April 2016
To appear in *Linguistic Inquiry*

Stripping and topless complements*

Susi Wurmbrand, University of Connecticut

Abstract:

This article shows that stripping, the elision of declarative TPs, is not only possible in coordinate structures, but also in embedded clauses, however, only when the complementizer is absent. This *Embedded Stripping Generalization* is not predicted by earlier accounts of stripping, but it falls out from a certain combination of independently available assumptions. Specifically, I propose a zero spell-out view of ellipsis in a dynamic (or contextual) phasehood approach, which, together with the lack of a CP layer in *that*-less embedded clauses, derives this generalization in languages like English. I then briefly consider stripping in other languages and suggest that the analysis also has the flexibility to accommodate cross-linguistic differences in the distribution of stripping.

1. A restriction on stripping

The term stripping was coined by Hankamer and Sag (1976: 409): "Stripping is a rule that deletes everything in a clause under identity with corresponding parts of a preceding clause

* This paper originated as a squib and I thank all the reviewers and editors for their useful comments, which eventually led to the current paper. I am also grateful for comments and feedback from Jonathan Bobaljik, Željko Bošković, Kyle Johnson, Sabine Laszakovits, Winfried Lechner, Jason Merchant, Troy Messick, David Pesetsky, Luis Vicente, Julio Villa-García, Masaya Yoshida, and the UConn students and auditors of my Spring seminars.

except for one constituent (and sometimes a clause initial adverb or negative)." Constructions such as (1) illustrate the phenomenon (see also Lobeck 1995, Merchant 2003). Merchant (2003) provides several arguments against a structure involving movement of the remnant (the non-elided stranded material) from a conjoined phrase. Following these observations, I assume that stripping involves a structure with clausal conjunction (to be specified below) and clausal ellipsis.[1]

(1) a. *Jane gave presents to John, but not to Geoff.* [Lobeck 1995: 27, (66a)]
b. *Jane loves to study rocks, and geography too.* [Lobeck 1995: 27, (66b)]
c. *Abby speaks passable Dutch, and BEN, too.* [Merchant 2003: (1)]
d. *Abby speaks passable Dutch, AND Ben.* [Merchant 2003: (2)]
e. *Abby can speak passable Dutch, and Ben, too.*

Stripping is claimed to be restricted to coordinate structures and impossible in subordinate clauses as in (2a-c). Corresponding VP-ellipsis constructions, on the other hand, are possible in embedded contexts (cf. (2d,e).

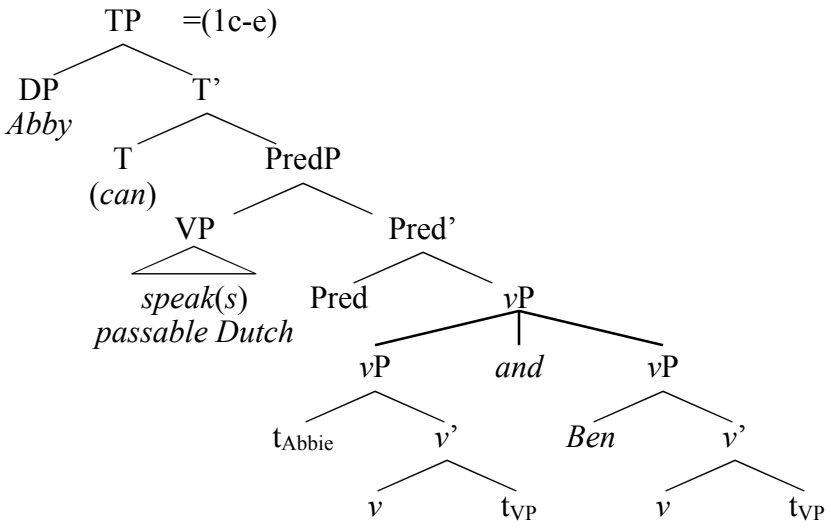
(2) a. **Jane loves to study rocks, and John says that geography too.*
[Lobeck 1995: 27, (72b)]
b. **Abby wanted to take Dutch, because Ben.* [Merchant 2003: (20)]
c. **Abby claimed Ben would ask her out, but she didn't think that Bill (too).* "(21)
d. *Abby wanted to take Dutch because Ben does.*
e. *Abby claimed Ben would ask her out, but she didn't think that Bill would.*

There are two proposals for how this restriction can be accounted for (a third approach will

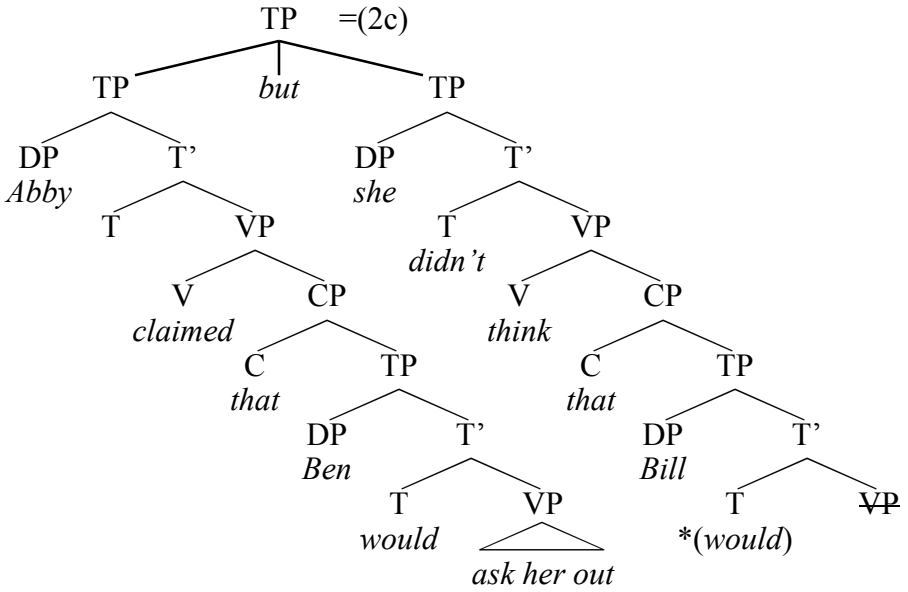
[1] Thanks to Jonathan Bobaljik, Jon Gajewski, Jason Merchant, Troy Messick, and Peter Smith for providing English examples.

be discussed in section 3 after I present my analysis). Following Johnson (2009), who discusses a similar restriction in gapping, stripping could involve *v*P coordination as in (3a), with the shared VP undergoing ellipsis or across-the-board movement. Since conjunction is one clause up in (3b) (=(2c)), a low *v*P coordination structure is not possible, and therefore, the modal *would* and the lowest VP cannot be shared by the two conjuncts (i.e., across-the-board movement of the VP above the conjunction is not possible). Only a VP-ellipsis configuration in which the embedded modal is present in the second conjunct can be derived.

(3) a.

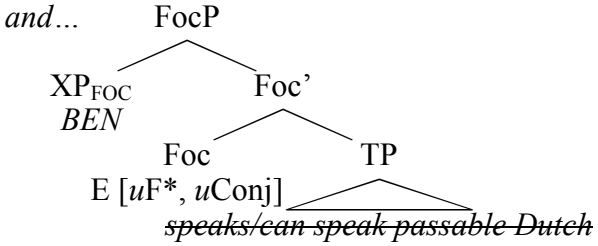


b.



