Sluicing and Implicit Arguments in English Double Object Constructions

Benjamin Bruening (University of Delaware)

rough draft, October 6, 2019

Abstract

Pesetsky (1995) argued that both objects in the double object construction must be selected arguments of the lexical verb, based on patterns of optionality. A closer examination shows that this is not correct. The second object of the double object construction and both the NP and PP of the PP frame behave like selected arguments of the lexical verb: the lexical verb determines both whether they can be implicit or not, and how they are interpreted when they are (indefinite or definite). In contrast, particular lexical verbs determine whether the first object of the double object construction can be dropped, but not how it is interpreted. All implicit first objects are interpreted as definites. Implicit first objects also do not license sluicing, unlike all other implicit objects. I propose a novel analysis of how implicit arguments are licensed and interpreted. This combined with the ApplP analysis of double object constructions (Marantz 1993, Bruening 2001) explains all of the facts. Other analyses of double object constructions cannot account for them.

1 Introduction

There is no shortage of analyses of English double object constructions, exemplified in (1):

(1) The teacher assigned the students a lot of homework.

One major point of contention is what projects each of the NP objects. In some accounts, both NPs are arguments of the lexical verb (e.g., Larson 1988, Pesetsky 1995); in small clause accounts, neither is (they form a small clause; e.g. Kayne 1984, den Dikken 1995, Harley 2008, Pylkkänen 2008). In another variation, the second object is an argument of the lexical verb, but the first object is not, it is instead projected by a functional head Appl(licative) (Marantz 1993, Bruening 2001, 2010). (I know of no analysis where the first object is treated as an argument of the lexical verb but the second is not.)

Pesetsky (1995) looks at patterns of argument optionality and argues that both objects must be selected arguments of the lexical verb. This is because particular lexical verbs determine whether each object is obligatory or optional. There are verbs like wish, hand, and lend that require both objects:

(2) a. I wish you all the best.
b. * I wish all the best.
c. * I wish you.

Verbs like *assign, pass, and sell* require the second object but permit the first to be absent:

(3) (Pesetsky 1995: 157, (421))
a. The teacher assigned the students the homework.
b. The teacher assigned the homework.
c. * The teacher assigned the students.

Verbs like *feed, fine, and spare* require the first object but permit the second to be absent:

(4) a. They fined the offender an astronomical amount.
b. * They fined an astronomical amount.
c. They fined the offender.

Verbs like *teach, pay, and strike* allow either or both objects to be missing:

(5) a. The knight struck his enemy a killing blow.
b. The knight struck a killing blow.
c. The knight struck his enemy.
d. The knight struck.

There are also many more verbs that allow either object to drop but require at least one of them to be present, like *charge, cost, envy, . . . :*

(6) a. They charge visitors an entrance fee.
b. They charge an entrance fee.
c. They charge visitors.
d. * They charge.

This pattern of facts does seem to indicate that both objects must be selected by the lexical verb, as Pesetsky concluded. On the other hand, there is a large and productive class of verbs that seem to select only a single object, but which can also be used in the double object construction:

(7) a. She melted some ice cream.
b. She melted me some ice cream.

(8) a. They built a time machine.
b. They built us a time machine.

With this class of verb, at least, it does not seem to be correct that the first object is a selected argument of the verb. When it is not present, there is no entailment of a first object. This means that the first object seems to be added by some element other than the lexical verb. At the same time, though, the semantics is the same as with the other verbs above: the English double object construction uniformly encodes intended caused possession (Green 1974, Oehrle 1976, Goldsmith 1980; see also Pinker 1989, Gropen et al. 1989, Pesetsky 1995, Krifka 2004, Bruening 2018b).
This shared semantics makes a unified analysis of all double object constructions desirable, but that is impossible if the first object is selected by the lexical verb with some verbs but is added by some other element with other verbs.

In this paper I attempt to reconcile this conflict by examining argument optionality in more detail. A closer look at implicit arguments (arguments that are not present syntactically but are semantically entailed) reveals significant asymmetries between the two objects. These asymmetries, I will argue, show that the first object is not solely an argument of the lexical verb, but the second object is, as is a PP if the verb permits the PP frame in addition to (or instead of) the double object construction. I will show that this pattern is inconsistent with all existing analyses of the double object construction except for the ApplP analysis first proposed by Marantz (1993) and developed by Bruening (2001, 2010, 2018b, 2019a).

I begin by establishing the patterns of implicit arguments in double object constructions and prepositional datives (section 2). This section will show that an implicit first object never permits sluicing, but implicit second objects and implicit PPs do. Additionally, implicit first objects are interpreted differently from implicit second objects and PPs. There are also two interesting asymmetries involving implicit second objects (themes/direct objects).

Section 3 introduces the ApplP analysis of the double object construction that I assume. Section 4 then proposes a novel analysis of implicit arguments according to which they are licensed by higher functional heads, not by lexical verbs alone. This section then shows how this analysis when combined with the ApplP analysis can account for the patterns of data discovered in section 2. Finally, section 5 goes through alternative analyses of double object constructions and shows that none are able to capture the pattern of facts discovered here. Only the ApplP analysis is able to account for them.

2 Implicit Arguments in Double Object Constructions

This section comprises the empirical investigation of this paper. Looking closely at implicit arguments in double object constructions, I show that there are two asymmetries where implicit first objects behave differently from implicit second objects and implicit PPs. There are also two important dependencies involving implicit second objects (themes/direct objects). I begin with sluicing.

2.1 An Asymmetry in Sluicing Licensed by Implicit Arguments

Implicit arguments often license sluicing, where the wh-phrase in the sluiced clause corresponds to the implicit argument in the antecedent clause (this is sometimes called “sprouting”; see, e.g., Chung et al. 1995, 2011, Merchant 2001):

(9) The patient already ate, but we’re not sure what.

Interestingly, the two objects in the double object construction do not behave the same in this respect. An implicit second object can often license sluicing:

(10) a. She is going to serve the guests now, but I don’t know what.
    b. Ron has to pay the loan shark, but I don’t know how much.
c. They charge every visitor, but their website doesn’t say how much.
d. They are definitely going to fine you, I just don’t know how much.
e. I think you need to tip the waiter in Germany, but I don’t know how much.
f. It will cost you, I just don’t know how much.
g. They can’t bill you without telling you how much.

In contrast, an implicit first object never can. If the verb does not permit the PP frame, sluicing is just ungrammatical without a pronounced indefinite first object:

(11) a. They accidentally charged *(someone) way too much, but we can’t figure out who.
b. That guy once tipped *(a waitress) almost 300%, but I can’t remember which waitress.
c. That guy envies *(one of his neighbors) the big house and the expensive car, but I can’t remember which of his neighbors.
d. The pope once forgave *(someone) blasphemy, but I don’t know who.
e. The court denied *(one of the prisoners) due process, but they won’t tell us who.
f. The warden will permit *(someone) one last conjugal visit, but he didn’t say who.
g. The black knight struck *(one of his opponents) a killing blow, but we couldn’t see which opponent.

If the verb does permit the PP frame, then sluicing requires a preposition, unless there is a pronounced indefinite first object:

(12) a. They’re going to sell the house, but I don’t know who *(to).
b. They’re going to sell someone the house, but I don’t know who.
(13) a. She promised a lot of money, but I don’t know who *(to).
b. She promised someone a lot of money, but I don’t know who.
(14) a. She was telling stories last night, but I don’t know who *(to).
b. She was telling someone stories last night, but I don’t know who.
(15) a. The coach yelled at her to pass the ball, but he didn’t say who *(to).
b. The coach yelled at her to pass someone the ball, but he didn’t say who.
(16) a. The suspect served one glass of poisoned Kool-Aid, but we don’t know who *(to).
b. The suspect served one of these people a glass of poisoned Kool-Aid, but we don’t know who.

1 Some speakers may allow a preposition to pop up with some of these verbs in order to license sluicing, even when they do not otherwise allow a preposition. These speakers still do not allow sluicing without the P, though. Note also that sluicing is completely acceptable with an overt indefinite, so there is no problem with extracting the first object in the sluiced clause (not surprising, since sluicing can generally violate constraints on extraction).

Chung et al. (1995: 248) observe this effect with serve and Chung (2013: 3) notes it with send, but neither of those works notes its full generality. Note also that the order P NP versus NP P (known as “swiping,” Rosen 1976 Culicover 1999 Merchant 2002) is just a matter of personal preference and is irrelevant here. I used the order that sounds most natural to me, but the other order is generally acceptable, too.
More examples follow (but condensed), illustrating the full generality of this fact (and that it does not matter whether the preposition is *to* or *for*):

(17) a. They awarded a prize, but we’re not sure who *(to).
    b. The secretary forwarded that embarrassing email, but I’m not sure who *(to).
    c. A: They sometimes grant extensions. B *(To) who?!
    d. A: They sometimes guarantee their work. B: *(To) who?!
    e. The UPS man left a package, but I’m not sure who *(for).
    f. They may offer a compromise, but *(to) who?
    g. They reserved a ticket, but I’m not sure *(for) who.
    h. That person is saving a seat, but I’m not sure *(for) who.

The two objects do not act at all the same when they are implicit, then. The second object can license sluicing when it is implicit, but the first never can. These data also indicate that the first object does not behave like the PP of the PP frame, either, since an implicit PP can clearly license sluicing. Implicit PPs can do this in general, even with verbs that only allow a PP frame and do not permit the double object construction:

(18) a. They donated a sizable tract of land, but the records don’t indicate to which charity.
    b. She plans to submit this paper, but doesn’t know to which journal yet.

