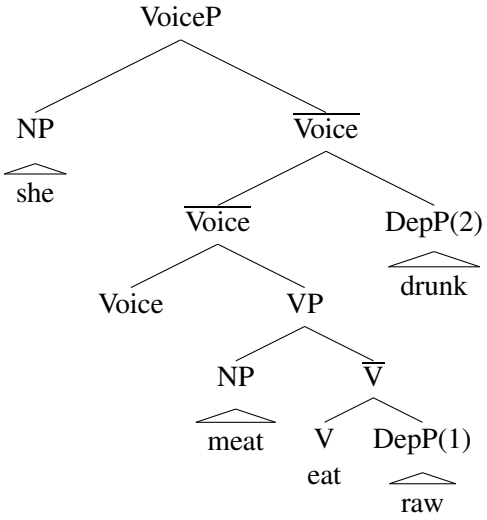
The first fact just seems to be the difference between depictive and resultative secondary predicates. What resultatives do is specify a culmination eventuality. Depictives do not do this, instead they modify a participant in the main event throughout the main event. So, fact 1 is just a description of what depictives do, and it will be captured in the analysis to be proposed below.

The rest of this section is devoted to explaining why indirect objects of non-light verbs cannot have depictives predicated of them, unless they are passivized. Section 4 then turns to light verbs.

I propose that the restriction against depictives modifying indirect objects is a syntactic one. Given that passivization renders this modification acceptable, it must be semantically well-formed. A simple hypothesis can account for this syntactic restriction. This is that depictive secondary predicates are syntactically constrained to modify heads. Being phrasal, however, they are not permitted to adjoin directly to the head they seek to modify. Only heads can adjoin to head positions. So, they have to adjoin as close as they can to the head. In X-Bar terms, this means that they adjoin to X-bar.

To illustrate the proposal, subject-oriented and object-oriented depictives adjoin as follows in a simple transitive:[5]

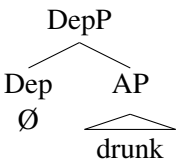
(40) She only eats meat raw drunk.



Dep(ictive)P(hrase)s adjoin to nodes that denote a function that takes an event argument and at least one individual argument. The depictive then predicates the property denoted by the AP of the *first* individual argument of the head, and states that that property holds throughout the event.

Following Geuder (2000) and Pylkkänen (2008), DepPs consist of a null Dep head and (typically) an AP:[6]

(41)



The denotation of the Dep head is the following, where "$\tau(e)\circ\tau(e')$" means that the run time of e overlaps with the run time of e′:

(42) $[\![\text{Dep}]\!] = \lambda f_{\langle e,vt\rangle}\lambda g_{\langle e,e^*vt\rangle}.\lambda x^1 \ldots \lambda x^n.\lambda e.g(x^1)\ldots(x^n)(e)\ \&\ \exists e'.f(e',x^1)\ \&\ \tau(e)\circ\tau(e')$

In the example in (40), Dep in DepP(1) will combine first with the AP *raw* and then with the verb *eat*, and finally with the NP *the meat*. It will produce a set of eventualities of eating the meat and say that there is an eventuality of the meat being raw, and the being raw and the eating temporally overlap:

(43) $[\![\text{VP}]\!] = \lambda e.\text{EAT}(e,\text{meat})\ \&\ \exists e'.\text{RAW}(e',\text{meat})\ \&\ \tau(e)\circ\tau(e')$

[5] I put the object on the left, the idea being that the verb moves across it to Voice to give the correct word order. It could also start out on the right and move leftward for case reasons. Surface word order is not the primary concern here.

[6] The alternative to a null Dep head is a rule that interprets depictives secondary predicates, as in Rothstein (2004); this would be equivalent as far as I can see.

The Dep in DepP(2) will combine first with the AP *drunk* and then with $\overline{\text{Voice}}$. Again, this will produce a set of eventualities of eating the meat with agent *she*, and say that there is an eventuality of *she* being drunk, and again the eating and the being drunk temporally overlap:

(44) $[\![\text{VoiceP}]\!] = \lambda e^1.\text{EAT}(e^1,\text{meat}) \;\&\; \text{AG}(e^1,\text{she}) \;\&\; \exists e^2.\text{RAW}(e^2,\text{meat}) \;\&\; \tau(e^1)\circ\tau(e^2) \;\&\; \exists e^3.\text{DRUNK}(e^3,\text{she}) \;\&\; \tau(e^1)\circ\tau(e^3)$

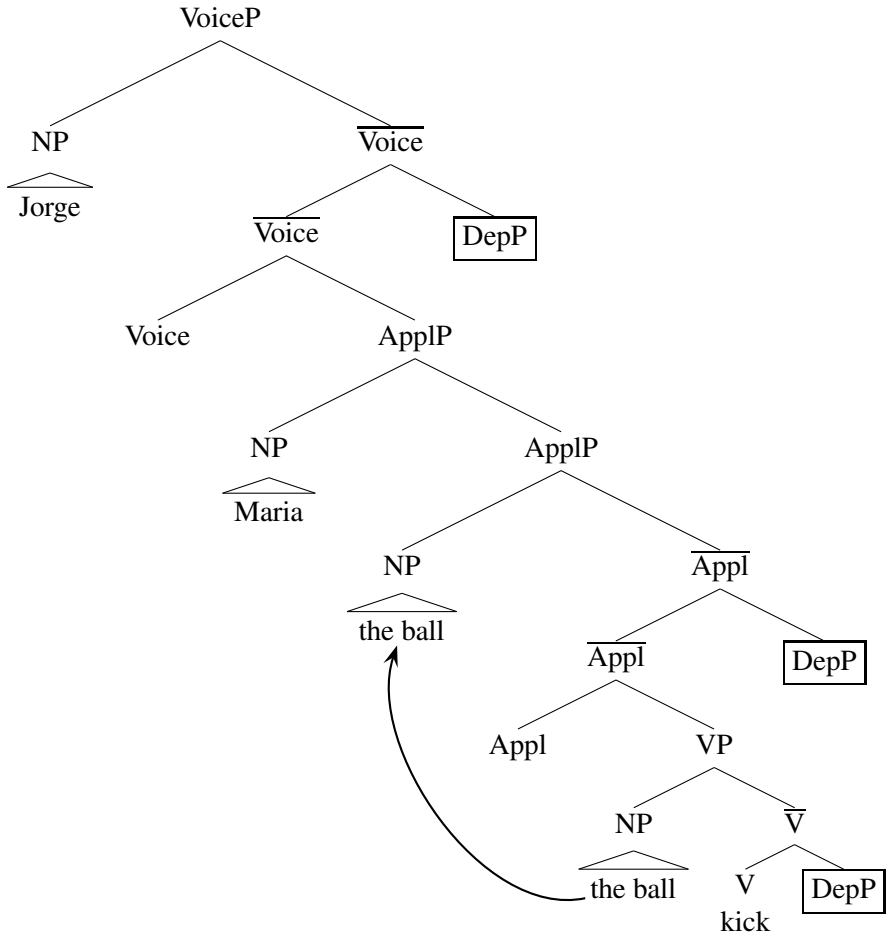
Higher tense and aspect (irrelevant here) will bind and temporally anchor the event argument of the main predicate *eat*.

The only difference between this account and the one in Pylkkänen (2008) is that in Pylkkänen (2008) depictive predicates can adjoin to any node that is type $\langle e,vt\rangle$. Here, by hypothesis, DepPs must adjoin as close as possible to a head, namely to $\overline{\text{X}}$. They also have no way of picking out a particular argument of the head, so they are constrained to modifying the *first* argument of the head whose projection they adjoin to. When they adjoin to $\overline{\text{V}}$, they necessarily modify the direct object; when they adjoin to $\overline{\text{Voice}}$, they necessarily modify the external argument.