A different approach would be, following Merchant (2003), to encode the stripping restriction as part of the lexical properties of the feature licensing ellipsis as in (4). Merchant suggests that the head selecting the TP in a stripping context is equipped with an ellipsis feature ($E_{stripping}$) which licenses its complement to be elided. $E_{stripping}$ involves a strong focus feature which attracts a focus element to its specifier. Furthermore, $E_{stripping}$ involves an uninterpretable feature *u*Conj which needs to be checked by a higher conjunction. The restriction that stripping is only possible in conjunctions thus comes from the feature licensing ellipsis.

(4)



=(1c-e)

While these two approaches capture the basic stripping data in (1) and (2), they make the

wrong prediction for embedding structures without complementizers. As shown in (5), there is a sharp contrast between Merchant's and Lobeck's embedding examples, repeated as (5a) and (5c), respectively, in which the complementizer is present, and the corresponding examples in (5b) and (5d) where the complementizer is omitted. Further examples are given in (6) and (7). The examples in (6) are from a corpus search conducted on COCA and have been confirmed with native speakers. The contexts of these examples clearly point to embedding structures rather than quotes, since *you* is interpreted indexically. The same is the case in (7), where *this year* refers to 2013. According to native speakers, both (6) and (7) are ungrammatical if *that* is added.

(5) a. **Abby claimed* (*that*) *Ben would ask her out, but she didn't think that Bill (too).*
b. *Abby claimed* (*that*) *Ben would ask her out, but she didn't think Bill (too).*[2]
c. **Jane loves to study rocks, and John says that geography too.*
d. *Jane loves to study rocks, and John says geography too.*

(6) a. [*W*]*hen we asked her … who her favorite new country star is, she said you.*
b. *When I get asked who's the biggest diva on the set, I say you.*

[2] The example in (5b) also shows that a parenthetical analysis of the higher clause (*she didn't think*) cannot be maintained. In section 4, I suggest that the coordinator *but* imposes a contrast requirement, which can be met by reversed polarity in the two conjuncts or a contextual contrast arising through the implicature of *too*. In the absence of *too*, negation is thus required in one of the conjuncts. With the right intonation and with stress on BILL, (5b) can be used without *too*, which shows that the contrast requirement of *but* is met by negation in the second conjunct (cf. the impossible **Abby claimed Ben would ask her out, but Bill*). Thus, the embedded clause must be an integral part of the sentence and cannot be parenthetical.

(7) a. *First, they thought it would be done last year, then they thought* (**that*) *THIS year.*

b. *First, they predicted there would be driverless cars in 2000, then they predicted* (**that*) *THIS year.*

The difference between (5a,c) and (5b,d) leads us to the following generalization:

(8) *Embedded Stripping Generalization*:
Stripping of embedded clauses is only possible when the embedded clause lacks a CP.

It is hard to see how the *Embedded Stripping Generalization* can be derived in Johnson's or Merchant's approaches. As in (3b) (=(5a)), conjunction one clause up from the clause with the stripped material in (5b) would prohibit low *v*P coordination and sharing of the embedded VP and IP. The presence or absence of a complementizer would not make any difference here. Similarly in Merchant's approach, the $E_{Stripping}$ feature would need to be licensed by conjunction, which is too far away in (5a), and it would presumably also be too far away in (5b).

In the next section, I introduce an alternative approach to ellipsis, which, together with a particular view of phasehood, provides a unified account of the *Embedded Stripping Generalization* and the facts discussed so far.

2. Accounting for the Embedded Stripping Generalization

2.1 Dynamic phasehood approach

Since the account of ellipsis to be presented is set in a dynamic approach to phasehood

determination, I will first lay out and summarize some of the arguments for this approach to phasehood. Broadly, there are two ways how phases are defined: statically as specific syntactic constructs (typically *v*P and CP) or dynamically as domains that are 'complete' by some linguistic measure. Although Chomsky (1998/2000, 2001) settles for a static definition, a dynamic definition is also considered:

(9) a. Phases are propositional [Chomsky 2000: 107, (19)]
b. Phases are convergent

The main issue for the view that the phasal projections are *v*P and CP is that the static definition in (9a) does not single out only these two projections. One question therefore has been why only *v*P and CP are typically considered to be phases and not, for instance, also TP. In relative clause CPs it is particularly difficult to see in what way CP is propositional but TP is not—semantically, exactly the opposite conclusion would hold. Thus, as Grano and Lasnik (2015: 7) note "this leaves us with a "list problem": the set of phase types has to be stipulated rather than following from something more general". While the split of a clause into two cycles has been widely adopted, the definition in (9a) and specifically the claim that phases are (statically) *v*P and CP have been questioned and other approaches have been pursued. There are two theoretical research areas which have provided insights into how phases are determined: i) the phasal status of syntactic configurations which lack *v*P and CP, and ii) the question of where exactly the boundaries of the two cycles are in cases the *v*P and CP domains involve a richer structure.

As for the first question, a converging view in many works on phases is that the domain which includes the verb, all of its associated arguments, and possibly other selected

entities constitutes a phase. As a result, unaccusative and passive *v*Ps/VPs qualify as phases, despite the absence of an agentive (strong) *v*P, since they are complete thematic domains of the verb (similar to Grimshaw 1991's notion of extended projection). This view is argued for, among others, in Legate (2003), Sauerland (2003), Bobaljik and Wurmbrand (2005), Wurmbrand (2015), and Wurmbrand and Shimamura (To appear) based on evidence from scope, binding, Case assignment, agreement, and restructuring. I only replicate one argument from Sauerland (2003) here. As shown in (10a), raising constructions allow a moved subject to bind a variable in the matrix experiencer and, at the same time, be interpreted in the scope of matrix negation. Assuming that negation does not undergo movement (see Sauerland 2003, among others, for evidence), the *not»every* interpretation requires the subject to occupy an LF position lower than matrix negation but higher than the matrix experiencer. If raising constructions have the phase structure as outlined in (10b), this state of affairs is exactly as expected. Movement across a phase boundary must pass through the phase edge, and any position occupied in the course of the derivation is a possible LF position (all lower positions, though available as reconstruction cites in principle, would not be options in this case since the quantified subject could then not bind into the matrix experiencer).

(10) a. *Every child*$_i$ *doesn't seem to his*$_i$ *father to be smart.* ∀»¬; ¬»∀
'It's not the case for every child that it seems to his father to be smart.'

b. *Every child*$_i$ *doesn't* [$_{v\text{P=PHASE}}$ ✓ *seem to his*$_i$ *father* [* *to be smart*].
[Sauerland 2003: 310, (7)]

The view presented above leads to a definition of phases as in (11) (see also Bošković 2014

for a similar view and further arguments for (11a) for DPs and other syntactic categories).

(11) a. The highest projection of a cyclic domain constitutes a phase.
b. The cyclic domains of a clause are:
i. the extended thematic domain of V
ii. the combined T and C domains

The definition of the lower cyclic domain in (11b.i) has been refined in works that consider a more complex temporal and aspectual domain, and a crucial question is where the phasal boundary lies between an expanded T, aspect, and *v* domain. A concurring conclusion reached in several works is that different types of aspect belong to different syntactic cycles—while perfect groups with the tense/C cycle, progressive is part of the lower clausal cycle, i.e., part of the "*v*P" phase. For instance, Harwood (2015) shows that a range of phenomena, among them existential constructions, idiomatic constructions, VP-fronting, and VP-ellipsis, treat the progressive, but not the perfect as being part of the lower clausal domain. To just give one example, fronting (the same distribution holds in specificational pseudo-clefts) must include the progressive auxiliary as in (12) but must exclude the perfect auxiliary as in (13). Assuming that fronting targets phases, this distribution then indicates that the lower clausal phase includes the progressive but not the perfect.