The first object of the double object construction then behaves unlike all other internal arguments of verbs. Unlike direct objects and PPs, it can never license sluicing when it is implicit.

### 2.2 An Asymmetry in How Implicit Arguments are Interpreted

The second asymmetry involves the interpretation of implicit arguments. Various researchers have shown that implicit arguments divide into two groups, with some implicit arguments being interpreted existentially and others being interpreted as pragmatically recoverable definites (Fodor and Fodor 1981, Dowty 1981, Fillmore 1986; see Williams 2015: chapter 5 for excellent discussion and references). Which is which depends on the lexical verb. For instance, the optional arguments of *eat* and *steal* are indefinite, and do not need to be identifiable at all. For instance, one can just ask out of the blue, *Have you eaten?*, with no item in the discourse to serve as the object of *eat*. In contrast, *win* and *notice* only permit their internal arguments to be missing if what is won or what is noticed is pragmatically identifiable (Fodor and Fodor 1981, Dowty 1981, Fillmore 1986):

(19) a. A: Check it out. Ron has a new car!
    B: He won a contest. / *He won. (Williams 2015: 100, (19))
    b. A: How did Ron do in the big sack race?
    B: He won!

(20) a. A: Why does Ron look like he got kissed?
    B: He noticed Hermione’s new hairdo. / *He noticed.
    b. Hermione has a new hairdo, but Ron hasn’t noticed.
As Chung et al. (1995: 267) and Williams (2015: chapter 5) point out, sluicing, just discussed, brings out this contrast nicely. Verbs that take indefinite implicit arguments are compatible with sluicing, but verbs that take definite implicit arguments are not:

(21) a. The patient already ate, but we’re not sure what.
b. He definitely stole from the convenience store last night, we’re just not sure what.

(22) a. # Ron won, but I can’t remember what.
b. # The subject noticed, but we’re not sure what/who.

This means that in all of the examples in the previous section where an implicit second object or an implicit PP licensed sluicing, that implicit NP or PP was interpreted as an indefinite. In addition to all of the verbs exemplified in the previous section, however, there are also verbs where an implicit second object seems to be interpreted as a definite. The second object can only be dropped where it is recoverable from the discourse, and sluicing is pragmatically odd without a pronounced indefinite:

(23) a. A: I have bad news. B: Tell me.
b. She told me #(something), but I couldn’t hear what.

(24) a. Bill is guilty of infidelity, and his wife will never forgive him.
b. The priest forgave Bill #(some sin or other), it doesn’t really matter what.

(25) a. A: I will never leave you. B: Promise me!
b. She promised me #(something), but I can’t remember what.

(26) a. A: I have a question. B: Ask me.
b. She asked me #(something), but I couldn’t hear what.

(27) a. A: There’s something weird in the bathroom. B: Show me.
b. She showed me #(something), but I can’t remember what.

This means that particular lexical verbs determine both whether the second object can be dropped, and how it is interpreted when it is. Some verbs have indefinite implicit second objects, while others have definite implicit second objects. The second object then behaves as though it is selected by the lexical verb.

The same is true of the PP of the PP frame. All of the examples in the previous section showed indefinite implicit PPs licensing sluicing. The vast majority of implicit PPs seem to be indefinite. However, there is at least one verb that takes a definite implicit PP, namely, give. Fillmore (1986) noted that the missing argument of give has to be pragmatically recoverable in the discourse:

(28) a. A: Why does Samantha look so smug? B: #She just gave $100.
b. A: Did you donate to the koala chlamydia ward? B: Yes, I gave $5.

Fillmore just assumed that the missing argument is a PP and not the first object of the double object construction, but sluicing verifies this. Sluicing is ungrammatical without the preposition, and with it it is pragmatically odd:

(29) # She gave $5, but we don’t know to which charity.
I believe there are also PPs with non-alternating verbs that have a definite interpretation when they are left out. For instance, *explain, introduce,* and *recommend* are infelicitous without the PP if there is no salient individual in the context, and sluicing is also infelicitous:

(30)  
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td># Barry explained the contract.</td>
</tr>
<tr>
<td>b.</td>
<td>A: What happened in the board meeting today? B: Barry explained the contract.</td>
</tr>
<tr>
<td>c.</td>
<td>Barry already explained the contract, #but I can’t remember who to.</td>
</tr>
</tbody>
</table>

(31)  
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td># Samantha is nervous, she’s going to introduce her girlfriend tonight.</td>
</tr>
<tr>
<td>b.</td>
<td>Samantha is nervous about going to her parents tonight, she’s going to introduce her girlfriend.</td>
</tr>
<tr>
<td>c.</td>
<td>Samantha will introduce her girlfriend tonight, #but won’t tell us who to.</td>
</tr>
</tbody>
</table>

(32)  
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td># Katherine will recommend a Thai restaurant.</td>
</tr>
<tr>
<td>b.</td>
<td>Don’t ask Katherine where to go, she will just recommend that same Thai restaurant.</td>
</tr>
<tr>
<td>c.</td>
<td>Katherine recommended a Thai restaurant, #although it’s not clear to who.</td>
</tr>
</tbody>
</table>

So, PPs are just like the second object, in that the lexical verb dictates whether it can be dropped or not, and how it is interpreted when it is.

When we turn to the first object of the double object construction, however, we find something different. We have to limit ourselves to non-alternating verbs, though, to be sure that what is implicit is not a PP. We already saw that implicit first objects with non-alternating verbs categorically ban sluicing. We can now ask how the missing first object is interpreted. We cannot use sluicing as a diagnostic for an indefinite interpretation, however, because sluicing is simply ungrammatical. We have to look for other kinds of data.

One context to look at discussed by [Williams (2015)] involves quantifiers. Definite implicit arguments can have a bound reading in the scope of a quantifier, but indefinite ones cannot. With the verb *win,* the sentence with and without an overt pronoun are synonymous, but this is not true with *eat:*

(33)  
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>Every contest turned out to have been rigged by the person who won (it).</td>
</tr>
<tr>
<td>b.</td>
<td>Every cake turned out to have been baked by the person who ate. [\neq ] Every cake turned out to have been baked by the person who ate it.</td>
</tr>
</tbody>
</table>

So, we can look for bound readings as a diagnostic for definite versus indefinite interpretations. We can also just look at the context for felicitous use of an implicit object[^1].

First, though, among obligatory double object verbs, some do not allow the first object to be missing. These include *begrudge, bill, fine,* and *spare* (on the relevant meaning). *Afford* and *lose* allow the first object to drop, but there is no entailment that it is present; these just seem to be able to be used as simple transitives:

[^1]: Another way to tell the difference is with negation. With an indefinite implicit object and negation, for instance *They haven’t eaten yet,* the interpretation is that they ate nothing. With a definite, for instance *They haven’t noticed yet,* the interpretation is instead that there is a particular thing that they haven’t noticed, not that they haven’t noticed anything. The reader can use this test to verify the facts reported here (as an example, *They haven’t charged the entrance fee yet* means there is a particular person they haven’t charged yet, not that they have charged no one).
(34)  a. The judge could not afford a fair trial. $\neq$ The judge would not afford him/anyone a fair trial.
    b. He lost the game. $\neq$ He lost his team the game.

I believe that *bet* is similar. If there is no first object representing the person with whom the wager is made, no such person is entailed. What is entailed is that there is some sort of contest the outcome of which forms the basis for the wager. World knowledge tells us that there must be some individual with whom the bet is made, but this could be an online betting service or some other shadowy entity that is not linguistically entailed by the sentence.

(35)  a. She bet a lot of money.
      $\approx$ She bet a lot of money on something.
      $\neq$ She bet him/her/someone a lot of money.
    b. A: Do you have something riding on this game? B: I bet a lot of money.

Other obligatory double object verbs do allow the first object to be missing and still entail it. With all such verbs, a paraphrase with an indefinite does not seem to be appropriate. What does seem to be appropriate in many cases is either a generic *you/one* or a unique definite appropriate to and recoverable from the situation, or perhaps an NP bound by the subject:

(36)  a. Tourist destinations always charge a lot.
      $\neq$ Tourist destinations always charge someone a lot.
      $\approx$ Tourist destinations always charge you/one/their visitors a lot.
    b. You’re supposed to tip at least 20% now.
      $\neq$ You’re supposed to tip someone at least 20% now.
      $\approx$ You’re supposed to tip the waiter/your waiter at least 20% now.
    c. Many catholics believe God will never forgive premarital sex.
      $\approx$ Many catholics believe God will never forgive you/one/his followers premarital sex.
    d. Courts in other countries often deny due process.
      $\approx$ Courts in other countries often deny you/one/their charges due process.
    e. The warden will usually permit one last conjugal visit.
      $\approx$ The warden will usually permit you/one/his prisoners one last conjugal visit.

*Strike* and *envy* seem to require a pragmatically recoverable definite:

(37)  a. A: Why is this sword dented? B: #The black knight managed to strike a heavy blow.
    b. A: Why is the white knight bleeding so badly? B: The black knight managed to strike a heavy blow.

(38)  a. A: What’s up with Bill? B: #He envies the big house and expensive car.
    b. A: Why does Bill dislike Monty? B: He envies the big house and expensive car.

I will investigate the interpretation of the missing first object with these verbs more fully in section 4.10.