3.4 Applying the Analysis to Double Object Constructions

In the ApplP analysis of double object constructions, there are three heads that are potentially available for a DepP to modify:

(45)



If DepP adjoins to $\overline{\text{V}}$, it will predicate the AP property of the *first* argument of the verb, which is the theme, here *the ball*. This will give us *Jorge kicked Maria the ball wet*. The main event is an event of kicking, so the eventuality of the ball being wet will temporally overlap with the kicking event.

If DepP adjoins to $\overline{\text{Appl}}$, it will predicate the AP property of the first individual argument of Appl. The denotation of Appl is repeated below:

(46) $[\![\text{Appl}]\!] = \lambda f_{\langle (e)vt\rangle} \lambda x \lambda y \lambda e.f(e(,y)) \;\&\; e \text{ culminates in } e'.\text{HAVE}(e',x) \;\&\; \text{PSSR}(e',y)$

At the point where DepP adjoins, Appl has already combined with its first argument, the function f. The argument picked out by DepP will be x, which again is *the ball*, since, as described above, *the ball* moves and tucks in beneath the argument of Appl. The result will be a set of events of the f type, which again is a kicking eventuality. Adjoined here, a DepP will again modify the direct object. In *Jorge kicked Maria the ball wet*, the eventuality of the ball being wet will again overlap with the kicking eventuality. Since the indirect object is the *second* argument of Appl, adjoining to $\overline{\text{Appl}}$ does not enable a depictive to modify the indirect object.

Finally, if DepP adjoins to $\overline{\text{Voice}}$, it will modify the subject, exactly as in our example of a simple transitive above. This will give us *Jorge kicked Maria the ball drunk*, which can mean only that *Jorge* is drunk, not *Maria*.

As can be seen, it follows from the proposed denotations of the elements involved that there is no way a depictive secondary predicate could modify the indirect object. The indirect object is not the *first* argument of any head. Additionally, there is no way for a depictive to modify the culmination eventuality. It could only modify the main verbal event. This is exactly the result that we want, and we explain two of the facts that we began this section with.

3.5 The Passive

As we saw above, the passive enables modification of the indirect object by a depictive secondary predicate. This was the motivation for taking the failure of such modification in the active to be a syntactic fact and not a semantic one. The account I propose is essentially that of Pylkkänen (2008), modified slightly for the current analysis.

As was noted briefly above, in Pylkkänen (2008), depictives can adjoin to any node of type ⟨e,vt⟩. Pylkkänen (2008) adopts the movement theory of Heim and Kratzer (1998), according to which movement works by abstracting over the adjoined-to node. In the passive, the underlying object will move and adjoin in a higher location. Abstraction over this node will create exactly the right semantic type for depictive modification, ⟨e,vt⟩. The depictive then adjoins in between the abstractor and the moved NP (see Pylkkänen 2008, 38, (62)).

The analysis of depictive secondary predicates in Pylkkänen (2008) is one of the most successful aspects of that work, and I will try to reproduce the positive aspects of that account. We have already seen above that the hypothesis that depictives must adjoin as close as possible to a head explains why they cannot modify an indirect object. (Pylkkänen's own account of this restriction relies on her syntax and semantics for "low applicatives," which have been shown to be problematic; see Bruening 2010a and Larson 2010.) To import the movement analysis of the passive, we will similarly need a depictive to modify a syntactic head in the passive.

In Bruening (2013), the passive is analyzed as a PassiveVoice head ("Pass" for short) that combines with an unsaturated active Voice and existentially closes its NP argument (the agent). As pointed out by Iatridou, Anagnostopoulou, and Izvorski (2001), this Pass head must form a morphological unit with the verb, since passive semantics inheres in the past participle itself. This can be seen with reduced relatives, which lack any auxiliary:

(47) Any food consumed on the premises is at your own risk.

Since reduced relatives lack auxiliaries, passive semantics (existential quantification over the external argument) must be part of the past participle; the passive semantics could not be contributed by the auxiliary that appears with clausal passives.

An important fact about English is that all passives seem to require movement of an object, even when something else, like an expletive, occupies the surface subject position:

(48) a. There was a study done in 1979 which showed that...
b. * There was done a study in 1979 which showed that...

It is impossible for the object to remain in object position. (This is the "thematization/extraction" process of Chomsky 2001.)

When there are two *be* auxiliaries and an expletive occupies the surface subject position, it is possible to see that this movement is further than the PassP projection itself, since it must cross the first *be* in addition to the passive verb (see Akmajian and Wasow 1975, Bowers 2010):

(49) There were bicycles being sold at a discount on the sidewalk.

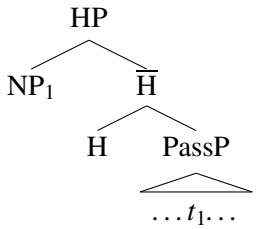
One way to analyze the facts is to say that in (48a), the NP moves to the left of *be*, and then *be* moves to a higher position. When there is another *be*, this movement of lower *be* may not happen (Akmajian and Wasow 1975). (See Bowers 2010 for a different analysis.)

I suggest that we build on this movement requirement of English passives to explain their effect on depictive secondary predication. Suppose that some head higher than Pass obligatorily attracts an NP to its specifier. Since depictive predication is possible even in reduced relatives, which lack *be*, I will not identify this head with *be*:

(50) People told bad news drunk seldom take it well.

I will therefore posit a functional head H above PassP that triggers movement:

(51)



The passive auxiliary *be* apparently starts out between H and PassP (not shown).

I further propose that Heim and Kratzer's (1998) abstraction is accomplished by the head H. The event argument of PassP has not yet been closed off (HP and PassP are below tense and aspect), so abstraction by H over PassP results in $\overline{\text{H}}$ being of type $\langle$e,vt$\rangle$. Now, $\overline{\text{H}}$ is exactly the type of element that DepP can adjoin to. It is the right semantic type, and it is also the right syntactic type: it is category $\overline{\text{X}}$, as close as possible to the head H.[7]

This permits depictive modification in the passive, even when that modification was not possible in the active. We account for the following contrast:

(52) (Pylkkänen 2008, 36, (57a–b))

a. He told me the news drunk. (I cannot be the one who is drunk)

b. I was told the news drunk. (I am the one who is drunk)

In the active, we saw that, simply because of the syntax and semantics of Dep, a depictive secondary predicate could not modify the indirect object. This was because it was always the *second* argument of a head (both V and Appl). In the passive, when the indirect object moves, it becomes the *first* argument of the head H. This enables a depictive secondary predicate to modify it. We have successfully preserved the achievement of Pylkkänen's account.

Moreover, if pseudopassives behave in the same way as regular passives, with the sole exception that the NP that is attracted is the object of a preposition rather than the object of the verb, we predict that, even though objects of prepositions cannot be modified by depictives, subjects of pseudopassives can. This is correct:

(53) a. * They slept in the bed unmade.

b. The bed was slept in unmade.

Nothing more needs to be said about pseudopassives; they are just regular passives, with the Pass head existentially quantifying over the external argument. Since H has to attract an NP, an object of a P has to move if there is no object of V. We explain why impersonal passives are not possible in English (there is no NP for H to attract), and it is not necessary to posit any process of V-P "reanalysis" (for arguments against such reanalysis, see Baltin and Postal 1996).[8]

[7] Note that the head Appl performs a similar abstraction when it attracts the object of the verb: it takes the moved NP as its argument. We might suppose that A-movement of all types is uniformly implemented by a head that attracts an NP and abstracts over its sister. The head may or may not do other things, as well. Appl does, H does not.