(12) *If Darth Vader says that Han Solo was being frozen in carbonite, then…*
a. [*being frozen in carbonite*] *he was*.
b. *[*frozen in carbonite*] *he was being*. [Harwood 2015: 550, (63)]

(13) *If Luke says he would have fought hard, then…*
a. [*fought hard*] *he would have*.
b. *[*have fought hard*] *he would*. [Harwood 2015: 550, (65)]

Turning finally to the higher clausal domain, the traditional CP-phase, the dynamic definition of phases in (11) has the result that not only CPs but also CP-less clauses with a TP domain function as phases. This has been argued in detail in Wurmbrand (2013, 2014) and Wurmbrand and Haddad (To appear). Under this view, raising constructions such as (14a), include three phase boundaries that need to be crossed during subject movement to matrix Spec,TP, thus yielding the four subject positions in (14b). In (10), we have already seen some evidence for the stop-over in position ②. Movement to position ③ has been argued for at length in several works, with evidence coming from binding, floating quantifiers, and scope (see Chomsky 1973, Grohmann et al. 2000, Pesetsky and Torrego 2007, Castillo et al. 2009, among others), and the reader is referred to these works for the specific evidence. In this paper, instead, I would like to summarize a different piece of evidence for the four subject positions in a raising configurations as predicted by the dynamic phasehood approach in (14b).

(14) a. *John* [**_v_P=PHASE** *seems* [**TP=PHASE** *to have* [**_v_P=PHASE** *left*]]]

b. [TP ① SUBJ T [**_v_P=PHASE** ② ~~SUBJ~~ [**TP=PHASE** ③ ~~SUBJ~~ [**_v_P=PHASE** ④ ~~SUBJ~~ …]]]]

c. ① = (15a) ② = (15b) ③ = (15d) ④ = (15c)

In Wurmbrand and Haddad (To appear), we show that the four positions in (14b), can be occupied by the subject overtly in a language like Standard Arabic. The examples corresponding to (14c) are given in (15). Positions ①, ②, and ④ are reflected straightforwardly in the word order in (15a-c). Pinning down the subject to position ③ is more complicated

since Arabic is a VSO language and due to the high position of the verb, word order does not directly distinguish between positions ② and ③. However, as shown in (15d), in certain constructions, the subject must occur with accusative, rather than nominative. In Wurmbrand and Haddad (To appear), we propose that case is determined at spell-out, and if the subject is spelled out together with the matrix VP it receives accusative case. Since the subject in position ③ is at the edge of the lower TP phase, it is not spelled-out with the embedded clause but rather together with the matrix VP once the matrix *v*P phase is completed. If the subject occupies position ②, on the other hand, it is spelled out together with the matrix TP, in which case it is realized with nominative case. Thus the case difference between (15b) and (15d) is a reflex of the different positions—② and ③—in (14c).

(15) a. *l-tˤa:liba:t-u* *badaʔna* *jarkudˤna* *fi* *l-malʕab*

the-students.F-NOM started.3.F.PL run.3.F.PL in the-playground

'The female students started to run.'

b. *badaʔat* *l-tˤa:liba:t-u* *faʒʔatan* [*jarkudˤna* *fi l-malʕab*]

started.3.F.SG the-students.F-NOM suddenly [run.3.F.PL in the-playground]

'The female students started to run.'

c. *badaʔat* [*tarkudˤu* *l-tˤa:liba:t-u* *fi* *l-malʕab*]

started.3.F.SG [run.3.F.SG the-students.F-NOM in the-playground]

'The female students started to run.'

d. *jumkinu* *l-tˤa:liba:t-i* / **l-tˤa:liba:t-u*

be.possible.3.M.SG the-students.F-ACC / *the-students.F-NOM

ʔan janʒaħna

to succeed.3.F.PL

'It is possible for the female students to succeed.'

With this short summary of a dynamic phase approach, I now return to the main issues of this remark, the *Embedded Stripping Generalization*.

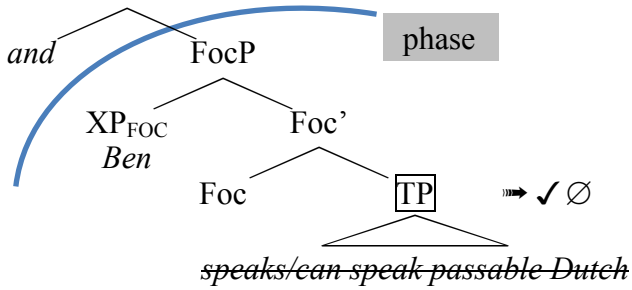
2.2 Ellipsis as zero spell-out

Recently, several works have proposed that ellipsis is a form of spell-out: phase heads trigger spell-out of their complements, and ellipsis is the option of not realizing a spell-out domain [SOD] at PF (see Gengel 2006, 2009, Gallego 2010, van Craenenbroeck 2010b, Rouveret 2012, Bošković 2014). Thus, elided constituents are unpronounced SODs. I will refer to this approach as the *zero spell-out* approach.

Following Merchant's basic structure, I assume that the remnant of stripping occupies a focus projection (see also Ortega-Santos et al. 2014, Yoshida et al. 2015). A zero spell-out approach to ellipsis, in conjunction with the dynamic phasehood approach laid out in the previous section, allows us to derive the *Embedded Stripping Generalization*. Let us first consider the structure of the examples in (1) and (2), illustrated in (16). In a main clause stripping context such as (16a), the root projection of the stripping clause is the focus phrase hosting the stripping remnant. Being the top projection of the higher clausal domain, the FocP is a phase and the TP therefore a SOD. Leaving that SOD unpronounced is thus correctly predicted to be possible. In the embedded context in (16b), on the other hand, the top projection of the embedded clause is the CP, making the FocP the SOD (see below). Since the TP is not a SOD, stripping is correctly predicted to be impossible.

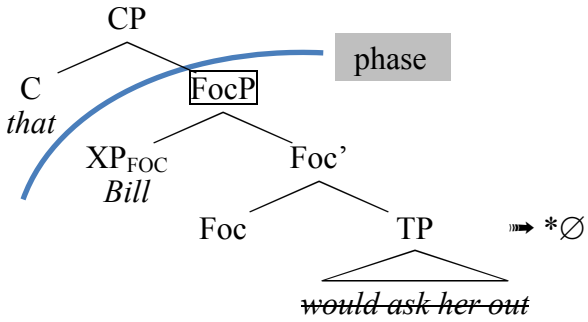
(16) a. *Abby speaks passable Dutch, and BEN, too* =(1c)

b. =(1c-e)



b. **Abby claimed Ben would ask her out, but she didn't think that Bill (too)* =(2c)

b. *



This approach predicts that the complement of a phase head C should be elidable, which is indeed the case in standard sluicing constructions (see Merchant 2001, van Craenenbroeck 2010b, among many others). However, while being a SOD is a necessary condition for ellipsis, it is, of course, not a sufficient condition. In addition to involving the appropriate structural configuration, ellipsis is also subject to a parallelism/identity requirement between the elided and antecedent constituent (see, among many others, Sag 1976, Fiengo and May 1994, Johnson 2001, Merchant 2001, 2008, 2009/11). In the present context, this will exclude ellipsis of FocP (a SOD, but one without a parallel antecedent) in cases such

as (16b) (cf. **Abby speaks passable Dutch, because ~~Ben speaks passable Dutch~~*).[3]

Although the three accounts discussed so far make the same predictions for the cases in (1) and (2), they differ regarding the examples in (5) through (7). Both Johnson's low coordination account and Merchant's $E_{Stripping}$ feature account prohibit stripping in contexts where the elided XP is in an embedded clause, even if that higher clause is part of a conjunction. The zero spell-out account, on the other hand, predicts stripping to be possible in embedded clauses, as long as there is no CP. This is, I argue, exactly what we find in embedded clauses lacking *that*.