All of these verbs appear to allow bound readings with an implicit first object in the scope of a quantifier:
No traveler should expect tourist destinations to charge (them) very little.
No waitress wants a customer to tip (her) less than 20%.
No teenage Catholic actually believes that God won’t forgive (him/them) premarital sex.
No US citizen taken into custody in the Middle East is shocked when the court denies (them) due process.
No man on death row expects the warden to permit (him) one last conjugal visit.
No duelist wants his opponent to be able to strike (him/them) a killing blow.
No successful investor is unhappy if his neighbors envy (him/them) the big house and expensive car.

It therefore appears that missing first objects in the double object construction are either not entailed at all, or they are definite if they are. This contrasts with a missing second object and a missing PP: they are typically indefinite, but a few are definite.

Just to shore up this point, we can contrast the above non-alternating verbs with alternating verbs that do permit sluicing with an implicit argument (with a preposition). Such verbs do not permit bound readings in the scope of a quantifier:

Everyone who places a bid at an auction wants them to sell the item.
No player on the sidelines wants the goalie to pass him/her/them the ball.

Going back to sluicing from the previous section, one might suggest that sluicing is not possible with a missing first object because missing first objects are not indefinite. Chung et al. (1995: 267–268) suggest a way that we can test this. They note that definite implicit objects are ill-formed with sluicing, but become much better when the verb with an implicit object is embedded in a clause that helps to neutralize the speaker’s assumptions:

They applied yesterday. I wonder what for.
They claimed to us that they had applied, but they refused to say for which jobs.
Bob’s therapist reported that he envies the big house and the expensive car, but she wouldn’t say which co-worker.
The pope claimed that he once forgave blasphemy, but he didn’t say who.
A whistleblower alleged that a secret military court denied due process, but the allegation didn’t reveal who.
The warden has let it be known that he will permit one last conjugal visit, but no one knows who.

(39) a. Everyone who places a bid at an auction wants them to sell the item.
\ne. They applied yesterday. I wonder what for.
b. ? They claimed to us that they had applied, but they refused to say for which jobs.

(40) a. Everyone who places a bid at an auction wants them to sell the item.
\ne. * They applied yesterday. I wonder what for.
b. ? They claimed to us that they had applied, but they refused to say for which jobs.

(41) (Chung et al. 1995: 267–268, (66b), (67b), judgments theirs)
\na. * They applied yesterday. I wonder what for.
b. ? They claimed to us that they had applied, but they refused to say for which jobs.

At the end of the previous section, it was suggested that sluicing is possible with a missing first object because missing first objects are not indefinite. Chung et al. (1995: 267–268) suggest a way that we can test this. They note that definite implicit objects are ill-formed with sluicing, but become much better when the verb with an implicit object is embedded in a clause that helps to neutralize the speaker’s assumptions:

(42) a. She reported that she had accidentally charged way too much, but she didn’t report who.
b. That guy claims he once tipped 300%, but he won’t tell us who.
c. Bob’s therapist reported that he envies the big house and the expensive car, but she wouldn’t say which co-worker.
d. The pope claimed that he once forgave blasphemy, but he didn’t say who.
e. A whistleblower alleged that a secret military court denied due process, but the allegation didn’t reveal who.
f. The warden has let it be known that he will permit one last conjugal visit, but no one knows who.
The black knight claimed that he struck a killing blow in yesterday’s melee, *but he wouldn’t say which opponent.

I therefore conclude that implicit first objects do not fail to license sluicing simply because they are interpreted as definites. Sluicing actually seems to be categorically ungrammatical. The asymmetry in sluicing and the asymmetry in interpretation are therefore not the same fact, although they are probably related.

To summarize, the second asymmetry lies in how implicit arguments are interpreted. An implicit first object in a double object construction is always definite. In contrast, implicit second objects and implicit PPs can be either indefinite or definite.

2.3 Two Dependencies Involving Implicit Second Objects

There are also two interesting dependencies involving implicit second objects. First, the productive class of verbs that are simple transitives but can have a first object added never allow the second object to be implicit when a first object is added. Second, the ability of the second object to drop depends on what frame the verb appears in.

2.3.1 Implicit Second Object Not Allowed with Base Transitives

As noted above, there are many verbs that are simple transitives in their base use, with just a single object. They can have an additional object added to them as the first object of the double object construction, with the meaning of intended caused possession. Some of these verbs allow their sole object in the simple transitive to be implicit. However, they can never form a double object construction when it is:

\begin{align*}
(43) & \quad \text{a. We’re baking them a cake.} \\
& \quad \text{b. We’re baking right now.} \\
& \quad \text{c. We’re baking *(for) them right now. (where ‘them’ is intended recipient)} \\
(44) & \quad \text{a. She mixed them a drink.} \\
& \quad \text{b. She’s busy mixing right now.} \\
& \quad \text{c. She’s busy mixing *(for) them right now. (where ‘them’ is intended recipient)} \\
(45) & \quad \text{a. Sing me a song!} \\
& \quad \text{b. Sing!} \\
& \quad \text{c. Sing *(for/to) me!} \\
(46) & \quad \text{a. The dog barked us a greeting.} \\
& \quad \text{b. The dog barked.} \\
& \quad \text{c. The dog barked *(at) us.}
\end{align*}

It is important to note that it is not the case that the double object construction bans an implicit second object across the board. Verbs that always appear with either a PP or in the double object construction do permit an implicit second object. A couple of examples are repeated from (10) above:
One could suggest that *serve* and *pay* can simply be used as transitives with the goal as the sole argument of the verb, but then one would not expect sluicing to be licensed. The sluiced clause in (47a), for instance, must be *what she is going to serve the guests now*, with struck through material elided. This clause must have a ditransitive argument structure, since it has two objects, *the guests* and *what*. We know that clauses with differing argument structure do not license sluicing, for instance active-passive pairs or double object/PP pairs (Levin [1982] Chung et al. [1995] Merchant [2001]):

(48) a. * Someone hacked my computer, but I’m not sure by who.

b. * She gave someone a car, but we’re not sure to who.

If the first clause in (47a) were a simple transitive, it would not license ellipsis in the second clause. The first clause therefore also has to be a double object construction, with an implicit second object.

It is also important to note that the implicit second object in such cases is not syntactically present but null. On standard tests, it acts like it is not present at all. For instance, it does not license a depictive secondary predicate, unlike a pronounced second object and unlike null subjects and objects in imperatives and instructions:

(49) a. She served them bits of meat raw.

b. * She served them raw. (where what she served them was raw)

(50) a. Don’t come to class naked!

b. Do not consume raw. [instructions on package of meat]

So it is not possible to claim that the permitted implicit second objects are syntactically present but null while the ones that are not permitted are truly absent. The double object construction does seem to allow truly syntactically absent second objects.

The generalization is then that a verb permits the second object in the double object construction to be implicit only if it always takes an additional argument as either a PP or the first object of the double object construction. Stated another way, a simple transitive verb that can appear in the double object construction cannot if its base object is implicit.

### 2.3.2 Implicit Direct Object Depends on DOC versus PP

Additionally, the direct object behaves differently depending on whether the other argument is a PP or an NP. There is a relatively large class of verbs that allows the second object to drop only if the other argument is the first object of the double object construction, and not a PP:

(51) a. She didn’t show (*to) us yet.

b. She didn’t ask (*of) us yet.

c. She didn’t email/text/telegraph (*to) me yet. (whole class of verbs of instrument of communication behaves the same)

d. She didn’t pay (*to) me yet.

e. She didn’t serve (*to) us yet.
f. You promised (*to) me!
g. She teaches (*to) special-needs children.
h. They’re feeding (*to) the seals right now.

I have been able to find three verbs that permit the second object to drop only if the other argument is a PP and not the first object of the double object construction:

(52) a. She wouldn’t pass *(to) me.
b. She wouldn’t read *(to) me.
c. She wouldn’t sing *(to) me.

Read and sing do not entail a recipient/goal that is not overtly expressed, so this might be the same fact as in the previous subsection. These two verbs might just be simple transitives, and therefore do not allow their object to be implicit in the double object construction. Pass as a verb of transfer of possession does entail a recipient, so there is at least one verb that only allows the second object or theme to be implicit when the frame is the PP frame and not the double object construction.

One verb permits the second object to drop in the presence of either a first object or a PP:

(53) a. She wrote to me.
b. She wrote me.

However, I suspect that she wrote me simply has a null preposition; it is quite marked and does not passivize without the P, for instance: *I was written *(to). If this is correct, then write falls into the same class as pass. There are also non-alternating verbs with PPs that permit the direct object to be implicit: She doesn’t submit (her papers) to that journal, She doesn’t donate (money) to any charities.

From these data it appears that the ability of the direct object to drop depends for individual verbs on whether the frame is the double object construction or the prepositional dative. There are no verbs that are non-selective in this regard.

2.4 Summary

This section has observed several patterns, summarized below:

1. Implicit second objects and implicit PPs license sluicing, but implicit first objects do not.

2. Implicit second objects and implicit PPs can be either definite or indefinite, but implicit first objects are only definite.

3. A simple transitive that allows an implicit object does not if it is used in the double object construction.

4. An implicit direct/second object is licensed only in the double object construction for some verbs, and only in the PP frame for other verbs.
2.5 Pesetsky 1995: Both Objects Selected by Lexical V

Before turning to an analysis of these patterns, I close out this section by re-examining Pesetsky’s (1995) conclusions. Recall that Pesetsky concluded that particular lexical verbs must select both NP objects in the double object construction. Particular lexical verbs must also select both the NP and the PP in the PP variant. Given what we have seen, is this conclusion warranted? Is it really correct that all internal arguments are selected by the lexical verb in the double object and PP frame alike?