[8] In the passive of a *believe*-type verb, the moving NP can be an expletive:

Note that what is necessary for Dep is a head that takes an individual argument *and* an event argument. The head H that appears in the passive fits into this category, as in the analysis given here, because it occurs lower than tense and aspect, which close off the event argument. Any head that triggers A-bar movement, however, will not. Since A-bar movement routinely occurs in the left periphery of the clause, then even if it is accomplished by a head that takes an individual argument, that head will not be able to take an event argument in addition. If A-bar movement also passes through a low position, as in phase theory (Chomsky 2000), in the interests of uniformity we should suppose that the head that triggers A-bar movement to the left edge of the VP phase (somewhere around Voice) would also not take an event argument. Heads that trigger A-bar movement should uniformly only take an individual argument, since they need a general mode of composing that will work even outside the domain where the event argument has been closed off. If this is correct, then it will only be A-movement like the passive that will permit depictive modification. We expect that wh-movement will not. This is correct: as we just saw, the object of a preposition cannot be modified by a depictive in the active, but if it is moved in the passive, it can. However, moving the object of a preposition by wh-movement does not enable depictive modification:

(54) * Which bed did they sleep in unmade?

In Pylkkänen (2008), this was an unsolved problem, since in the account given there, any movement should permit depictive modification. In the account given here, only A-movement within the domain of tense and aspect should.

If the account given here is correct, we explain why the passive enables depictive modification when the corresponding active does not, both with indirect objects and objects of prepositions. We also explain why other types of movement do not enable otherwise disallowed depictive modification. As a bonus, we have also explained why English does not have impersonal passives.

3.6 Summary

This section proposed a radical simplification of the syntax and semantics of the ApplP account given in Bruening (2010a). This account is not only simpler, it captures all of the empirical facts discussed in Bruening (2010a) and Bruening (2014b), plus it permits a simple account of the distribution and interpretation of depictive secondary predicates. We need only two auxiliary hypotheses: One is that depictive secondary predicates are syntactically restricted to adjoining as close as possible to a head (at $\overline{\text{X}}$); and the second is that abstraction in the passive is accomplished by a syntactic head H.

All that is left now is to explain why the facts of depictive secondary predicates are different with light verb uses of *give*. This is the topic of the next section.

4 Light Verb *Give*

In a nutshell, the fact that an analysis of light verb *give* needs to explain is the following: Light verb *give* unexpectedly permits the indirect object to be modified by a depictive if the direct object is one that takes a logical object (*give medication*); however, light verb *give* does not permit the indirect object to be modified by a depictive if the direct object is one that does not take a logical object (*give a shout*).

In the last section, I proposed an analysis of depictive secondary predicates that built on the analysis in Pylkkänen (2008). Pylkkänen (2008, 35) also proposed an analysis of the *give medication* type of light verb. In this analysis, *give* combines with *medication* to produce a transitive verb, basically 'medicate'. The indirect object is then the direct object of that verb. A depictive is able to adjoin in between this derived verb and its object. Unfortunately, this analysis does not explain how *give us a shout* is possible: if *give* and *a shout* combine to create the

(i) There was believed to be a unicorn in the garden.

In the analysis proposed here, the head H must attract the NP *there*. *There* must bind its trace through the lambda abstraction performed by H. This much seems necessary and unproblematic. The problematic part is the role *there* plays in the lower clause (the existential one). If *there* is completely contentless, one might worry that binding would make no sense. Since the interpretation of expletives is not the focus of this paper, I will leave this matter to future research, although I will suggest that the expletive *there* is not semantically contentless as many have supposed.

corresponding verb, 'shout', no other object should be possible, since *shout* does not take an object. It is not clear how such a sentence could be interpreted. For this reason, it is necessary to come up with an alternative analysis.

4.1 Two Observations

I begin with some observations. First, it is often claimed that the argument structure properties of light verb constructions are determined not by the verb, but by the noun (e.g., Jackendoff 1974, Grimshaw and Mester 1988, Butt 1995, among many others). For instance, the verb *give* normally takes two NP objects, but light verb *give* takes two only if the noun is the type of noun that has a logical object. For instance, *kick*, *massage*, and *pat on the back* take such objects, and so another NP appears as the object of *give*, apparently functioning as the argument of the noun:

(55) a. She gave him a kick.
b. She gave him a massage.
c. She gave him a pat on the back.

In contrast, nouns like *sigh*, *lurch*, *grunt* do not have logical objects, and they do not seem to appear with another NP object with light verb *give*:

(56) a. She gave a sigh.
b. The table gave a lurch.
c. He gave a grunt.

The first observation is that this is not correct. In fact, all light verb constructions with *give* allow an indirect object, even when the noun does not have a logical object (contra Huddleston and Pullum 2002, 293):

(57) a. She turned and gave the audience a deep sigh.
b. Come on, give us a vomit.
c. The baby gave us a giggle.
d. . . . but I couldn't help it and I gave them a gasp and looked to the floor.
e. The lanky youngster in the stained apron behind the counter gave them a grunt as the couple left.
f. She blushed and gave us an embarrassed laugh.
g. She blanched and gave us a horrified shudder.

Conversely, nouns that do take a logical object can appear without the indirect object:

(58) a. She gave one violent kick and broke free.
b. She gives massages all day long.
c. Tink the horse gives kisses for treats.

This is true even when the corresponding verb takes its object obligatorily:

(59) a. This doctor gives very thorough examinations.
b. This doctor examines *(patients) very thoroughly.
(60) a. She gave many unearned pats on the back that day.
b. She patted *(people) on the back that day many times.

It therefore does not appear to be true that the argument structure of the light verb construction is determined by the noun. This is especially evident when we consider *give* versus *take*, occurring with the same noun. With a noun like *a punch*, *take* only permits a PP and does not allow an indirect object, while *give* does not allow a PP and only allows an indirect object:

(61) a. She took a punch at him.
b. * She took him a punch.

(62) a. She gave him a punch.
b. * She gave a punch at him.

If the NP was what determined the argument structure, *take* and *give* should have exactly the same argument structure when they combine with the same NP. It should be noted that *take* does permit an indirect object in other uses:

(63) a. She took him a drink.
b. She took him his tea.

Take permits an indirect object, just like *give*; if the argument structure of light verb constructions were determined by the noun, *give a punch* and *take a punch* should have exactly the same argument structure. They do not.

In this respect *take* is acting like fully verbal *take*. *Take* only allows an indirect object on its use as a verb of physical transfer:

(64) a. She took him a drink.
b. She took him his tea.
c. She took (*him) a moment.
d. She took (*him) the responsibility.
e. She took (*him) dictation/a memo.

Take on its light verb use is not a verb of physical transfer, so an indirect object is not allowed (see Norvig and Lakoff 1987 on meanings of *take*). The important thing here is that it is the verb, *take* or *give*, that is determining argument structure, not the noun. (On contributions of the verb to light verb constructions, see Brugman 2001, Newman 1996, Karimi 1997, Folli, Harley, and Karimi 2005, Wittenberg, Jackendoff, Kuperberg, Paczynski, Snedeker, and Wiese 2014.)