The structure of *that*-less complements is a controversial issue, and the question of whether such clauses involve a CP-less structure or an embedded CP with an empty complementizer is still under debate.[4]. While I will not be able to solve this debate, I believe that the properties of stripping may shed some interesting new light on this issue. Recall that the crucial difference between (16a) and (16b) is the presence of the CP. If there is no CP above FocP, the TP is a SOD and can thus be elided. In contrast, if a CP is present above FocP, TP is not a SOD, and hence cannot be elided. If, following the CP-less view,

---

[3] Following Merchant (2003), I assume that two conjuncts with parallel traces, which are bound by different antecedents outside the conjuncts qualify as identical for the purpose of ellipsis. That is, the TP [$_{TP}$ t_{Abby} *speaks passable Dutch*] in (1c-e)/(16a) is an appropriate antecedent for the elided TP [$_{TP}$ t_{Ben} *speaks passable Dutch*].

[4] See, among others, Pesetsky and Torrego (2001, 2004, 2007), Bošković and Lasnik (2003), for the empty complementizer view; and Hegarty (1991), Webelhuth (1992), Doherty (1993, 1997, 2000), Bošković (1997), Svenonius (1994), Franks (2005), and Wurmbrand (2014), for a CP-less approach.

that-less embedded clauses lack their top projection, we are in a position to account for the contrasts in (5) through (7). The relevant parts of the structures are given in (17). In (17a) (=(5a)), *think* combines with a CP, which, like in (16b), prevents the TP from eliding since it is not a SOD. The same is the case for (5c) and the versions with *that* in (6) and (7). In (17b) (=(5b)), on the other hand, *think* combines with a CP-less embedded clause, which makes the focus phrase the top projection and hence a phase. As in (16a), the TP is a SOD, and zero spell-out of the TP is thus correctly predicted to be possible in (5b,d), (6) and (7).[5]

(17) a. *…*but she didn't think* [$_{\text{CP=phase}}$ *that* [$_{\text{FocP=SOD}}$ *Bill* *[$_{\text{TP}}$ ~~*would ask her out*~~]]]
b. …*but she didn't think* [$_{\text{FocP=phase}}$ *Bill* ✓[$_{\text{TP=SOD}}$ ~~*would ask her out*~~]]]

The current account also extends to fragment answers (thanks to Jason Merchant for drawing my attention to these cases). Assuming a clausal ellipsis account of fragment answers

[5] In contrast to accounts along the lines of Merchant (2003) or Johnson (2009), stripping is not dependent on a conjunction in the current approach. This is motivated by the possibility of embedded stripping where no conjunction is present. A reviewer notes, however, that this may be too unrestrictive since *but* seems to be necessary in cases such as i., since omitting *but* as in ii. is impossible. The contrast between i. and ii. does, however, not necessarily point to the conclusion that stripping needs to be licensed by a conjunction. As shown in iii., which differs from ii. only in the polarity of the second sentence, stripping is possible when negation is omitted, despite the absence of any conjunction. Thus, the difference between ii. and iii. seems to indicate that a polarity change strongly favors an overt marking, such as through a connecting *but* (possibly for pragmatic reasons), however, this property is not a necessary factor in the formal licensing of stripping.

i. Abby claimed that Ben would ask her out but Mary didn't think Bill too

ii. *Abby claimed that Ben would ask her out. Mary didn't think Bill too.

iii. Abby claimed that Ben would ask her out. Mary thinks Bill too.

(see Merchant 2004), the utterance in (18b) involves a FocP with the remnant PP in its specifier. If this FocP is the top projection, deletion of the complement TP is possible, exactly as in (16a)/(17b). However, if a complementizer, i.e., a CP, is added, FocP ceases to be a phase and TP would not be a SOD anymore, thus not allowing TP-deletion.

(18) a. *How does Nixon eat his tapioca. I think with a fork.*

[Morgan 1973: 732, 105-6]

b. *I think* (**that*) *with a fork.*

As a final point, certain limitations of the current account should be noted. The zero spell-out approach only demands that a stripped constituent is a SOD, and the dynamic phase-hood approach provides the algorithm for calculating whether a particular syntactic configuration is a SOD. For embedded contexts, this establishes that TP-stripping is only possible when the embedded clause lacks a CP. Whether *that*-drop is possible or not, however, is an independent property that is not covered by the account here. In other words, the zero spell-out approach makes stripping contingent on the availability of *that*-drop, but the account does not regulate when CP-less embedded clauses are possible. As proposed in Pesetsky and Torrego (2004, 2006), for instance, clausal complements of nouns typically do not license *that*-drop (but see Wurmbrand 2014 and references therein for a more nuanced description of this property). It is then expected, that stripping is not possible in embedded clauses combining with nouns. Adjectives, on the other hand, can occur with *that*-less complements and stripping is acceptable, at least in certain contexts:

(19) a. *Bill was afraid the storm will be destructive.*

[Pesetsky and Torrego 2004: 502, (15b)]

a. *Mary is afraid Bill will be arrested.*

b. *Mary knows Tom will be arrested, and she's afraid Bill too.*

Lastly, in addition to restrictions and speaker variation regarding the availability of *that*-drop, stripping seems to generally be a marked phenomenon and restricted to only a subset of contexts that allow *that*-less embedded clauses. As pointed out to me by Jason Merchant (pers. comm.), embedded stripping works best with predicates of reporting (*say, claim, think, predict, suggest*), but is less readily available with others (e.g., *learn, determine, confirm*). The account offered here only provides the upper bounds of when stripping is possible, but does not distinguish between fine-grained distinctions regarding different types of embedding structures. It is left open here whether such differences should be treated as additional restrictions on the formal licensing of stripping, as semantic properties (e.g., by perhaps relating stripping to quotes), or as an extra-grammatical phenomenon.[6]

[6] J. Merchant suggests that perhaps judgments are influenced by the relative proportion of CP vs. DP complements found with different verbs—verbs that bias for DP complements (see e.g., Gahl and Garnsey 2004, Gahl et al. 2004's survey) are less likely to allow stripping (which requires a clausal complement). If this direction is on the right track, the account proposed here can be maintained as is: complements that allow an embedded *that*-less clause, allow stripping *in principle*, but other extra-grammatical (e.g., frequency) factors are responsible for the bias in the distribution.