I contend that the answer is no. The second object (the theme, which is the first object in the PP frame) does act like a selected argument of the lexical verb, as does the PP of the PP frame. Particular lexical verbs decide whether both of these arguments can be dropped, and how they are interpreted (as either a definite or an indefinite) when they are. Things are not so simple for the first object of the double object construction. It is true that the lexical verb determines whether it can be dropped or not, but sluicing is never allowed when it is, and the interpretation seems to be uniformly definite. This indicates that it is not entirely up to the lexical verb, and there seems to be a role for something else besides the lexical verb regarding the first object. I therefore conclude that the first object is alone among these internal arguments in not being (entirely) an argument of the lexical verb.

3 The ApplP Analysis of Double Object Constructions

As a preliminary to my proposal for how to account for the patterns uncovered in section 2, I will spell out the ApplP analysis of double object constructions that I assume. I will work with a greatly simplified version of the analysis proposed in Bruening 2010 (see also Bruening 2019a).

In this analysis, the PP frame has the following structure, where both the NP and the PP are arguments of the lexical verb. The external argument, following Kratzer (1996), is projected by a functional head Voice:

(54) VoiceP  
   /       
  NP      Voice  
     /     
    the teacher Voice  
       
   Voice VP  
      
   V  PP  
     /   
    assigned to the first-graders  
       NP an essay

This structure, with the PP higher than the NP, is motivated by constituency tests (see Janke and Neeleman 2012). It is also consistent with binding data, given that binding depends not on c-
command but on precede-and-command (Bruening 2014). The NP both precedes and commands the PP, but the PP only commands and does not precede the NP. Therefore the NP can bind (into) the PP, but not vice versa.

The double object construction instead has the first object projected by a head Appl(licative) above VP and below Voice:

(55) VoiceP
   /              \
  NP              Voice
    /                \
  the teacher       Voice
                           ApplP
                                 NP
                                    Appl
                                        VP
                                            V
                                              assigned
                                                 NP
                                                    an essay

The verb moves through Appl to Voice, where it precedes the first object.

As for the semantics, the Appl head introduces an additional possession eventuality. Simplifying greatly, Appl says that the main verbal event (here the assigning event) if not interrupted will culminate in a possession eventuality. The two internal arguments, here *an essay* and *the first graders*, are participants in both eventualities. *An essay* is the theme of both the assigning eventuality and the possessing eventuality. *The first graders* are both the goal of the assigning eventuality and the possessors of the possessing eventuality. Departing from the analysis in Bruening (2010), the way this comes about is that the V moves to Appl and combines with it prior to either head combining with the arguments. This creates a complex function that includes both Appl and V. This complex function takes each NP as argument in turn and relates them to both eventualities simultaneously. Voice then adds the agent, as in Kratzer (1996).

The semantics of the double object construction are not of particular importance here. What is crucial is the syntactic structure of the double object construction in contrast with that of the PP frame. Additionally, case assignment will be important. I assume that in a simple transitive, it is Voice that assigns or checks accusative case on the object, while T assigns or checks nominative case. In the double object construction, Voice assigns or checks case on the NP in Spec-ApplP. The case of the lower object (complement of V) is assigned or checked by Appl. The details of how case assignment/checking works are not important here, but it is important which heads do the assignment/checking.

One thing to point out before turning to the analysis is that this approach to the double object construction has exactly the right character to account for the facts uncovered in section 2. In this approach, both the NP and PP in the PP frame are arguments of the lexical verb. We concluded
in section 2 that this is correct. In the double object construction, the second object is also an argument of the lexical verb. This also seems to be correct, based on patterns of implicit arguments. However, in the ApplP analysis, the first object is not solely the argument of the lexical verb. It is projected by Appl, but it also fills a role in the verbal event. Since we concluded in section 2 that the first object is not determined solely by the lexical verb, this seems like a promising approach to pursue. I will show in section 5 that other approaches to double object constructions do not fare so well.

4 How to Account for the Patterns

Now that we have a minimal analysis of the syntactic structures involved, we can go on to explain the patterns uncovered in section 2.

4.1 How Implicit Arguments are Licensed and Interpreted

To begin to approach the facts from section 2, we need an analysis of implicit arguments. We need to know what licenses them and what determines their interpretation. In many cases it appears that it is simply the lexical verb that does both. For instance, with eat and notice, there is no reason to think that anything other than the lexical verb is involved in determining whether the object can be dropped and how it is interpreted when it is. However, in other cases, it becomes clear that more must be involved.

Consider the following cases. The verbs wave, roll, and heave permit their object to be dropped when they are used transitively (the a examples). However, these verbs can also be used as intransitive unaccusatives (the b examples). Since the object of the transitive corresponds to the subject of the intransitive, we might expect the subject of the intransitive to be able to drop, too. This is not possible, however (the c examples):

(56) a. They are waving (their hands).
   b. Their hands are waving.
   c. * There/it is/are waving. (with expletive subject)

(57) a. Ready? Roll (the rocks)!
   b. The rocks are rolling.
   c. * There/it is/are rolling. (with expletive subject)

(58) a. Ready? Heave (those rocks)!
   b. The ground heaved.
   c. * There/it heaved. (with expletive subject)

Similarly, verbs like eat and notice that permit implicit direct objects do not permit the passive:

(59) a. * Has there been eaten (by you)?
   b. I got a new haircut, but *there was not noticed (by anybody).

The problem here might be that passives and unaccusatives in English require an NP to move to an intermediate position (and typically on to Spec-TP, see Bruening 2019b). If there is some other NP that can move, the passive is grammatical, at least in some cases:
(60) a. This table has never been eaten on.
   b. She was stolen from.

However, this never works with unaccusatives like wave:

(61) a. Hands were waving in the crowd.
   b. * The crowd was waving in.

(62) a. Rocks are rolling down the hill.
   b. * The hill is rolling down.

(63) a. The ground heaved beneath us.
   b. * We heaved beneath.

If lexical verbs only select their objects and nothing else, and unaccusative VPs are the same as transitive VPs, with the only difference being higher functional projections like Voice, then we would expect that these verbs would allow implicit logical objects in the unaccusative since they do in the transitive. They should only be required to meet all other wellformedness conditions. The sentences in (61b), (62b), (63b) do, as far as I can tell, yet the implicit arguments are still not licensed. I take this to show that the licensing of implicit arguments depends not just on the lexical verb that projects that argument, but on other syntactic elements as well.

This is also evident from nominalizations. As [Bruening (2018c)] points out (building on [Reu-land (2011)] and [Adger (2013)][16]), all nominalizations license an implicit argument corresponding to the direct object of the verb, even when the corresponding verb does not license an implicit object (Bruening (2018c) (20–21)):  

(64) Reporter: Is the military really considering annexing the disputed territories?
   Government Spokesperson:
   a. * If we do annex, it will not lead to open conflict.
   b. The proposed annexation should not lead to open conflict.

(65) Reporter: Are the refugees really not going to be allowed to stay?
   Government Spokesperson:
   a. * We plan to relocate, and that is in everyone’s best interests.
   b. The relocation currently being planned is in everyone’s best interests.

Moreover, such implicit arguments are uniformly definite, and are only allowed when they are pragmatically identifiable (as they are in these dialogues).

This means that it is not just lexical verbs that determine whether arguments can be implicit, and how they are interpreted when they are. In this case, it is whatever syntactic element turns the verb into a noun that licenses the implicit argument and determines that it is interpreted as a definite. In fact the lexical verb seems to have no role to play at all in this case, as all nominalizations permit definite implicit arguments, and the verb itself does not.

A third fact that indicates a role for something besides the lexical verb is the fact that external arguments can never be implicit without the passive. It is not good enough to rule this out through the requirement for a syntactic subject. In the passive, this requirement can be satisfied by moving some other NP to subject position, but this is never possible in the active:
(66) a. This hat was stepped on.

   b. * This hat stepped on. (to mean either ‘someone stepped on this hat’ or ‘a pragmatically recoverable individual stepped on this hat’)

It is also not good enough to say that the existence of the passive pre-empts this, because the implied argument of the passive is always indefinite. The passive would then not be expected to pre-empt some verb taking an implicit *definite* external argument. But no verb does.

I conclude from these facts that the licensing of implicit arguments is a syntactic process. It must involve more than just the lexical verb. Functional elements must play a crucial role.

I will argue below that the licensing mechanism for implicit arguments is different for NPs that are projected by lexical heads versus functional heads. Starting with lexical heads, I propose that a lexical head like a verb that has an argument to project can be given a feature that will block syntactic projection of that argument. Call this a [*N] feature. The only effect this feature has on the head it is added to is to stop projection of the argument. [*N] features are also specified as having to be checked by a designated functional element. For instance, a [*N] feature on a verb can be specified as having to be checked by Voice, which I will notate [*N-Voice]. This feature then has to be checked by Voice in a local relation which I will specify below. Moreover, the head that checks the feature is the one that determines how the implicit argument is interpreted. In this example, Voice would both check the [*N-Voice] feature and determine whether the missing argument is definite or indefinite.

4.2 *Eat* versus *Notice*

Let me start to develop this analysis with the simple cases of *eat* (indefinite) and *notice* (definite). As stated above, I assume with Kratzer (1996) that transitive verbs have the internal argument projected by V and the external argument projected by Voice:

(67) VoiceP
    /   \\  
  NP_{ext} Voice
     /   \  
  Voice_{tr} VP
     \   
      V  NP_{int}

Following the notation in Bruening (2019b), Voice that projects an external argument is notated Voice_{tr}, while a Voice that does not project an external argument (as in unaccusatives) is notated Voice_{un}.