So, the first observation is that the verb and not the noun determines the argument structure of light verb constructions. The second observation is that light verb *give* is not uniform. There are at least three different classes of light verb *give*. The first is a *causative* use, exemplified by the following:

(65) a. That gave us a laugh! (laugher = us)
b. That gave me a shudder! (shudderer = me)

The causative use appears to be a causative of *have*, as in *have a laugh* and *have a shudder* (not frequent but certainly possible). The indirect object is interpreted as the logical external argument of the noun.

The second use is what I will call 'produce' *give*. In this use, primarily occurring with just one object, *give* can be paraphrased as 'produce':

(66) a. She gave a smile. ≈ She produced a smile.
b. I gave a sigh. ≈ I produced a sigh.
c. She gave an embarrassed laugh. ≈ She produced an embarrassed laugh.
d. She gave one violent kick and broke free. ≈ She produced a violent kick and broke free.
e. My phone only gives one short ring. ≈ My phone only produces one short ring.

In fact, the verb *give* seems to have a regular use as a simple transitive verb with exactly the meaning of 'produce':

(67) a. Cows give milk. (≈ Cows produce milk.)
b. The entire paper only gives two examples. (≈ The entire paper only produces two examples.)
c. The output only gives one result. (≈ The output only produces one result.)

d. Why is it that CBS only gives one side of the news from Washington DC? (≈ CBS only produces one side of the news.)

e. NSolve usually gives only one solution. (≈ NSolve usually produces only one solution.)

I will suggest below that this is all we need to account for this class of light verb *give*: it is the simple transitive use of *give* meaning 'produce', taking an NP object that denotes an eventive noun. Complications will arise when an indirect object is added (*she gave us an embarrassed laugh*); these are the indirect objects that do not permit depictive secondary predicates.

The third class of light verb *give* I will call "true light verb *give*." This class has a noun that takes a logical object, and the indirect object appears to be functioning as the logical object of the noun, as in *give him a kick*. This is the class that we saw above permits a depictive secondary predicate to modify the indirect object. Causative *give* does too, as we will see.

I will address 'produce' *give* first, followed by true light verb *give* and then causative *give*.

4.2 'Produce' *Give*

As stated above, 'produce' *give* just seems to be a regular use of the verb *give*, primarily with only one object, as in the examples in (66–67). However, as was already illustrated above, an indirect object can also be added, at least with light verb 'produce' *give*:

(68) a. She blushed and gave us an embarrassed laugh.

b. She blanched and gave us a horrified shudder.

c. My phone will only give you one short ring.

The first question to answer is, What is the semantics of this indirect object? In some of these cases, an oblique relation with the corresponding verb may be appropriate, as with *give us a shout* ('shout to') and *give us a smile* ('smile at'). However, no oblique relation seems appropriate with *give us a vomit* or *give us a laugh/giggle/gasp*: with *give us a vomit*, the vomit does not stand in any spatial relation with *us*; with *give us a laugh*, there does not appear to be any appropriate prepositional paraphrase: none of *laugh at/to/with* is the right semantics. Similarly for *give you one short ring*: there really is no PP that goes with the verb *ring*.

I take this to further indicate that the argument structure comes entirely from the (extended) verb. In particular, in the ApplP analysis of double object constructions, the indirect object must be projected by Appl. Note that 'produce' *give* only occurs in the double object frame and does not occur with a *to* PP:[9]

(69) a. * My phone will only give one short ring to you.

b. * The lanky youngster gave a grunt to them.

c. * She gave a kiss to him. (Huddleston and Pullum 2002, 293).

This indicates that the indirect object is not an argument of the verb; it is projected by Appl and assigned an interpretation by Appl alone.

What is that interpretation? Well, given the ApplP analysis outlined above for double object constructions in general, we might expect it to be caused possession. However, as all the examples above suggest, this does not seem to be right. For instance, *give us a vomit* does not result in us possessing vomit, or even anything. Additionally, adverbs like *again* cannot pick out a having result state with 'produce' *give* the way they can with caused possession double object constructions:

(70) Maria has a condition where she hears shouts in her head. This morning, a shout was echoing in her head. This afternoon, #Jorge gave her a shout again.

(71) People had smiles for Maria all day long. Then someone was rude to her and she fell into a bad mood. #But then Jorge gave her a smile again. (infelicitous on light verb use, meaning *smiled at her*)

[9] Apparent exceptions are actually rightward shift, as in Bruening (2010b).

One might possibly object that something about bodily properties has this effect, or that such phrases are idiomatic and so do not combine well with *again*. However, cases that are similarly about bodily properties and similarly idiomatic (if any of them are), like *give a headache*, do permit *again* to target just [NP HAVE a headache]:

(72) Maria woke up with a headache today. It went away, but then the lighting in her office gave her a headache again.

It is specifically 'produce' *give* that does not allow *again* to target just the Have component.

This indicates that 'produce' *give* does not include the Have component that caused possession double object constructions do. Note that this is a further reason to reject the HaveP analysis of double object constructions: The HaveP analysis claims as a virtue the fact that *give* and *have* often pattern together, here as both having light verb uses. However, 'produce' *give* fails the tests usually given for having a Have component in the semantics. 'Produce' *give* actually does not seem to involve Have at all.

I suggest that a better paraphrase for all of these cases is *produce NP for NP*:

(73) a. She gave me a smile. ≈ She produced a smile for me.
b. I gave them a sigh. ≈ I produced a sigh for them.
c. She gave them an embarrassed laugh. ≈ She produced an embarrassed laugh for them.
d. Come on, give us a vomit. ≈ Come on, produce a vomit for us.
e. The baby gave us a giggle. ≈ The baby produced a giggle for us.
f. My phone will only give you one short ring. ≈ My phone will only produce one short ring for you.

I tentatively identify this meaning as a benefactive or "dative of interest." In some dialects of English, double object constructions in general can have this kind of meaning. In other dialects, like mine, this meaning seems to be restricted to 'produce' *give*. Since the meaning seems to be similar in many respects to the object of the preposition *for* (with one difference noted below), I will posit a second Appl head which I notate Appl_{for}:[10]

(74) $[\![\text{Appl}_{\text{for}}]\!] = \lambda f_{\langle v,t\rangle} \lambda x \lambda y \lambda e.f(e) \,\&\, \text{FOR}(x,y)$

In my dialect of English, Appl_{for} combines only with 'produce' *give*. In some other dialects, it may be less restricted.

There is one difference between Appl_{for} and the benefactive preposition *for*. With benefactive *for*, the NP does not have to be present or involved in the event in any way, whereas this is required with Appl_{for}:

(75) a. We need you to smile. Think of your dead father. Produce a smile for him.
b. We need you to smile. Think of your dead father. #Give him a smile.

Give your dead father a smile is only acceptable where the smiler envisions their dead father as present and the direct recipient of the smile. I assume this follows because the argument of Appl_{for} is a direct participant in the event, whereas the object of preposition *for* can be related only indirectly to the event (although I will not try to formalize this).

Consider the following sentence:

(76) My phone will only give you one short ring.

[10] A similar interpretation also seems to be a part of reflexive light verb *have*:

(i) a. We had ourselves a good laugh.
b. She had herself a good cry.

Reflexive uses of light verb *have* are yet another problem for the HaveP analysis. It seems that light verb *have* can appear in a double object frame just when the indirect object is a reflexive. (This is not possible with non-light *have*: ***I have myself a car***.) It is not clear how this could be possible in the HaveP analysis: *have* is supposed to be the spellout of Have plus *be*, where *be* takes no NP arguments. If Have combines with a higher v that takes an argument (v_{CAUSE}), we get *give*. If it combines with a higher v that takes no arguments, we get *get*. There is no way to combine Have with a head that takes another argument and still have it spelled out as *have*.