3. An alternative?

In this section, I discuss a potential alternative account of the *Embedded Stripping Generalization* and provide reasons for not adopting it. In languages involving *wh*-movement to Spec,CP, the so-called *Sluicing–Comp Generalization* holds: in those languages (see section 4 for an example of a language where this generalization is not in effect), complementizers or elements moved to C cannot co-occur with sluicing (see Lobeck 1995, Lasnik 1999, Merchant 2001). Baltin (2010) proposes that the *Sluicing–Comp Generalization,* illustrated in (20a,b),[7] can be derived from a split CP-structure, specifically the structure in (20c) where the *wh*-phrase is in Spec,Foc(us)P and moved T or *that* are in the lower Fin(ite) head.

(20) a. *They discussed a certain model, but they didn't know which model* (**that*).
[Baltin 2010: 331, (2)]

b. A: *He visited somebody.*
B: *Oh, really. Who did he visit*? *Who* (**did*)? [Baltin 2010: 331, (3)]

c. [$_{\text{ForceP}}$ [$_{\text{TopP}}$ [$_{\text{FocusP}}$ *who/which model* [$_{\text{FiniteP}}$ *that/did*]]]]

Assuming that sluicing targets FinP, it follows that moved T elements and complementizers must always delete. This account could be extended to stripping in the following way. Examples such as (5c,d) (repeated as (21a)) would have the structure in (21b). If stripping, like sluicing, targets FinP, the complementizer *that* would have to be deleted, in other

[7] Note that the *Sluicing–Comp Generalization* holds even in languages in which embedded interrogatives can co-occur with a filled C (as a reviewer points out, (20a) is not the best example to illustrate the generalization, since complementizers can never co-occur with a *wh*-phrase in modern English).

words, the *Embedded Stripping Generalization* would boil down to a subcase of the *Sluicing-Comp Generalization*.[8]

(21) a. *Jane loves to study rocks, and John says* (**that*) *geography too.*

b. *says* [$_{\text{FocusP}}$ *geography* [$_{\text{FiniteP}}$ *that* [$_{\text{TP}}$ *Jane loves to study* t]]]

Although this account is attractive as it would relate the obligatory omission of *that* in stripping contexts to similar properties found in sluicing, it faces several questions when considered for English (see below for other languages). First, as argued in Rizzi (1997) and Haegeman (2000a, b), in embedded questions, the *wh*-XP is not in Spec,FocP, but rather in Spec,ForceP, since embedded interrogatives are selected by the matrix verb and the highest CP-projection must therefore carry the *wh*-feature, which then attracts the *wh*-XP to its specifier. Furthermore, embedded *wh*-XPs can co-occur with lower focus elements, such as the negative inversion cases given in (22a-c) or the topic constructions in (22d,e).[9]

(22) a. *Lee wonders ?whether/why under no circumstances at all would Robin volunteer.* [Culicover 1991; Haegeman 2000a: 136f; (28)]

b. ?*Lee wonders who under no circumstances would Robin help*.

c. ?*Lee wonders what under no circumstances at all would Chris ever buy.*

---

[8] I thank a squib reviewer for emphasizing this point.

[9] Embedded *wh*-constructions with topics are generally accepted. Embedded *wh*-constructions with lower foci and inversion are marked for most speakers, however for many not impossible (the speakers I consulted show various degrees of acceptance, with (22a) with *why* being the best [but see the next section] and (22c) the least liked). Culicover (1996: 456, (37a,b)) also gives relevant examples with relative clauses: *Terry is the person to whom only books like these would I give*; *Terry is the person for whom on my vacation not even a postage stamp did I remember to buy.*

d. *I was wondering for which jobs, during the vacation, I should go into the office.*
[Haegeman 2000a: 135; (25)]

e. *No one could ever explain to me how in just fifteen minutes two children could make such a mess*; [Culicover 1996: 460, (47b)]

Proponents of a split CP structure therefore assume that the structures of embedded questions are as in (23) rather than as in (20c).

(23) a. [$_{\text{ForceP}}$ *wh*-XP [$_{\text{FocP}}$ *under no circumstances* {*would*} [$_{\text{FinP}}$ {*would*}]]]

b. [$_{\text{ForceP}}$ wh-XP [$_{\text{ToP}}$ *during the vacation* [$_{\text{FinP}}$]]]

Second, in contrast to what Baltin (2010) suggests, Haegeman (2000a, b) assumes that T–to–C movement in (22a-c) targets Foc rather than Fin, since this movement is triggered by the NEG-criterion, which requires a spec-head relation between the focused XP and the Foc head. Thus, under Haegeman's account, the *Sluicing/Stripping–Comp Generalization* (the prohibition of stranding C elements) could not be derived by the assumption that sluicing targets FinP.

Lastly, as laid out in (21b), the extension of Baltin's sluicing account to stripping would entail that complementizers are lower than focused or topicalized XPs in embedded clauses. For English, this is clearly not the case, as shown in (24a-c). For that reason, Rizzi (1997) and Haegeman (2000a, b) argue that the complementizer in embedded declaratives is in Force (cf. (24d)), rather than in Fin.

(24) a. *John thinks that geography, Jane loves to study.*

b. **John thinks geography that Jane loves to study.*

c. *I stress that, during the vacation, on no account will I go into the office.*
[(Haegeman 2000a: 135, (26a)]

d. *stress* [$_{\text{ForceP}}$ *that* [$_{\text{TopP}}$ *during the vacation* [$_{\text{FocP}}$ *on no account will* [$_{\text{FinP}}$]]]]

To maintain the structure in (21b) thus appears to be quite unmotivated for English. Note that the co-occurrence of *that* and the inverted auxiliary in (24c) also makes an account according to which *that* corresponds to T which is moved into the CP-domain unlikely. Rather the most straightforward account seems to be that *that* is base-generated in the highest CP projection (e.g., ForceP in a split structure). This, however, then raises the question of why *that* must be missing in stripping cases, which is exactly what the zero spell-out analysis proposed here accounts for.

A Baltin-style split CP structure may, however, be a promising approach for stripping in verb second languages such as German. As shown in (25a), stripping is possible in German, but only when the verb (traditionally assumed to be in C) is also deleted. Under a traditional CP-structure, this is surprising. However, if the moved XP and the finite verb are in different projections, as suggested by Baltin and shown in (25b), the outcome is as desired: TopP or FocP is the top projection of the clause, hence a phase, and its complement FinP, which contains the finite verb, is the SOD that undergoes zero spell-out. Furthermore, German, like English, allows embedded stripping, however, as predicted, only when the complementizer is not present (cf. (25c)).[10]

[10] A disadvantage of this approach noted by a reviewer is that it may seem like a conspiracy that the phase head which triggers zero spell-out is always empty. To avoid this issue, an alternative to the split CP approach in (25b) would be to manipulate the way spell-out operates. A specific mechanism that has been proposed in Ott (2011) and Arano (2014a, b) is to define SODs such that, at least in certain configurations, the phase head spells out together with its complement. In other words, if sluicing and stripping could be defined as configurations in which C' counts as the SOD, rather than just TP, the *Sluicing/Stripping–Comp Generalization*

(25) a. *Leo spricht Deutsch und Viktor (*spricht) auch*
Leo speaks German and Viktor (*speaks) also
'Leo speaks German and Viktor too.'

b. *and* [$_{\text{TopP/FocP=Phase}}$ *Viktor* [$_{\text{FinP=SOD}}$ *speaks* [$_{\text{TP}}$ t_{Subj} t_{T} *German* t_{V}]]]

c. *Leo spricht Englisch und Kai behauptet (*dass) Lina auch*
Leo speaks English and Kai claims (*that) Lina also
'Leo speaks English and Kai claims (*that) Lina, too'

4. Additional material in stripping contexts

In this section, I turn to constructions in which the stripping remnant includes the focused phrase plus additional material. If such a complex remnant entails two separate projections, and only the higher projection constitutes a phase, stripping of the third projection would be predicted to be impossible in the zero spell-out approach. I will show that several cases that at first sight appear to challenge the stripping analysis proposed here can be successfully dealt with in the current approach.