The V can be given a [*N-Voice] feature, which blocks projection of the internal argument. I further suppose that the specification of which head checks the feature can be specified even further, as [*N-Voice.tr], for instance. That is the case here:

---

4This proposal for the involvement of the external-argument-projecting head in the licensing of an implicit internal argument has a precursor in the analysis of the Chamorro antipassive in Chung (2013).
The [*N-Voicetr] feature has to be checked by Voice_{tr}. I assume that this is accomplished by V moving to Voice_{tr}. Voice_{tr} then checks the feature and also determines how the missing argument of its complement V is interpreted. I will simply assume that for this purpose lexical verbs divide into two classes, class 1 and class 2. Each verb is listed lexically as to which class it belongs to. Verbs that do not allow implicit objects belong to neither class and therefore cannot be given a [*N-Voicetr] feature; if they were, there would be no instruction as to how to interpret the missing argument. If the verb belongs to class 1, Voice_{tr} says that the missing argument is interpreted existentially. If the verb belongs to class 2, Voice_{tr} says that the missing argument is interpreted as a pragmatically recovered definite.

4.3 External Arguments

Above I noted that there are no particular lexical verbs that permit an implicit external argument. I propose that this follows in the Voice theory because of the way functional heads work. I suggested above that lexical and functional heads that project arguments behave differently in how those arguments can be allowed to remain unprojected. I propose that features like [*N] are only given to lexical heads. Functional heads cannot be given these features. Instead, there is simply an inventory of functional heads that either project an argument or not. Voice_{tr} has an argument and projects it, while Voice_{un} does not have an argument and projects no argument. There may also be a middle Voice, Voice_{mid}, that has a semantic argument but does not project it. This gives rise to middle voice, with an implicit external argument but no passive morphology:

(69) a. Politicians bribe easily.
    b. Klingon poetry does not translate well.

As for the passive, it is effected by a functional head, Pass, which forces its complement to not project its argument. That is, Pass specifically selects a projection of Voice_{tr} that has not yet projected its NP argument (Bruening 2013):
Summarizing, functional heads like Voice cannot be given [*N] features; there is simply an inventory of Voice heads that either must or must not project an argument, or a higher functional head like Pass can force an argument to remain unprojected. This has the result that no particular lexical verb can permit an implicit external argument.

4.4 Unaccusatives versus Prepositional Passives

We can now also explain why a verb like eat that allows an implicit object is well-formed in the prepositional passive (where there is another NP to undergo movement), while an unaccusative is not allowed, even when there is another NP to move to subject position:

(71) a. This table has never been eaten on.
   b. * The crowd was waving in.

The verb eat can be given a [*N-Voice.tr] feature that must be checked by Voice\(_{tr}\). As outlined in the previous subsection, the passive is a head Pass that attaches outside of Voice\(_{tr}\) and forces its argument to be unprojected:

\[
\begin{array}{c}
\text{PassP} \\
\text{Pass} \quad \text{VoiceP} \\
\text{Voice}_{tr} \quad \text{VP} \\
\quad \text{V[(*N-Voice.tr]} \\
\quad \text{eat}_{class1}
\end{array}
\]

In this structure, the [*N-Voice.tr] feature on V can be checked by Voice\(_{tr}\). So long as there is another NP to move to Spec-PassP (and on to Spec-TP in this case), the structure will be well-formed.

The verb wave can also be given a [*N-Voice.tr] feature, and it will then not project its internal argument. However, this feature can only be checked by Voice\(_{tr}\), not Voice\(_{un}\). I assume that there is no [*N-Voice.un] feature (in English, at least). This has the result that the direct object can be dropped in the transitive (They are waving (their hands)), but never in the unaccusative, even if there is another NP to move to Spec-Voice\(_{un}\) (and on to Spec-TP), as in (71b).

4.5 Nominalizations and Locality

Above it was noted that nominalizations license implicit arguments, even when the corresponding verb does not:

(73) Reporter: Are the refugees really not going to be allowed to stay?
   Government Spokesperson:
   a. * We plan to relocate, and that is in everyone’s best interests.
   b. The relocation currently being planned is in everyone’s best interests.
Such implicit arguments are uniformly interpreted as pragmatically recoverable definites.

This is also true of unaccusatives. Above we saw that the internal argument of an unaccusative can never be implicit. It can in a nominalization:

(74)  a. The constant heaving (of the ground) was making me nauseous.
      b. The constant rolling was wearing me out.

This raises an issue of locality. As noted in [Bruening (2013)], many nominalizations permit a range of things that are associated with the Voice projection (e.g., instrumentals, agent-oriented comitatives, etc.), and so they must embed at least a VoiceP. A possible structure for relocation (with an overt object) is something like the following, where N is a head that turns a VoiceP into a noun. In this case we might identify it as the suffix -tion:

(75)  NP
       Det
       the
       N
       N
       -tion
       VoiceP
       Voice
       VP
       relocate
       VP
       NP
       of the refugees

I assume that the N head can suppress the external argument of Voice\textsubscript{tr} just like Pass can; this permits the external argument to also be implicit, just like in a passive (see more on this below).

The problem here is that relocate does not normally permit an implicit object. It has to be the N head that licenses any implicit object, not Voice\textsubscript{tr}, but the N head is separated from V by Voice\textsubscript{tr}.

Above I suggested that the [*N] feature is checked by head movement. Since the nominalizing suffix appears on the V, we can assume that the V moves through Voice\textsubscript{tr} to N. This puts the V into the required configuration with N for it to check the [*N] feature. I also suggest, however, that there is an additional locality requirement besides head movement. I propose that it is crucial that in a nominalization, it is N that case-licenses the object. This is evident from case changing from accusative to genitive (marked with of in English). I propose that a [*N] feature that suppresses an argument must be checked by the head that would have case-licensed that argument or by a head that it c-commands.

This means that in the structure above, a [*N] feature on V could be checked either by Voice\textsubscript{tr} or by N, but not by any higher head. The N head, if it is what checks the [*N] feature, uniformly yields a definite interpretation, as we have seen. However, note that if the verb stem itself allows an indefinite interpretation, that interpretation can be preserved in a nominalization:

(76)  a. Stealing is bad. (=stealing anything)
      b. Eating before swimming is a bad idea. (=eating anything)
In contrast, verbs that have only a definite interpretation for an implicit argument preserve that definite interpretation in a nominalization:

(77)  
   a. Noticing and saying something would be nice. (pragmatically recoverable only)
   b. Calling once in a while would be nice. (pragmatically recoverable only)

This means that N only checks the [*N] feature on V if Voice\textsubscript{tr} does not. *Stealing versus relocation* would have the following representations:

(78)

\[
\begin{array}{cccc}
\text{NP} & \text{VoiceP} & \text{VP} & \text{V} \\
\text{N} & \text{Voice}_{\text{tr}} & \text{V}_{[*N-Voice.tr]} & \text{steal}_{\text{class1}} \\
\text{-ing} & \text{VP} & \text{V}_{[*N-N]} & \text{relocate} \\
\end{array}
\]

The V *steal* can be given a [*N-Voice.tr*] feature which is checked when V moves to (and through) Voice\textsubscript{tr}. Voice\textsubscript{tr} determines that the implicit argument is interpreted as an indefinite, since *steal* belongs to class 1. In contrast, *relocate* belongs neither to class 1 nor to class 2. It cannot be given a [*N-Voice.tr*] feature, or there will be no way to interpret the missing argument. However, it can be given a [*N-N*] feature, which has to be checked by the N head. Since the N head is what would case-license the argument if it were present, this is permitted. V moves through Voice\textsubscript{tr} to N, and the [*N-N*] feature is checked. N uniformly imposes a definite interpretation on the missing argument.

As for the implicit external argument, it also often seems to be interpreted as definite (Bruening 2013: 19–20). As stated above, the N head, like Pass, suppresses the external argument of Voice\textsubscript{tr} (Bruening 2013). We now just have to add that it is also like Pass in determining how the suppressed argument is interpreted. Pass says that it is an existential. N instead seems to determine a definite interpretation.

In the following sections, the locality restriction on the checking of the [*N*] feature will play a crucial role. This feature must be checked within the domain of the head that would have case-licensed the argument if it had been projected.

### 4.6 Double Object Constructions: Verbs of the Bake Class

We can now explain why verbs that are simple transitives but can have an argument added to appear in the double object construction do not allow their argument to be implicit when they do. Recall that these were verbs like *bake*:

(79)  
   a. We’re baking them a cake.
   b. We’re baking right now.
   c. * We’re baking them right now. (where ‘them’ is intended recipient)
Since bake can have an implicit object in the transitive, it must be able to have a [*N-Voice.tr] feature added to it. This feature will then be checked by Voice\textsubscript{tr}. Bake is also in class 1, so Voice\textsubscript{tr} will interpret the missing argument as indefinite.

What goes wrong in the double object construction is that the Appl projection intervenes between V and Voice\textsubscript{tr}:

\begin{equation}
(80) \quad * \begin{array}{c}
\text{VoiceP} \\
\text{NP} \\
\text{we} \\
\text{ApplP} \\
\text{them} \\
\text{VP} \\
V\text{\textsuperscript{[\textast N-Voice.tr]}} \\
bake
\end{array}
\end{equation}

As stated above, the [*N-Voice.tr] feature must be checked within the domain of the head that would have case-licensed the NP had it been projected. In the double object construction, it is Appl that case licenses the complement of V. This means that the [*N] feature on V has to be checked either by Appl or a head that is c-commanded by Appl. However, the [*N] feature on this class of verbs is specified as having to be checked by Voice\textsubscript{tr}. Such checking would violate the locality restriction, and so the derivation crashes.