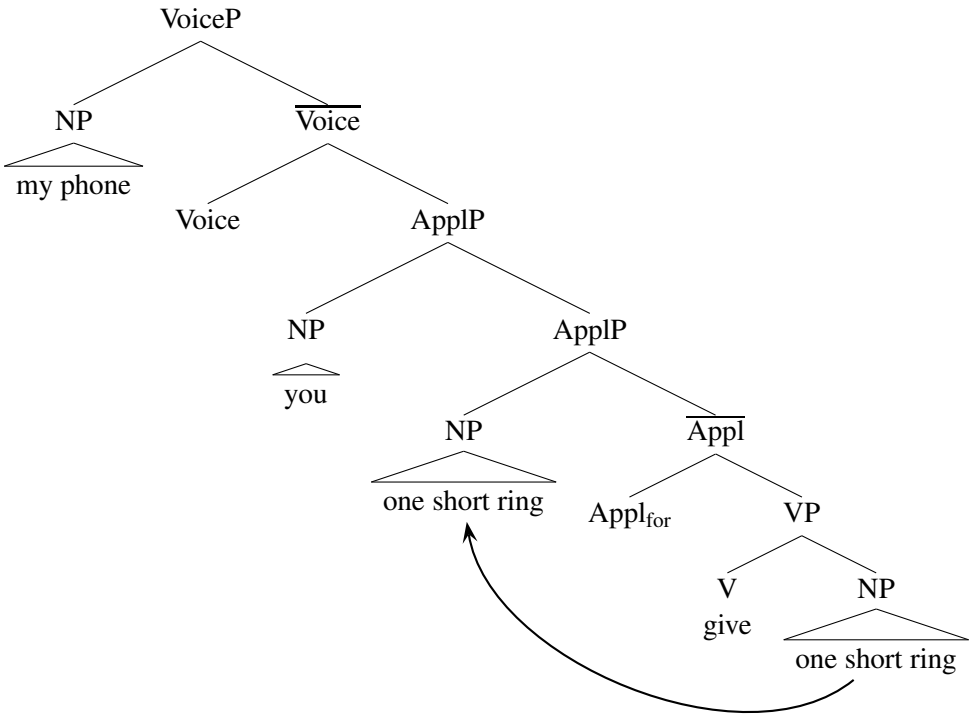
The denotation of 'produce' *give* is the following:

(77) $[\![\text{give}_{\text{produce}}]\!] = \lambda x \lambda e.\text{PRODUCTION}(e,x)$

This is a set of production events where the product is x.

The verb will combine with the direct object, and then Appl_{for} will combine with the VP. As before, I assume that Appl attracts the direct object to an inner specifier, for case reasons:

(78)



After Appl_{for} has combined with the VP, it will combine with the moved NP and then with its own argument:

(79) a. $[\![\text{VP}]\!] = \lambda e.\text{PRODUCTION}(e,\text{ring})$

b. $[\![\overline{\text{Appl}}]\!] = \lambda x \lambda y \lambda e.\text{PRODUCTION}(e,\text{ring}) \;\&\; \text{FOR}(x,y)$

c. $[\![\text{ApplP}]\!] = \lambda e.\text{PRODUCTION}(e,\text{ring}) \;\&\; \text{FOR}(\text{ring},\text{you})$

d. $[\![\text{VoiceP}]\!] = \lambda e.\text{PRODUCTION}(e,\text{ring}) \;\&\; \text{FOR}(\text{ring},\text{you}) \;\&\; \text{AG}(e,\text{phone})$

After Voice has added an agent, we have a set of production events with product *one short ring* and agent *my phone*. The NP *one short* ring is FOR *you* in this event.

This analysis, coupled with the analysis of depictive secondary predicates above, explains why depictives cannot modify the indirect object. To remind the reader, depictives must adjoin as close as possible to a head, that is, to $\overline{\text{X}}$. If a DepP adjoins to $\overline{\text{V}}$, it will necessarily modify the direct object. If it adjoins to $\overline{\text{Appl}}$, it will again only modify the direct object, because that is the first argument of $\overline{\text{Appl}}$, due to movement. If a DepP adjoins to $\overline{\text{Voice}}$, it will modify the external argument. There is simply no way for a depictive to modify the indirect object, for the exact same reason there was no way to do it with caused possession applicatives. (Again, the passive permits it, as explained above: *I was given a shout drunk*.)

The analysis has some further benefits. First, because the movement of the direct object is required for the semantic computation, blocking this movement in adjectival passives (Bruening 2014b) will block 'produce' *give* from forming an adjectival passive, if Appl_{for} is present. This is correct:

(80) a. * children ungiven smiles

b. * parents ungiven giggles

c. * The audience looks given too many sighs.

If Appl_{for} is not present, there is no problem forming an adjectival passive from 'produce' *give*:

(81) a. Words unsaid, **smiles ungiven**, insults unforgiven,... (http://koikaze-seika.deviantart.com/art/I-have-forgotten-81729695)

b. One wishes Anne had stayed with the image of the **ungiven milk**; this could have been a stellar poem. (http://www.mezzocammin.com/timeline/timeline.php?vol=timeline&iss=1900&cat=10&page=lindbergh)

Finally, the event with Appl_{for} has no culmination, so it is not possible to adjoin Again2 and have a restitutive reading. Only repetitive readings are possible with *again*, as was shown above.

4.3 True Light V *Give*

I turn now to "true light verb *give*," which, unlike 'produce' *give*, permits a depictive secondary predicate to modify the indirect object. The task is to explain this difference.

First, it does not even make sense to try to test for restitutive readings with light verb constructions like *give him a kick*; it simply does not make sense to HAVE a kick. It therefore appears that, as with 'produce' *give*, true light verb *give* does not involve the caused possession Appl. Analyzing true light verb *give* as 'produce' also does not seem right. It might be plausible to view giving someone a kick as a production of a kick, but it is not plausible to treat that as meaning 'produce a kick for someone'. *She produced a kick in the face for him* does not require that he was kicked in the face, but *She gave him a kick in the face* does (thanks to the anonymous reviewers for emphasizing this point).

I therefore propose that the *give* that is involved here is the *give* of transfer. In Bruening (2010a), this verb is actually a root *g-* that occurs in both *give* and *get* (note that you can both give and get kicks). The denotation proposed for this root in Bruening (2010a, 550, (65)) is the following (modified so that the theme is a direct argument of the event, as in Kratzer to appear):

(82) $[\![\text{g-}]\!] = \lambda x \lambda y \lambda e.\text{G}(e,x) \,\&\, \text{RECIPIENT}(e,y)$

"G" stands for a description of a completely bleached transfer event.

I further propose that NPs can be event descriptions of type $\langle v,t \rangle$ (Zucchi 1993, 123; Higginbotham 2000). Going even further, they can also be of type $\langle e,vt \rangle$, where the individual argument is one of the event's logical participants. I take no stand on the internal structure of nominals, but simply assume that they do have logical arguments, although these might not be realized syntactically. An NP like *a kick* can then have the following denotation:

(83) $[\![\text{a kick}]\!] = \lambda x \lambda e.\text{KICK}(e,x)$

(I will limit myself here to simple indefinite NPs, which are most frequent with true light verb *give*, but will assume that definites and quantificational NPs can also be fit into the analysis.)

Generally, items of syntactic category N do not take arguments directly. If *a kick* has the denotation given above, the individual argument has to be realized as a PP or as a possessor. The reasons for this are beyond the scope of this paper. However, permitting an NP to be type $\langle e,vt \rangle$ will allow it to combine in a different way in a light verb construction.