4.1 *Why*-stripping and sluice stripping

There are two constructions, which may lead to to the conclusion that the elided part is not a SOD—*why*-stripping as in (26a) and sluice-stripping as in (26b). *Why*-stripping involves the *wh*-phrases *why* or *how come* plus a focused XP (*natto* in (26a)), and sluice stripping

could be derived. In the works cited, the empirical domains for such spell-out extension, as well as the motivation for it are different. However, if a general and uniform algorithm can be developed for when a phase head is spelled out with its complement and when it is grouped with the higher SOD, this approach would provide a very attractive solution to the *Sluicing/Stripping–Comp Generalization*.

(also sometimes referred to as *wh*-stripping) involves a *wh*-phrase (which can be of any type) plus another XP (the PP *about phonology* in (26b)). If, as depicted in (26c), the *why* phrase and the other stranded remnant are in different CP-type projections, the elided part would not correspond to a SOD and zero spell-out should be impossible. However, building on the accounts in Nevins (2008), Ortega-Santos et al. (2014), and Yoshida et al. (2015), I propose that these two types of stripping only involve one C-projection and adjunction of one of the remnants to that CP. The structures for the two types of stripping are slightly different, and I will hence discuss them in turn.

(26) a. A: *John was eating natto.*
B: *I can't believe it! Why NATTO!* [Yoshida et al. 2015: 325, (4)]

b. *Lou will ask Doris about syntax, but I can't imagine who about phonology.* [Nevins 2008]

c. …. [$_{CP1}$ *why/who* [$_{CP2}$ *NATTO/about phonology* [$_{XP \neq SOD}$]]

A property that sets sluice-stripping aside from other types of stripping and sluicing (with the exception of *why*-sluicing) is clause-boundedness. Sluice-stripping is possible in a simple clause as in (27a), but not when long-distance sluicing applies as in (27b). *Why*-stripping, in contrast, can span across a clause boundary as in (27c).

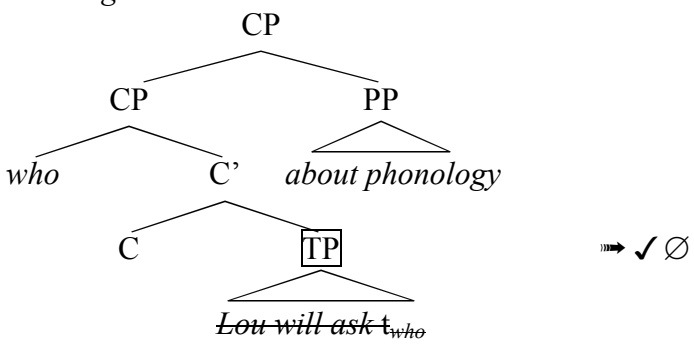
(27) a. *A phonetician talked about syntax, but I don't know who about semantics.*

b. **No phonetician*$_i$ *thought that a syntactician talked about his*$_i$ *paper, but I wish I could remember who* ~~*no phonetician*$_i$ *thought that*~~ ~~t$_{who}$ *talked*~~ *about his*$_i$ presentation. [Yoshida et al. 2015: 345, (72)]

c. *No linguist*$_i$ *thinks that a student should talk about his*$_i$ *supervisor's paper, but I don't understand why* ~~*no linguist*$_i$ *thinks that a student should talk*~~ *(about) HIS*$_i$ *SUPERVISOR'S PAPER (not his presentation)*. [Yoshida et al. 2015: 345, (73)]

Following Nevins (2008), Ortega-Santos et al. (2014), and Yoshida et al. (2015), the strict clause-boundedness of sluice-stripping is accounted for if this form of stripping involves regular *wh*-movement to Spec,CP plus rightward movement of the non-*wh*-remnant. The structure of (26b) is thus as in (28). Since there is only one CP, the TP is the complement of the phase head, hence a SOD, and zero spell-out is correctly predicted to be possible..

(28) *but I can't imagine…* =(26b)



Turning to the second construction, Ortega-Santos et al. (2014) and Yoshida et al. (2015) provide an in-depth analysis of *why*-stripping in English and Spanish. They show that only one of the remnants in *why*-stripping, the non-*wh*-XP, involves movement to the CP domain, whereas the *wh*-element (*why*) is base-generated in the CP. Evidence for movement of the non-*wh* remnant comes from Case connectivity effects, binding connectivity effects, selectional properties, the distribution of P-stranding, implicit correlates, and voice matching requirements. To just give one example, (29) illustrates binding connectivity. If *why*-stripping involves clausal ellipsis (indicated by the shading in (29c)) and movement of the non-*wh* remnant, it is correctly predicted that (29a), but no (29b), involves a Condition C violation.

(29) a. A: *He*$_i$ *is selling all of these pictures.*
B: **Why/how come (even) PICTURES OF JOHN*$_i$?
[Yoshida et al. 2015 : 332, (25a)]

b. A: *His*$_i$ *mother is selling all of these pictures.*
B: *Why/how come (even) PICTURES OF JOHN*$_i$?
[Yoshida et al. 2015 : 332, (25c)]

c. *why* [$_{FocP}$ *pictures of John*$_i$ [$_{TP}$ **he*$_i$/✓ *his*$_i$ *mother is selling* ~~*pictures of John*~~$_i$]]

The claim that in *why*-stripping the *wh*-element is base-generated and not moved is motivated by the lack of strict locality and scope properties. As shown in (30a), *why* sluicing is impossible across a finite clause (Merchant 2001). Whatever the reason for this restriction, the important observation is that *why*-stripping in (30b) is not subject to this constraint.

(30) a. **Mary said* [*that John left for a certain reason*], but I don't know *why*.
Intended: … but I don't know what Mary says is the reason why John left
[Yoshida et al. 2015: 344, (71)]

b. A: *Mary denied that John was eating natto.*
B: *Why* NATTO? [Yoshida et al. 2015: 353, (96)]

Furthermore, while *why* questions such as (31a) show scope ambiguity between the *wh*-phrase and a universal quantifier (in particular, (31a) can receive a pair-list answer), *why*-stripping does not permit an interpretation of the *wh*-phrase within the scope of a quantifier—a pair-list answer is infelicitous in (31b). Both of these properties follow straightforwardly, if there is no *wh*-movement in *why*-stripping.

(31) a. *Why does everyone hate John?* *wh* » ∀/∀ » *wh*
[Yoshida et al. 2015: 353, (97a)]

b. A: *Everyone hates John*. B: *Why JOHN* (but not Bill)? *wh* » ∀/*∀ » *wh*

[Yoshida et al. 2015: 354, (99a)]

The last crucial property of *why*-stripping is that this construction is restricted to certain *wh*-elements—*why* and *how come*. As shown in (32), other *wh*-phrases do not allow this form of stripping.