4.7 Verbs that Allow Implicit Direct Objects in DOC or PP Frame

There are verbs that allow implicit second arguments in the double object construction, as we have seen. Given the locality restriction, this must mean that there is a [*N-Appl] feature that can be added to a verb. This feature will then be checked by Appl, resulting in examples like the following:

\begin{enumerate}
\item[(81)] a. She is going to serve the guests now, but I don’t know what.
\item[(81)] b. A: I have bad news. B: Tell me.
\end{enumerate}

In (81a), the missing second object is interpreted as an indefinite (and then licenses sluicing), while the missing second object in (81b) is interpreted as definite. This means that Appl must be like Voice and can assign two different interpretations to the missing object of its complement, according to what class that complement V belongs to.

The representations of these sentences will be the following (the VoiceP only):
In both cases, the [*N-Appl] feature will be checked off by Appl, which is the head that would have case-licensed the NP if it had been projected. This is allowed by the locality restriction on the checking of [*N] features. The missing argument of a class 1 verb will be interpreted as indefinite, while the missing argument of a class 2 verb will be interpreted as a pragmatically recoverable definite.

There are also verbs that allow the direct object to be missing in the PP frame:

(84) a. She wouldn’t pass to me.
    b. She wrote to me.

The missing argument of *pass* seems to be definite, since it does not license sluicing: *She passed to me. Oh? #What kind of ball?* In contrast, the missing argument of *write* seems to be indefinite: *She wrote to me. Oh? What kind of letter?*

In the current analysis, the PP frame lacks Appl. Both the NP and the PP are projected by the V. If the V is given a [*N] feature, we have the following representations:
The [*N-Voice.tr] feature can be checked by Voice\textsubscript{tr}, since it is the head that would have case-licensed the NP. Class 1 verbs are again interpreted as having an indefinite implicit object, and class 2 verbs are interpreted as having a definite implicit object.

This means that verbs can be given either a [*N-Voice.tr] feature, or a [*N-Appl] feature. Notice that there do not appear to be any verbs that can have either. As we saw before, some verbs only license an implicit direct object in the double object construction, while other verbs only license an implicit direct object in the PP frame. There are no verbs that can do both (if write without to really does have a to that is just not pronounced). It therefore appears that individual verbs have to be specified as being compatible with either [*N-Voice.tr] or [*N-Appl]. A verb that can be given a [*N-Voice.tr] feature cannot instead be given a [*N-Appl] feature, and vice versa. Verbs like bake from the previous subsection can then never be given a [*N-Appl] feature instead of the [*N-Voice.tr] feature, and they will therefore never license a missing direct object when they are used in the double object construction.

### 4.8 Implicit PPs

Verbs can also allow implicit PPs, as we saw in section\cite{section2} Most of them are interpreted as indefinite:

(86) a. They awarded a prize, but we’re not sure who to.
    b. The secretary forwarded that embarrassing email, but I’m not sure who to.
    c. That person is saving a seat, but I’m not sure for who.

The verb give, at least, has a definite implicit PP \cite{Fillmore1986}:

(87) a. A: Why does Samantha look so smug? B: #She just gave $100.
    b. A: Did you donate to the koala chlamydia ward? B: Yes, I gave $5.
    c. # She gave $5, but we don’t know to which charity.

Analogously to the [*N] feature, I propose that a verb can have a [*P] feature that will block projection of a PP argument. In every case here, this feature will be checked by Voice\textsubscript{tr}, so the feature is [*P-Voice.tr]:
Once again there are two classes of verbs, call them now class 3 and class 4. Voice specifies that the missing PP argument of a class 3 verb is interpreted as an indefinite, while the missing PP argument of a class 4 verb is interpreted as a definite.

As for the locality restriction, it was previously defined according to the head that case-licenses the argument that would have been projected. In this case, PPs do not need case licensing. I therefore suggest amending the locality restriction to say that the head X that checks a [*N] or [*P] feature on a head Y must be within the domain of the head that would case-license any NP argument of Y. This means that a [*P] feature on V in the cases above must be checked within the domain of Voice, since it is Voice that case-licenses NP arguments of V. If there is an Appl projection, a [*N] or [*P] feature on V must be checked by Appl, since it is the head that case-licenses any NP arguments of V.

### 4.9 Implicit Arguments of Appl

We come now to implicit first objects of the double object construction. Looking only at verbs that do not allow the PP frame, we found two patterns that need explaining: First, sluicing with an implicit first object is simply unacceptable; and second, implicit first objects are never indefinite.

Let me begin by ruling out a possible analysis. This would say that when the first object is missing, ApplP is missing altogether. The verb would be being used as a simple transitive:

(89) VoiceP
    NP Voice
    they Voice
    charge a lot

This proposal would explain why sluicing is never allowed: the sluiced clause would have to have ApplP in it (because the wh-phrase originates in Spec-ApplP), but the antecedent clause would lack ApplP, and ellipsis would then not be licensed because the clauses are not sufficiently identical (see below).
The problem with this is that it has no way of specifying that the missing argument must be definite. As we saw above, alternating verbs can appear in a structure essentially like that in (89), with their PP suppressed by a [*P] feature, but the missing PPs are usually interpreted as indefinite and sometimes as definite. On this analysis, it would be a complete coincidence that the missing argument happens to be definite with every verb that cannot appear in the PP frame.

I will therefore pursue a different analysis. I propose that there is a special version of the Appl head that is like Voice$_{un}$ and Voice$_{mid}$ in not projecting an argument in its specifier. It is more like Voice$_{mid}$ in that it has a semantic argument, but does not project it (Voice$_{un}$ lacks an argument altogether). This special Appl has the same semantics as the regular Appl, except that its unprojected argument is interpreted as a definite. Let us call this Appl “Appl$_{def}$.” Appl$_{def}$ selects only certain verbs as its complement (charge, permit, forgive, . . .), yielding representations like the following:

(90)  

\[ \begin{array}{c}
\text{Voice} \\
\text{the warden} \\
\text{Voice} \\
\text{Appl} \\
\text{Appl$_{def}$} \\
\text{VP} \\
\text{permit} \\
\text{NP} \\
\text{one phone call} \\
\end{array} \]

No [*N] feature needs to be checked off here; this is simply a different functional item with a particular interpretation for its semantic argument (which is not projected).

This proposal can account for the unacceptability of sluicing as a failure of ellipsis licensing. As we saw above, mismatching argument structures are not allowed in sluicing:

(91)  

a. * She gave someone a car, but we’re not sure to who.  
    b. * Someone hacked my computer, but I’m not sure by who.  
    c. * They embroidered something with peace signs, but I don’t know what on. (Merchant 2013: 100, (43a))

Importantly, this is also true of unaccusative-transitive pairs. An unaccusative does not license sluicing of a transitive:

(92)  

a. The door opened, *but we’re not sure who. (‘who opened the door’)  
    b. The victim drowned. *Let’s find out who. (‘who drowned the victim’)

A transitive does not license sluicing of an unaccusative, although we have to look at a case-marking language like Greek to see this clearly (but note that the English translation cannot mean this, either):
(93) Greek [Merchant 2013: 97, (31)]
   a. * Eklisan ena ðromo, alla ðen ksero pjos.
   closed.3PL a.Acc road.Acc but not know.1SG which.Nom
   ‘They closed a road, but I don’t know which one (closed).’
   b. Eklisan ena ðromo, alla ðen ksero pjon.
   closed.3PL a.Acc road.Acc but not know.1SG which.Acc
   ‘They closed a road, but I don’t know which one (they closed).’

This tells us that Voice_{tr} and Voice_{un} are not sufficiently identical to license ellipsis. Neither are Voice_{mid} and Voice_{tr}:

(94) a. We know politicians bribe easily, *so let’s find out which lobbyists. (*which lobbyists bribe politicians (easily)*)
   b. A: Klingon poetry translates well. B: *Which translators? (*which translators translate Klingon poetry (well)*)

Much recent work has argued for at least some strict syntactic identity conditions on sluicing (e.g., Chung 2013 [Merchant 2013]). I will assume here that at least all functional heads have to match, including Voice and Appl. Importantly, different versions of Voice do not match, and neither do different versions of Appl.

Consider a case of sluicing with an implicit first object:

(95) The warden will permit one last conjugal visit, *but he didn’t say who.

In the analysis proposed here, the antecedent clause in (95) has a special version of Appl, Appl_{def}, which does not project a specifier (96):

(96) VoiceP
      /-
     /  
    NP Voice
      /-
     /  
    the warden Voice_{tr} ApplP
      /-
     /  
    Appl_{def} VP
      /-
     /  
    V permit
      /-
     /  
    NP one last conjugal visit

On the other hand, the sluiced clause must have regular Appl, projecting the wh-phrase in its specifier, as in (97):

(97)
(97) VoiceP
    NP the warden
    Voice
    Voice
    ApplP
    NP who
    Appl
    VP
    V permit
    NP one last conjugal visit

The sluiced clause therefore does not match the antecedent clause, and ellipsis (following wh-movement) is not licensed. This accounts for why the sluiced clause in (95) is unacceptable: ellipsis is not licensed. Note that full pronunciation is acceptable:

(98) The warden will permit one last conjugal visit, but he didn’t say who he will permit one last conjugal visit.