This different way is the following: if the root *g-* can drop its first argument, so that it is not taking the NP as an argument, it can combine with that NP (here, *a kick*) by Predicate Modification, since they are both of the same type. This is my proposal for true light verbs: rather than combining with their complement as an argument, they conjoin with it. They do this by simply dropping their first argument. In this case, the result is the following:

(84) a. $[\![\text{g-}]\!] = \lambda x \lambda e.\text{G}(e) \,\&\, \text{RECIPIENT}(e,x)$ (dropping first argument)

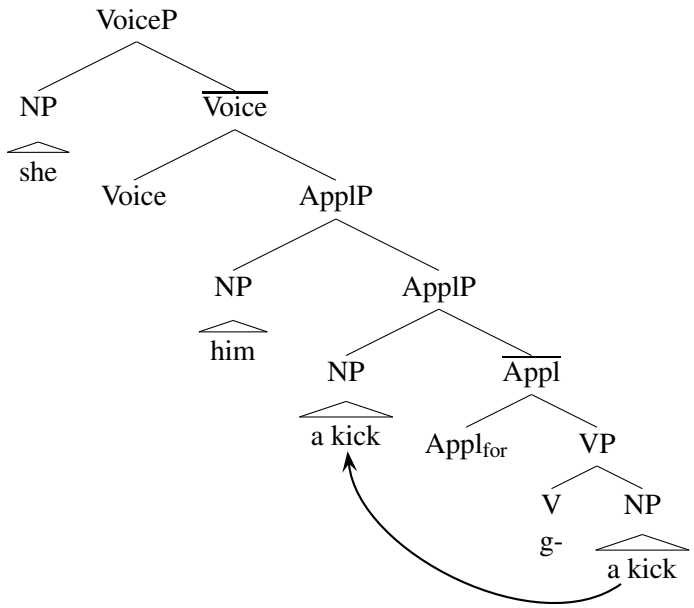
b. $[\![\text{a kick}]\!] = \lambda x \lambda e.\text{KICK}(e,x)$

c. $[\![\text{g- a kick}]\!] = \lambda x \lambda e.\text{G}(e) \,\&\, \text{KICK}(e,x) \,\&\, \text{REC}(e,x)$ (by Predicate Modification)

The combination of the two is a set of eventualities that are both bleached transfer and kicking eventualities, sharing an argument x that is both the kickee and the recipient of the transfer (84c).

I assume that the syntax is the same as before, with the direct object moving to an inner Spec-ApplP:

(85)



The Appl head here is Appl$_{for}$, as with 'produce' *give*. I assume that Appl$_{for}$ is type-flexible, and can combine with a function of type ⟨e,vt⟩ as well as one of type ⟨v,t⟩. The type-flexible denotation of Appl$_{for}$ is given below, along with the computation of the tree above:

(86) a. $[\![\text{VP}]\!] = \lambda x \lambda e.\text{G}(e) \,\&\, \text{KICK}(e,x) \,\&\, \text{REC}(e,x)$

b. $[\![\text{Appl}_{for}]\!] = \lambda f_{\langle(e,)vt\rangle} \lambda x \lambda y \lambda e.f(e(,y)) \,\&\, \text{FOR}(x,y)$

c. $[\![\overline{\text{Appl}}]\!] = \lambda x \lambda y \lambda e.\text{G}(e) \,\&\, \text{KICK}(e,y) \,\&\, \text{REC}(e,y) \,\&\, \text{FOR}(x,y)$

d. $[\![\text{ApplP}]\!] = \lambda e.\text{G}(e) \,\&\, \text{KICK}(e,\text{him}) \,\&\, \text{REC}(e,\text{him}) \,\&\, \text{FOR}(\text{kick},\text{him})$

e. $[\![\text{VoiceP}]\!] = \lambda e.\text{G}(e) \,\&\, \text{KICK}(e,\text{him}) \,\&\, \text{REC}(e,\text{him}) \,\&\, \text{FOR}(\text{kick},\text{him}) \,\&\, \text{AG}(e,\text{she})$

Paraphrasing, the VoiceP is a set of events that are both bleached transfer and kicking events with agent *she*, where *him* is kicked and the recipient of the transfer is *him*. The kick is also FOR *him*, as with 'produce' *give* above. What is transferred is not specified, but because events are minimal we cannot introduce extraneous participants (e.g., Heim 1990); conceptually, then, the theme of the transfer must be something that is involved in a kicking event (force, for instance, or contact with a foot).

This seems to be a reasonable paraphrase for true light verb *give*. It captures the fact that *she gave him a kick* entails that he was kicked, even though the Appl head involved is Appl$_{for}$. At the same time, the meaning is not the same as the simple verb *kick*: there is also a transfer, capturing the intuition that the indirect object is a recipient. Additionally, numerous researchers have shown that light verbs and the corresponding simple verb differ in aspectual properties and in modification possibilities (e.g., Huddleston and Pullum 2002). I leave it to future research to show that these differences can be captured in the proposed analysis (most of the differences seem to be due to the fact that *a kick* is syntactically an NP).

As with 'produce' *give* above, there is no culmination, so Again2 cannot adjoin, and again there is no possibility of a restitutive reading with *again*. Similarly, movement of the direct object to the inner specifier of Appl is necessary for the semantic computation, so we also predict that adjectival passives will be ill-formed, and they are:

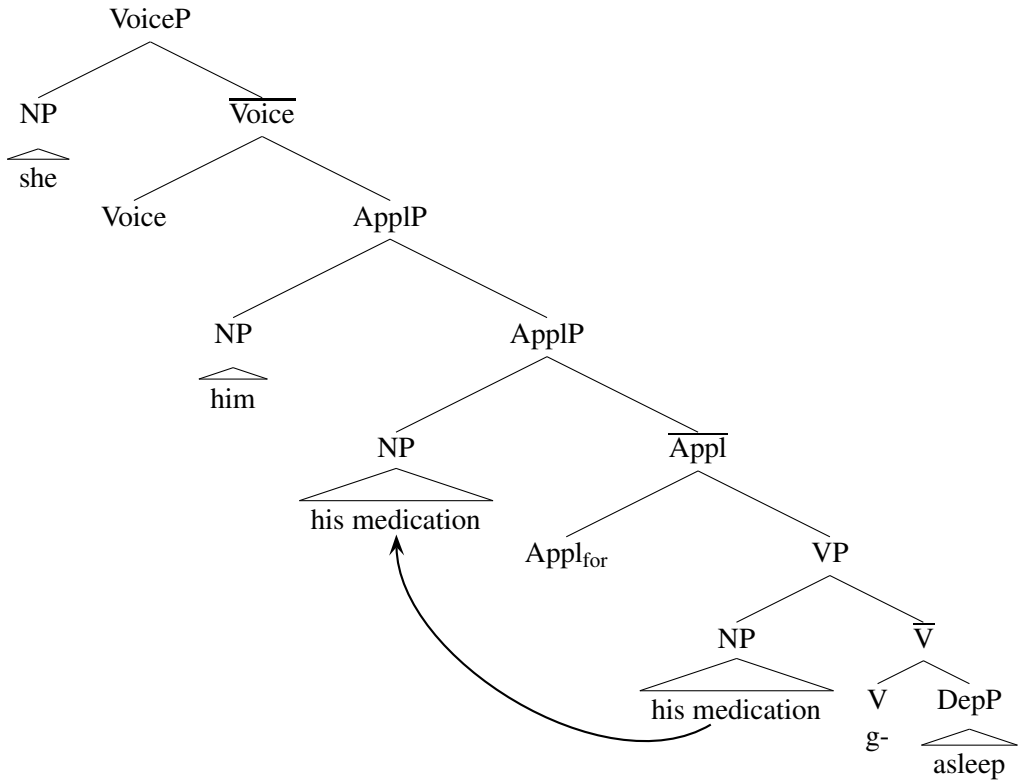
(87) a. * children ungiven hugs/kisses

b. * The patient looks given his medication.

c. * The tables look (un)given a good scrubbing.