(32) a. A: *John was eating natto.* B: *Why NATTO?*

b. A: *John was eating natto.* B: *How come NATTO?*

c. A: *Someone was eating natto.* B: **How*/**When*/**Where NATTO*?

d. A: *Something made John eat natto.* B: **What NATTO?*

[Yoshida et al. 2015 : 326, (6)]

The zero spell-out account proposed here predicts that stripping is impossible in cases where there are two (or more) XPs above the TP. I assume that true *wh*-movement targets CP, and that there is a Focus projection below CP. Thus, examples such as (32c,d) have the structure in (33). Since the TP is not a SOD, ellipsis (i.e., zero spell-out) is not possible.[11]

(33) $[_{CP=phase}$ *when* $[_{FocP=SOD}$ *natto* $*[_{TP\neq SOD}$ …]]] *TP ➠ ∅

[11] An alternative account may be to assume that a focus XP (but not topic XPs) blocks *wh*-movement across it. However, as we have seen in the previous section, Culicover (1991, 1996) and Haegeman (2000a) provide cases (which have been confirmed by native speakers I consulted) where *wh*-movement is compatible across lower foci. Furthermore, *wh*-movement across topics is possible, thus, if there is an intervention effect, it would need to be restricted to inversion cases. The zero spell-out approach here excludes stripping in *wh*-contexts independently of whether *wh*-movement across a focus XP is possible or not, thus allowing *wh* » Foc inversion cases (for speakers who allow those constructions) but still accounting for the stripping restriction in (32).

Why then is *why* different? The special behavior of *why* has been noted in several works on *wh*-movement, and a common (well-motivated) assumption is that *why* can be base-generated in the CP (see among many others Lasnik and Saito 1984, 1992, Rizzi 1990, Collins 1991, Bromberger 1992, Ko 2005). Following Bromberger (1992), Yoshida et al. (2015) note that *why* interrogatives have a unique focus association property. Answers to *why*-questions differ depending on which constituent receives stress in the *why*-question, since the focus association triggers different alternatives. Putting the three main observations (base-generation of *why*, movement of the focus phrase to the left periphery, and obligatory focus association) together, Yoshida et al. (2015) adopt a split CP domain and propose the structure in (34). The *wh*-phrase is base-generated in the highest projection (IntP or ForceP) and requires focus association with a lower XP. When stripping applies, this association must be made visible for reasons of recoverability, thus overt focus movement must apply in stripping contexts.

(34) [$_{\text{IntP/ForceP}}$ *Why* [$_{\text{FocP}}$ *NATTO* [$_{\text{TP}}$ *John was eating* ~~*NATTO*~~]]] [Yoshida et al. 2015]

The specific structure in (34) will not be compatible with the zero spell-out approach in this paper, since TP would not qualify as a SOD. However, the slightly modified alternative structure in (35) is: the main difference is that there is no separate projection for the *wh*-element, but instead *why* is adjoined to the FocP.

(35) [$_{\text{FocP}}$ *Why* [$_{\text{FocP}}$ *NATTO* [$_{\text{TP=SOD}}$ *John was eating* ~~*NATTO*~~]]]

The main reason for the assumption that *why* occupies a separate projection from the FocP, according to Yoshida et al. (2015), is that *why*-stripping constructions can be interpreted as interrogatives (they can also be exclamatives). A clause typing projecting such as IntP

or ForceP is thus assumed to mark a clause as an interrogative. However, as shown in Bobaljik and Wurmbrand (2015) (following approaches such as Ginzburg and Sag 2000), an interrogative semantic does not require a syntactic interrogative structure. In a range of *wh*-movement languages, certain *wh*-in-situ constructions, cases such as (36), can be interpreted as genuine (non-echo) questions, however, the syntactic context they appear in is clearly declarative.

(36) a. *So, your boy's name is what?*

b. *Major, you want this stuff where?* [Bobaljik and Wurmbrand 2015: 14, (2)]

In the above paper, we propose that the interrogative force of these constructions comes from the combination of a *wh*-element (equipped with an interpretable *wh*-feature) with focus semantics. These are exactly the pieces that Yoshida et al. (2015) argue are present in *why*-stripping. Thus, the structure in (35) covers all the properties of *why*-stripping, including their potential as an interrogative, and it is also compatible with the zero spell-out view, thereby allowing a uniform account of regular stripping, sluice stripping, and *why*-stripping.

4.2 Negation

A last set of facts that bear on the analysis proposed here are cases in which negation is stranded under stripping in addition to the focused element, as in examples like (37a,b). In such cases, negation is typically obligatory with the connectors *but* and *although* as illustrated in (37c).

(37) a. *Abby speaks passable Dutch,* (*al*)*though not Ben.* [Merchant 2003: (38c)]

b. *Abby speaks passable Dutch,* (*but*) *not Ben*. [Merchant 2003: (1c)]

c. **Abby speaks passable Dutch,* (*al*)*though Ben too.* [Merchant 2003: (38a)]

I assume that in the contexts above, *but* and *although* are coordinators which require (possibly via a conventional implicature; cf. Grice 1975) a contrast between the two conjuncts (see Toosarvandani 2013, 2014), which can be instantiated via reversed polarity in the two conjuncts (cf. (38)).[12,13]

(38) a. *Abby speaks Dutch, but/although Ben doesn't/*does.*

---

[12] The contrast requirement can also be met contextually (without negation in either conjunct), if the context supports an 'only' interpretation of the first conjunct, which can then be contrasted with *too* in the second conjunct (e.g., *Who speaks Dutch? Abby speaks Dutch. Oh, but Ben speaks Dutch, too.*). For the stripping cases considered here, these contexts are not relevant.

[13] The expression *although* (see Huddleston and Pullum 2002: 735f), similar to *because*, can be used in different ways. One function of *although* is a subordinator, which I assume is not what we find in cases such as (37). Like adverbial clauses introduced by *because* (expressing causation), concessive *although* can also trigger embedded root phenomena in the clause it combines with (see Heycock 2006, Wegener 1993). In German, *obwohl* 'although' can combine with a verb second clause, and in English, too, *although* can introduce a root question (e.g., *Some people want me to learn Greek, although why should I?* Agbayani and Zoerner 2004: 205). For that reason, Agbayani and Zoerner assume that *although* is a CP-adjoined adverb. Huddleston and Pullum (2002: 1321) further note that *although* can link finite VPs (*They both remembered Jane, though rarely spoke of her*), in which case an initial position of the second 'conjunct' is not possible (**They both, though rarely spoke of Jane, remembered her*), and they state that such cases "might be regarded as a marginal coordinative construction" [p 1321]. I leave open here whether *although* is a coordinator syntactically or an adverbial adjoined to the highest projection of the clause it combines with. Under either view, the XP combining with *although* (FocP in (37b)) would count as a phase, and hence stripping of its complement will be allowed.

b. *Abby doesn't speak Dutch, but/although Ben does/*doesn't.*

Polarity differences are possible in VP-ellipsis contexts (cf. (38a)/(39)a), since the TP in the second conjunct is overt (only the VP is elided) and can thus be different from the TP in the first conjunct. In stripping contexts, on the other hand, parallelism requires that the two TPs be identical. Since, as shown in (39b), the elided TP (the highlighted part) cannot simultaneously involve the same polarity value (as required by parallelism) and a different polarity value (polarity reversal triggered by *but, although*), stripping in (37c)/(39b) is impossible. The only context which allows both requirements to be met is when the TP matches in polarity, but the remnant of ellipsis involves polarity reversal. This is the case in (37a,b)/(39c), where the focused phrase involves constituent negation.