This is slightly odd, since the missing argument of *permit* is supposed to be pragmatically recoverable. There is nothing odd if the pragmatically identifiable first object is a group, and then the wh-phrase ranges over that group (see more on this below). Since complete pronunciation is grammatical (if pragmatically odd), it is clear that the problem is specifically the ellipsis in sluicing. The current analysis accounts for this in the same way it accounts for the failure of sluicing with an unaccusative-transitive pair or a middle-transitive pair (92–94).

As can be seen, this analysis accounts for both of the facts regarding implicit first objects. It explains the unacceptability of sluicing as a failure of ellipsis licensing. As for the obligatory definite interpretation, this is essentially stipulated. The analysis simply posits a special version of Appl, Appl_def, that does not project its specifier and instead interprets it as a pragmatically recoverable definite. While the definite interpretation is simply stipulated, this is probably unavoidable; different functional heads simply seem to differ in this respect. N, the nominalizing head, also yielded a definite interpretation, while Pass imposes an indefinite one.

4.10 More on the Semantics of Implicit First Objects

The proposed analysis has now accounted for all of the facts uncovered in section 2. However, there is more to say about implicit first objects. So far, I have grouped them all together as pragmatically recoverable definites. It appears that they actually fall into two groups. First, there is a group that allow an interpretation of the implicit first object as the addressee. With this interpretation, binomial *each* is licensed in the direct object, ranging over the implicit addressees:
This place will charge $20 each.

The warden will permit one phone call each.

The police will allow one phone call each.

The pope will forgive one sin each.

The verbs that permit this are charge, permit, allow, forgive. In contrast, tip, deny, strike, and envy do not allow this:

We had two waiters. *I tipped $5 each.

* The boss will deny one request each (before permitting anything).

a. * The black knight will strike one blow each.

b. * He envies one possession each.

In section 2 we saw that strike and envy require a pragmatically identifiable (familiar) definite:

A: Why is this sword dented? B: #The black knight managed to strike a heavy blow.

A: Why is the white knight bleeding so badly? B: The black knight managed to strike a heavy blow.

A: What’s up with Bill? B: #He envies the big house and expensive car.

A: Why does Bill dislike Monty? B: He envies the big house and expensive car.

In contrast, tip and deny permit a uniquely identifiable but not necessarily familiar definite:

You’re supposed to tip at least 20% now.

≈ You’re supposed to tip the waiter/your waiter at least 20% now.

Courts in other countries often deny due process.

≈ Courts in other countries often deny their charges due process.

The implicit first object of tip is interpreted as a unique definite, something like ‘the unique individual (singular or plural) who serves the subject in the given context.’ The same is true for deny, where it is plausibly something like ‘the unique individual who the subject has power over in the given context’. Neither of these needs to be a familiar individual established in the discourse, instead they can be identified from the context and knowledge of the world. (Note that this is not the same as an indefinite; a paraphrase with someone is not appropriate, as was shown above.) In contrast, the missing first object with strike and envy does need to be familiar in the discourse.

What these four verbs have in common is that the missing argument is definite; definiteness encompasses both familiarity and uniqueness (in English). The verbs that permit binomial each, in contrast, permit a more specific interpretation, where the missing argument is specifically the addressee.

Some other verbs that are not obligatorily double object verbs also have the property of permitting an implicit you. Binomial each can range over this implicit you with these verbs as well:

They will provide one meal each.

The teacher will assign one task each.
This means that the Appl head that permits this addressee interpretation is not limited to selecting obligatorily double object verbs. It selects a list of verbs, some of which cannot appear in the PP frame and some of which can.

I will continue to treat this *you* interpretation as an implicit, non-syntactic argument of a special Appl head. One reason to do this is that, while this implicit *you* licenses binomial *each*, it does not license other things that require a syntactically present NP. For instance, the null *you* in an imperative easily licenses anaphors, but the implicit first object *you* does not:

(106) a. Hug each other!
    b. She will permit you each other.
    c. * She will permit each other.

(107) a. Assign yourself to the team!
    b. I will assign you yourself.
    c. * I will assign yourself.

This means that it is not the case that implicit first object *you* is a null pronoun; it is truly an implicit argument (that is, not syntactically present).

Note also that this special addressee interpretation still does not license sluicing, even if we specify the wh-phrase to range over addressees:

(108) a. This place will charge $20 (each), *but it’s not clear which of you.
    b. The warden will permit one phone call (each), *but it’s not clear which of you.
    c. The pope will forgive one sin (each), *but it’s not clear which of you.
    d. They will provide one meal (each), *but it’s not clear which of you.
    e. The teacher will assign one task (each), *but it’s not clear which of you.
    f. They will allow one phone call (each), *but it’s not clear which of you.

Again, sluicing simply seems to be ungrammatical, not pragmatically infelicitous. In this case, full pronunciation is much better, and even quite felicitous:

(109) The warden will permit one last conjugal visit, but he didn’t say which of you he will permit one last conjugal visit.

The problem again is the failure of ellipsis licensing. The Appl$_{def}$ that permits the addressee interpretation does not match the regular Appl that projects a specifier.

I will continue to propose the same analysis. There is an Appl$_{def}$ that does not project its specifier. It selects a specific (listed) set of verbs. With some of these verbs, it requires that its unprojected argument be a pragmatically familiar definite (*strike, envy*). With others, it requires that it be a pragmatically identifiable (unique) definite (*tip, deny*). With yet others, including two alternating verbs, it permits an interpretation where the unprojected argument is the addressee. Note, however, that this interpretation is not obligatory; these verbs also permit the implicit first object to be an individual other than the addressee. We saw that for instance with bound readings with quantifiers:

(110) a. No traveler should expect tourist destinations to charge (them) very little.
b. No man on death row expects the warden to permit (him) one last conjugal visit.
c. No teenage catholic actually believes that God won’t forgive (him/her/them) pre-marital sex.

(111) a. No passenger on a cruise ship should be shocked when they provide (him/her/them) less than three meals a day.
b. No student should be shocked when the teacher assigns (him/her/them) a book to read.

I take this to show that the special addressee interpretation is one that the same head, Appl_{def}, makes available to certain verbs. It also allows other definite interpretations, however.

4.11 Passivization with an Implicit First Object

One thing to note is that the ability to passive these verbs does not correlate with their semantics. First, all of the verbs that permit an addressee interpretation permit passivization with promotion of the direct object when the first object is implicit:

(112) implicit addressee
   a. A fee will be charged.
   b. A single phone call will be permitted.
   c. A single phone call will be allowed.
   d. Sins will be forgiven in the evening.
   e. Meals will be provided.
   f. Sleeping quarters will be assigned.

In contrast, strike (familiar) and deny (unique) permit promotion of the direct object, but envy and tip do not:

(113) familiar definite
   a. A heavy blow was struck.
   b. * The expensive car is envied.

(114) unique definite
   a. * Twenty dollars was tipped.
   b. The request was denied.

I have no explanation for why envy and tip do not permit promotion of the direct object. All other verbs do, so the only condition on promotion in the passive seems to be that no other NP is crossed by that promotion. Since Appl_{def}’s specifier is not projected, there is no other NP in the way in the passive when the first object is implicit, and the lowest object can move to Spec-PassP and on to Spec-TP.
4.12 Summary

This section has proposed an analysis of implicit arguments and used it to account for all of the facts from section 2. Implicit first objects are always definite because they are projected by a special head, Appl\textsubscript{def}, that requires a definite interpretation. They do not permit sluicing because Appl\textsubscript{def} is not identical to the regular Appl that projects an argument, and so ellipsis is not licensed. Verbs permit an implicit direct object either in the double object construction or the PP frame, but not both, because Vs have to be specified as being compatible with either a [*N-Appl] feature or a [*N-Voice.tr] feature. No verb is compatible with both. Verbs that are base transitives are only compatible with [*N-Voice.tr], so they can never have an implicit argument in the double object construction.

5 Other Analyses of Double Object Constructions

As stated at the beginning of this paper, there is no shortage of analyses of the double object construction. In this section I go through them, and argue that all of them are ill-equipped to deal with the facts discussed here. Only the ApplP analysis has the right character. Since there are so many analyses, I have to group many of them together according to their important characteristics, and discuss classes of analyses rather than individual analyses in detail. I believe the conclusions here are valid despite this level of abstraction.

5.1 Null P (Pesetsky 1995)

I begin with the null preposition analysis of Pesetsky (1995). Recall that Pesetsky concluded that particular lexical verbs must select both NP objects in the double object construction. Particular lexical verbs must also select both the NP and the PP in the PP variant. Pesetsky therefore proposed analogous structures for the PP and double object frames, but with the order of the two NPs reversed. There is a null preposition, G, in the double object construction, corresponding to the overt to of the PP frame (based on Pesetsky 1995: 197–198, (511–512)):

\begin{equation}
\begin{array}{c}
\text{V'} \\
\text{V} \\
\text{give} \\
\text{PP} \\
\text{DP} \\
\text{goal} \\
\end{array}
\begin{array}{c}
\text{V'} \\
\text{V} \\
\text{give} \\
\text{PP} \\
\text{DP} \\
\text{theme} \\
\text{P} \\
\end{array}
\begin{array}{c}
\text{G} \\
\text{theme} \\
\text{P'} \\
\text{to} \\
\text{goal} \\
\end{array}
\end{equation}

In both frames, the verb selects the second NP via the mediation of the preposition. For Pesetsky, then, both NPs are selected by the lexical verb (the second one through the mediation of a P). (To get c-command right, Pesetsky locates the complement of the verb in the specifier of the PP.)