Most significantly here, this analysis predicts that a depictive secondary predicate will be able to modify the indirect object. As before, DepPs can only adjoin to $\overline{X}$. Consider what happens if a DepP adjoins to $\overline{V}$:

(88)



Recall that the root *g-* has dropped its first argument. Given the denotation of Dep in (42) and the denotation of *g-* in (84a), the denotation of $\overline{V}$ will be the following:

(89) $[\![\overline{V}]\!] = \lambda x \lambda e.G(e)$ & REC(e,x) & $\exists e'.$asleep(e′,x) & $\tau(e) \circ \tau(e')$

$\overline{V}$ will combine with the NP by Predicate Modification, as before:

(90) $[\![VP]\!] = \lambda x \lambda e.G(e)$ & MEDICATE(e,x) & REC(e,x) & $\exists e'.$asleep(e′,x) & $\tau(e) \circ \tau(e')$

Since the verb combines with its NP not by function application but by Predicate Modification, the depictive ends up modifying not the direct object, but the argument that it and the verb share. This is x in the denotation above. Once VP combines with Appl$_{for}$, x is filled in with the indirect object in the second specifier of Appl. The same participant who is medicated is the one who is asleep, as is evident in (90).

Thus, this proposal for true light verb *give* explains why its indirect object can be modified by a depictive secondary predicate, while other indirect objects cannot be so modified. The difference is the mode of combination: the first object of a true light V combines via predicate modification rather than by function application.[11]

4.4 Causative *Give*

Finally, we need an analysis of causative *give*. Causative *give* also seems to permit a depictive to modify the indirect object:

[11] This proposal could be extended to transitive light verbs like *take* and *have*. The main point of variation would be which logical argument of the noun is the open individual argument of that noun. In *take a nap*, for instance, the open argument would be the napper (the logical external argument). In *have a massage* the open argument would be the internal argument. There seems to be a correlation with the verbal phrase in all these cases: if the verb includes active Voice, as *take* does, then the argument that is shared is the external argument of the noun. If the verb does not include active Voice (*have* and *get*), then the shared argument is the logical internal argument of the noun. I will leave full exploration of other light verbs to future work.

(91) This movie wouldn't give anyone a laugh sober.

Causative *give* also seems to be restricted to occurring with nouns that are related to unergative verbs, like *laugh*, *smile*, *shudder*:

(92) a. That gave me a kick. ≠That made me kick (something). (transitive)
b. * Give this ice cream a melt. (unaccusative)

One possible analysis is just to treat this as a causative, so that *that gave me a laugh* is essentially equivalent to *that made me laugh*. In such an analysis, the indirect object would be equivalent to a direct object of the causative verb and so amenable to depictive modification. My intuition is that the semantics of these two phrases are not the same, in the same way that true light verb *give* differs from the corresponding verb, so I will not pursue this analysis.

A second possible analysis, which I will pursue, would again have the NP be able to function as an event description with an open argument, except that the noun has as its open argument the logical agent:

(93) $[\![\text{a laugh}]\!] = \lambda x \lambda e.\text{LAUGH}(e) \,\&\, \text{AG}(e,x)$

We cannot have the NP combine with the verb by Predicate Modification as we did with true light verb *give*, because if we did, a single event would end up with two agents: the one specified by *a laugh* and the one added by Voice. Since this is a causative, the agent added by Voice needs to initiate a separate event from the laughing event.

We can instead suppose that in (91) the NP *a laugh* moves to inner Spec-ApplP, as before, but now the lower copy is not interpreted. The root *g-* can again drop its first argument, as it did with true light verb *give*:

(94) $[\![\text{g-}]\!] = \lambda x \lambda e.\text{G}(e) \,\&\, \text{REC}(e,x)$ (first argument dropped)

Appl is now a special causative Appl, $\text{Appl}_{\text{Caus}}$, which takes another function as its second argument rather than an individual. Rather than culminating in a having eventuality, it culminates in an event specified by its second argument:

(95) $[\![\text{Appl}_{\text{Caus}}]\!] = \lambda f \lambda g \lambda x \lambda e.\text{f}(e,x) \,\&\, e \text{ culminates in } e'.\text{g}(e',y)$

$\text{Appl}_{\text{Caus}}$ combines first with the V (remember that the lower copy of the direct object is not interpreted) to produce $\overline{\text{Appl}}$:

(96) $[\![\overline{\text{Appl}}]\!] = \lambda g \lambda x \lambda e.\text{G}(e) \,\&\, \text{REC}(e,x) \,\&\, e \text{ culminates in } e'.\text{g}(e',x)$

$\overline{\text{Appl}}$ will then combine with the first NP, *a laugh*:

(97) $[\![\text{ApplP}]\!] = \lambda x \lambda e.\text{G}(e) \,\&\, \text{REC}(e,x) \,\&\, e \text{ culminates in } e'.\text{LAUGH}(e') \,\&\, \text{AG}(e',x)$

The indirect object will then fill in the x argument, and function as both the recipient of something in the main event and the laugher in the culmination event. After Voice adds an agent to the main event, we will have the following for (91):

(98) $[\![\text{VoiceP}]\!] = \lambda e.\text{G}(e) \,\&\, \text{REC}(e,\text{anyone}) \,\&\, \text{AG}(e,\text{movie}) \,\&\, e \text{ culminates in } e'.\text{LAUGH}(e') \,\&\, \text{AG}(e',\text{anyone})$

Paraphrasing, there is a transfer event with agent *this movie* an recipient *anyone*. This culminates in a laughing event with agent *anyone*. Again, what is transferred is not specified. (At a later stage the clause is negated.)

If in (91) the depictive secondary predicate is adjoined to $\overline{\text{V}}$, we will have the following for the denotation of $\overline{\text{V}}$:

(99) $[\![\overline{\text{V}}]\!] = \lambda x \lambda e.\text{G}(e) \,\&\, \text{REC}(e,x) \,\&\, \exists e'.\text{drunk}(e',x) \,\&\, \tau(e) \circ \tau(e')$

Since the lower copy of *a laugh* is not interpreted, x will eventually be filled in by the indirect object. The one who is drunk will then be *anyone*:

(100) ⟦VoiceP⟧= λe^1.G(e^1) & REC(e^1,anyone) & AG(e^1,movie) & e^1 culminates in e^2.LAUGH(e^2) & AG(e^2, anyone) & $\exists e^3$.drunk(e^3,anyone) & $\tau(e^1) \circ \tau(e^3)$

The run time of the drunk eventuality overlaps with the run time of the transfer event.

This analysis therefore accounts for the ability of a depictive secondary predicate to modify the indirect object of causative *give*. However, it requires a number of stipulations: that there is a special causative Appl; that the direct object is only interpreted in its moved position and not in its trace position; and that the NP can have an open agent argument (but see note 11, where this might be desirable). All of this is only possible with nouns that correspond to unergatives. On the other hand, the root *g-* is the same verb that appears in most instances of *give*, and the syntax is exactly the same as other double object constructions. Movement of the direct object is necessary, so we predict that adjectival passives will be ill-formed:

(101) a. * viewers ungiven a laugh
b. * He appears given a shudder.