It is hard to see how this analysis could account for the asymmetries we have seen here. Notice that the goal of the double object construction is structurally identical to the theme of the to-dative in this analysis. But all of the data discussed in this paper indicates that they behave very
differently: an implicit goal in the double object construction can only be definite and does not license sluicing, while an implicit theme in the PP frame can be definite or indefinite and does license sluicing.

Notice also that the analysis proposed here with a [*N] feature that licenses an implicit argument would not help to account for the facts when combined with this analysis. A [*N] feature has to be able to suppress Spec-PP in the PP frame (the theme), but Spec-PP in the double object frame is completely identical. There is no difference between the two structures above that could result in the [*N] feature having different effects.

Now consider the sluicing asymmetry further. Both frames allow the lower NP in Pesetsky’s structures to be implicit and license sluicing, but only the one with overt to permits the higher NP to be implicit and license sluicing:

(116) a. She is going to serve the guests now, but I don’t know what.
    b. They awarded a prize, but we’re not sure who to.

(117) a. That guy once tipped *(a waitress) almost 300%, but I can’t remember which waitress.
    b. She will sing to us, but we don’t know what yet.

Since (116a) is grammatical, there is no conflict between null G and sluicing. One could also not say that G does not permit an implicit argument, because its argument is the second NP, not the first. One would have to say that the specifier of G cannot be implicit, but this is not correct either: the first clause of (117a) is grammatical without the first object, it is only sluicing that is not allowed. It would also not be possible to say that the structures of the antecedent clause and the sluiced clause would not match, because one would then also expect sluicing to fail in the completely analogous PP frame.

I conclude that this analysis cannot account for the patterns of implicit arguments discussed here. Pesetsky’s theory also stumbles on the patterns of conventionalized expressions discussed by Bruening (2010, 2019a). Briefly, there is again an asymmetry, with the first object of the double object construction behaving unlike any of the other arguments. Since Pesetsky’s theory makes the first argument of the double object construction structurally identical to the first argument of the PP frame, it cannot account for this asymmetry.

5.2 Small Clause Analyses

The introduction divided analyses of double object constructions into three groups based on selection: (1) the ApplP analysis treats only the second NP as an argument of the lexical verb; (2) Pesetsky’s (1995) analysis treats both NPs as arguments of the lexical verb; and (3) small clause analyses treat neither NP as an argument of the lexical verb. As we have seen, the ApplP analysis is borne out by the facts, while Pesetsky’s analysis is not. Let us now consider small clause analyses. The small clause analysis appears to have been first proposed by Kayne (1984), Aoun and Li (1989), Johnson (1991), den Dikken (1995), Hornstein (1995), Obi (2002), Pykkänen (2008) all propose versions of a small clause analysis. The most prominent small clause analysis, however, is the HaveP version proposed by Harley (1997) and adopted by numerous others (Harley 2002, 2008, Beck and Johnson 2004, Ramchand 2008, Harley and Jung 2015).
In small clause analyses, the verb combines with a small clause ("SC") that has the first NP as the subject of a predicate that includes the second NP. In the HaveP version, this small clause is headed by an element that indicates possession ("Have"):

(118) Mary gave the car a new engine. [Harley 2008: (53)]

In the HaveP version, the verbal element is an abstract Cause predicate; if there is a lexical verb, it adjoins to this element as a "manner" modifier. In other versions, the lexical verb itself may combine with the small clause.

Small clause analyses are particularly ill-equipped to deal with the facts discussed here. Since neither NP is an argument of the lexical verb, it is hard to see how they could be distinguished as implicit arguments. As we have seen, the particular lexical verb determines whether the second object can be implicit and how it is interpreted when it is, but this was not quite true for the first object. In the small clause theory, the only thing that is an argument of the lexical verb is the small clause itself (and even that is not true in the HaveP theory, the lexical verb is just a manner modifier). It should be noted that verbs that truly do select small clauses never permit implicit arguments, of either the subject or any nominal inside the predicate (note that Have is considered to be of category P):

(119) a. I want [the workers at their desks]!
   b. * I want [at their desks]!
   c. * I want [the workers at]!

(120) a. I consider [him beneath contempt].
   b. * I consider [beneath contempt].
   c. * I consider [him beneath].

(121) a. We can never permit [adults on the playground].
   b. * We can never permit [on the playground].
   c. * We can never permit [adults on].

This is exactly what we would expect, if the lexical verb does not select either of these NPs directly, and only selects the small clause itself. The lexical verb should never be able to determine anything about what is inside the small clause, given the locality of selection. (Note that consider when it
takes only a single NP as object permits that NP to be implicit: *I will consider (the request) and get back to you.*

Notice also that the analysis proposed here, with a [*N*] feature, will not be successful when combined with this analysis. The head of the small clause projects both arguments in the small clause analysis. Giving that head a [*N*] feature should yield symmetrical results. Both NPs should behave identically, since there is nothing in the structure that can distinguish them.

Moreover, recent work in the HaveP theory treats the PP frame very differently (Harley 2008, Harley and Jung 2015). These publications essentially adopt the analysis here for the PP frame, where both the NP and the PP are arguments of the lexical verb. But then this theory predicts incorrectly that the second object of the double object construction should behave unlike them, since it is not an argument of the lexical verb. Alternatively, all four arguments should behave the same, since the NP and PP are arguments of the same head in the PP frame, while the two NPs are both arguments of the same small clause head in the double object construction. However, as we have seen, the second object of the double object construction behaves just like both the NP and the PP in the PP frame. It is only the first object of the double object construction that behaves differently. Small clause theories fail to capture this.

In addition, small clause theories also stumble on the idiom and collocation data discussed in Bruening (2010, 2019a). They also have the wrong semantics and make the wrong predictions for depictive secondary predicates, as Bruening (2018a) shows. All of these phenomena indicate that the second object of the double object construction must be an argument of the lexical verb. This is something that small clause theories deny, which makes them inadequate.

### 5.3 Derivational Analyses

The final class of analysis that I will discuss includes those that posit a derivational relationship between the double object construction and the PP frame. These come in a large variety, and differ in which frame they take to be basic and what structures they posit for both frames. What they all have in common is that they treat the first object of the double object construction as derivationally related to the PP of the PP frame. Proponents of derivational analyses include Larson (1988, 2014, 2017), Baker (1988), Aoun and Li (1993), Ormazabal and Romero (2010), Hallman (2015), and others. To give an example, Larson (2014: 102) proposes that the double object construction has the following structure, where the first object starts as the complement to the verb *give* and then moves to the specifier of a higher vP (which Larson identifies as Appl):\(^5\)

\[^5\]This tree is the slightly simplified version given in Larson (2017: 395, (12b)). It differs from the tree shown in Larson (2014: 102, (177b)) only in that it does not depict details of the analysis like syntactic features and Agree relations.
The PP frame has the same underlying VP, with the goal surfacing in the lower position with a preposition.

The problem with these types of analyses is precisely that they relate the first object of the double object construction to the PP of the PP frame. As we have seen, the two behave very differently. The lexical verb determines whether a PP can be implicit or not and how it is interpreted when it is (the majority are indefinite). This was not true with the first object of a double object construction: they are always definite, and they never permit sluicing. It might be possible for derivational analyses to capture the sluicing fact, since they often liken the proposed derivation to the passive. As we saw, active-passive pairs do not license sluicing. Nor do double-object/PP pairs. This type of analysis might say that the PP cannot be transformed into the first object of the double object construction if it is implicit; this would block sluicing as a banned instance of the PP frame being the antecedent for the double object construction:

(123) That guy once tipped almost 300%, *but I can’t remember which waitress.

In this analysis, the first clause in (123) would not have movement to Appl, but the second would, and ellipsis would not be licensed.

I rejected an analysis like this above because it cannot account for why an implicit first object is always definite. A derivational analysis would have to say that a PP that would have been transformed into a first object is always definite when implicit, but this would be mysterious because the same type of PP when left implicit as a PP is usually indefinite. This is a real problem for derivational analyses, because derivations usually do not affect aspects of interpretation. That is typically the whole point of positing a derivational analysis: derivation is proposed because one believes that the semantic interpretation is identical (it is in passives). Implicit arguments show us that the interpretation of the first NP in the double object construction is not identical to the interpretation of the PP in the PP frame. (Note that an implicit indefinite direct object is still an indefinite in the passive, as we saw above: *This table has never been eaten on.*

Derivational analyses also stumble on the idiom and collocation data (Bruening 2010, 2019a).
For additional reasons to reject analyses that derive double object constructions from PP frames, see Bruening (2018b).

6 Conclusion

The study of implicit arguments undertaken here reveals that the first object of the double object construction behaves unlike any other argument. The second object behaves like a selected argument of the lexical verb, as do both the NP and the PP in the PP frame. Particular lexical verbs determine whether the first object can be dropped, but they do not determine how it is interpreted when it is. Implicit first objects can also never license sluicing, while all other implicit arguments can. I argued in this paper that the ApplP analysis of double object constructions can account for this pattern, while no other analysis of double object constructions can. This adds to the growing number of phenomena that favor the ApplP analysis over all others (see Bruening 2010, 2019a, 2018a). Only the ApplP analysis treats the second object as the selected argument of the verb, while the first object is introduced by something else (in combination with the lexical verb). All empirical phenomena indicate that this is correct.

I also proposed a novel analysis of how implicit arguments are licensed and interpreted. In this analysis, functional heads play a crucial role. It is not simply lexical verbs that license implicit arguments and determine how they are interpreted.

Bibliography