There is also a culmination event, so we predict that Again2 will be able to adjoin and specify that only a laughing event took place before, not a transfer or other sort of cause. This is also correct:

(102) I had only laughed once today, and that was spontaneous, but then Bill said something funny and gave me a laugh again.

Most importantly, the analysis permits modification of the indirect object by a depictive secondary predicate, when that is not possible with other instances of *give*. I therefore offer this analysis for consideration, and leave for future research investigation of its merits and finding explanations for what are currently stipulations.

4.5 Summary: Light Verbs

This section has investigated light verb uses of *give*. There seem to be three: causative *give*, 'produce' *give*, and true light verb *give*. 'Produce' *give* does not allow a depictive secondary predicate to modify the indirect object, but the other two do. I proposed analyses of 'produce' *give* and true light verb *give* that explain this difference. The proposal for true light verb *give* is that light verbs combine with their complement not by function application, but by conjunction. They do this by dropping their first argument. This hypothesis explains why true light verb *give* permits a depictive to modify the indirect object. Finally, I suggested a tentative analysis for causative *give*, although a number of stipulations were required to make it work.

5 Conclusion and Implications

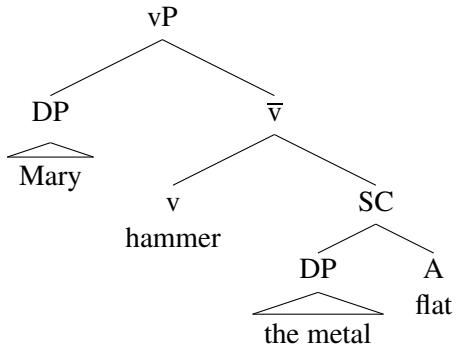
This paper has argued that the facts of depictive secondary predication show us something about the semantics of the double object construction. Depictives show clearly that both objects must be participants in the main verbal event in a double object construction. This is irreconcilable with the HaveP analysis, which has the two NPs as participants only in the final having state. In contrast, the proposed ApplP analysis has both NPs as participants in both the main verbal event and the having eventuality that is its culmination, and so it is compatible with the facts of depictive secondary predicates.

Additionally, light verb *give* initially seemed to fit nicely with the HaveP analysis, but this was shown to be illusory. Light verb *give* is actually problematic for that analysis. There is no having component in the semantics of light verb *give*, undermining the motivation for HaveP. I divided light verb *give* into three categories, and suggested analyses for all of them within the ApplP approach. These analyses again explain the facts of depictive secondary predication.

Finally, the facts of depictive secondary predicates have implications beyond the structure of double object constructions. There is a line of analysis that treats many different kinds of verbs as abstract verbal heads like

v_{CAUSE} and v_{BECOME} embedding small clauses. Once again, Harley's work (e.g., Harley 2005, 2008) is representative of this account. As an example, Harley (2008, (30)) analyzes a resultative construction in the following way:[12]

(103) Mary hammered the metal flat.



Here, there is a causing portion with the lexical verb spelling out the manner of causation, and a result portion represented by a small clause in the syntax.[13]

The problem with this type of analysis is the same problem that we saw with double object verbs. The object in this structure and semantics is not actually a participant in the main verbal event, it is only a participant in the final state. Depictive secondary predicates again show us that this is not correct:

(104) a. It's best to hammer metal flat wet, but it's OK if it has dried by the time it's completely flat.

b. # It's best to hammer metal flat dry, but it's OK if it's wet during the hammering.

Once again, depictives cannot modify the final state, they can only modify the direct object during the main verbal event. But in the small clause analysis, the direct object is not a participant in the verbal event, it is only a participant in the final result state.

Depictive secondary predicates therefore tell us that small clause analyses of such examples are not correct. It is not correct to view verb phrases as CAUSE and BECOME verbal heads embedding small clauses, where the direct object is only an argument in the small clause. It is also not correct to view the lexical verb itself as a manner modifier modifying these verbal heads. Rather, we need an analysis where the direct object is the object of the verb *hammer* and a participant in a hammering event (or a *hammering flat* event, depending on the right analysis of resultative constructions).

Part of the motivation for positing these small clause structures was the facts of adverbial modification with *again* and some other modifiers (see Harley 2008, Copley and Harley 2015). We saw above that *again* does not require a syntactic constituent corresponding to a state in order to give a restitutive reading (Dowty 1979, Williams 2015). The other modifiers also do not require such a constituent, and can even be shown to be problematic for analyses that have such a constituent. For instance, a temporal *for X time* modifier can modify just the having eventuality in a double object construction:

(105) I gave Sandy my smartphone for a few minutes.

The sentence in (105) is most plausibly interpreted as Sandy having the smartphone for a few minutes, not as me repeatedly giving her the smartphone for a few minutes.

In Harley (2008) and Copley and Harley (2015), this reading is derived in the same way as the restitutive reading of *again*: the *for X time* adverbial adjoins to the small clause. This predicts that this reading of *for X time* adverbials and restitutive readings of *again* should always pattern alike. This is not true, however. For instance, we

[12] Other small clause analyses of resultatives include Kayne (1984), Hoekstra (1988), Sybesma (1999), and Kratzer (2005). See Williams (2011, 2015) for more reasons to reject such analyses.

[13] Copley and Harley (2015, 131) explain briefly what manner modification would be in the force semantics that they propose. They also state that the verb root adjoins to a predicate headed by v_{BECOME} in an example like *Mary hammered the metal flat*. They do not give a structure for this sentence, but it appears they have in mind a structure like that in (103), where v_{BECOME} takes a small clause *the metal flat* as its complement.

saw above that stranding *again* under VP ellipsis removes the restitutive reading (Johnson 2004). However, it does not remove the Have reading with a *for X time* adverbial:

(106) a. Megan loaned him a car for a week, and I did for a month.

b. A: Give me your smartphone for the day, will you? B: I can't for the whole day.

This is also true with simple transitive verbs like *open* and *close*, which Harley (2008) and Copley and Harley (2015) also analyze as involving small clauses:

(107) 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.

Again and *for X time* also diverge in that some verbs allow a restitutive reading with *again*, but do not allow the corresponding reading with *for X time*:[14]

(108) a. I just got this brand new, sparkling clean shirt. I spilled tomato sauce on it, but I managed to clean it again. (restitutive)

b. I cleaned the shirt for a week. (only repetitive cleaning events)

(109) a. This panda was born in the zoo and has never been out of it. Yesterday it escaped, but we caught it again. (restitutive)

b. # In China, you're allowed to catch a panda for a week, but then you have to let it go. (only repetitive catching events)

These differences indicate that restitutive readings of *again* and the reading at issue with *for X time* adverbials are not derived in the same way. I proposed an analysis of *again* here, but will leave it to future research to determine how best to analyze the *for X time* adverbials. The important point is that their behavior is not consistent with the small clause approach to verbal predicates.

There is therefore no reason to prefer small clause analyses, and depictive secondary predicates are a good reason to reject them. Depictives indicate that they are on the wrong track, as is viewing verbal roots as manner modifiers rather than as the main verbal predicate. (See also Bruening 2010a for other arguments against treating double object verbs as including a small clause.)

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[14] Chierchia and McConnell-Ginet (1990, 359) state that the restitutive reading of *again* is not available with the verb *clean*, but I and numerous speakers I have asked find it acceptable.

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