(39) a. [$_{TP\ [-Neg]}$ *Abby speaks Dutch*] *but* [$_{TP\ [+Neg]}$ *Ben doesn't* [$_{vP}$ t_{Ben} ~~VP~~]] ✓VPE

b. [$_{FocP}$ *Abby* [**TP [-Neg]** t_{Abby} ***speaks*** *passable Dutch*]] *but/although* =(37c)
*[$_{FocP}$ *Ben* [**TP [-Neg]** t_{Ben} ***speaks*** *passable Dutch*]] *polarity
*[$_{FocP}$ *Ben* [**TP [+Neg]** t_{Ben} ***doesn't speak*** *passable Dutch*]] *parallelism

c. [$_{FocP}$ *Abby* [**TP [-Neg]** t_{Abby} ***speaks*** *passable Dutch*]] *but/although* =(37a,b)
[$_{FocP}$ *not Ben* [**TP [-Neg]** t_{Ben} ***speaks*** *passable Dutch*]] ✓polarity, parallelsim

Merchant (2003) leaves open whether examples such as (37a,b) involve constituent negation or a NegP projected above the focus phrase. Unless NegP constitutes a phase by itself, the zero spell-out approach is only compatible with the former. As pointed out to me by Winfried Lechner (pers. comm.), the addition of *either* supports this claim (see Klima 1964). While *either* can be added to VP-ellipsis cases such as (40a), which clearly involve

sentential negation, adding *either* to a stripping context with a negative remnant is impossible as illustrated in (40b,c).[14]

(40) a. ?*Sue doesn't speak Dutch, but Abby does. Ben doesn't either.*
b. *Sue doesn't speak Dutch, but Abby does, (al)though not Ben.*
c. ?**Sue doesn't speak Dutch, but Abby does, (al)though not Ben either.*

5. Extensions and conclusion

In this final section, I provide a preliminary suggestion for how the current proposal can be extended to stripping in languages in which the *Embedded Stripping Generalization* does not hold, as well as a possible extension of the current approach to gapping.

[14] A further interesting construction pointed out to me by a reviewer and Masaya Yoshida involves elliptical *if* statements. Stripping appears to be possible in "if not" contexts, e.g., *John will invite someone to the party, but if not Mary, I'd be surprised.* Negation seems to plays an important role in this construction since it is often obligatory, which may point to a tight connection between *if* and *not*, at least in certain cases (cf. **If now, when else should we eat fugu?, *If Ralph, who else should we invite?;* Jason Merchant, pers. comm.). Moreover, the *if* clause can combine with an interrogative root clause (e.g., *If not now, (then) when should we eat fugu?*), which may indicate a higher (above CP) level structure. I tentatively suggest that (at least some of) these constructions do not involve stripping but rather a concealed copula/cleft construction, similar to van Craenenbroeck (2010a)'s pseudo-sluicing. This is supported by cases which do not appear to involve ellipsis such as *We need a new representative. If not John, then who will we get to do this?* but are readily accounted for under a 'pseudo-stripping' analysis. However, as noted by Masaya Yoshida (pers. comm.), a concealed cleft structure may not always be available, for instance in sprouting contexts. I have to leave a full analysis of *if*-stripping for further research.

Looking beyond English and German, we find that stripping is allowed in constructions with a complementizer in certain languages, as illustrated in (41a) for Hungarian and (41b) for Spanish.[15] An interesting generalization about which languages allow these constructions is provided in van Craenenbroeck and Lipták (2006, 2008): such stripping is only possible in languages in which *wh*-movement targets FocP, rather than CP. Van Craenenbroeck and Lipták propose that in those languages Foc is equipped with an operator feature, which, like C in English-type languages, licenses ellipsis of its complement.

(41) a. *János meghívott valakit és azt hiszem, hogy BÉLÁT*
Janos invited someone.ACC and that.ACC think that Bélá.ACC
'János invited someone and I think it was Béla whom he invited.'
[Craenenbroeck and Lipták 2006: 260, (26a)]

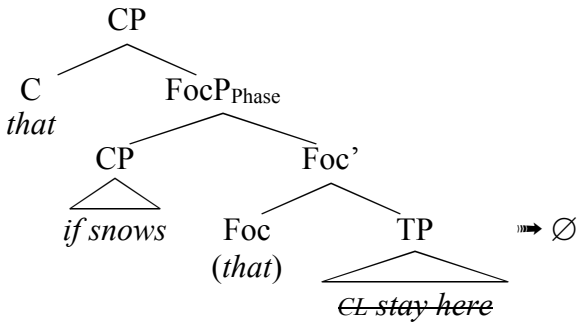
b. *Me dijeron que si llueve* (*que*) *se quedan aquí,*
CL said that if rains (that) CL stay here
y que si nieva (*que*) *también*
and that if snows (that) too
'They told me that they are going to stay here if it rains or snows.'
[Villa-García 2012a: 210, (16)]

The approach proposed here also has a way of implementing this generalization: the head that attracts a *wh*-phrase (i.e., the head equipped with the operator property) functions as a phase head. In English, this coincides with the top projection of the CP-domain. However, in *wh*-focus languages, this is Foc. As shown in (42), if FocP is a phase, it then follows that

[15] I thank Luis Vicente for drawing my attention to Spanish. Morgan (1973: 749, fn. 5) states that *that*-stripping is possible in Spanish and Albanian; furthermore, van Craenenbroeck and Lipták (2006, 2008) note that, in addition to Hungarian, *that*-stripping is also possible in Basque, Polish, Russian, and Hebrew.

its complement, TP, can be elided, despite the presence of a higher complementizer.

(42) … *and*



=(41b)

While the proposed structural difference is still mostly descriptive, the possible advantage of this approach is that van Craenenbroeck and Lipták's generalization can potentially be derived. By tying both properties—the operator status of Foc and ellipsis—to phasehood, a connection between the licensing ellipsis and having the operator property is established, which may turn out to be less arbitrary than the assignment of an ellipsis features. This claim will, of course, need to be backed up by showing that English-type languages and *wh*-focus languages display different behavior regarding locality or other phasehood properties. But some initial evidence for the phasal status of FocP is provided by the distribution of complementizers in Spanish. As shown in Villa-García (2012a, b) and illustrated in the example in (41b), Spanish allows multiple occurrences of the complementizer *que*. Interestingly, Villa-García (2012b) argues that medial *que*, such as the *que* associated with a TopP or FocP, creates island effects. This is expected, if FocP constitutes a phase, exactly as proposed here.

The second extension concerns gapping. The restrictions noted for stripping in English are very similar to restrictions known for gapping. Since the distribution of gapping is considerably more complex, I can again only provide a preliminary suggestion for how to

extend the current account of stripping to similar facts found with gapping. Like stripping, gapping appears to be restricted to conjunctions and be impossible in embedded contexts (see, among others, Koutsoudas 1971, Sag 1976, Hankamer 1979, Wilder 1994, Williams 1997, Johnson 2001, 2009). This is illustrated in (43) (examples from Johnson 2009).[16] If gapping can be analyzed as involving movement of multiple XPs to a TP-external focus projection, the difference between (43a) and (43b-e) can be derived in the same way as suggested for analogous examples with stripping. This would then lead us to expect that omission of a complementizer as in (43f) should also show an ameliorating effect in gapping. While most speakers consulted find a contrast between (43e) and (43f), judgments for gapping are in general significantly less clear and stable, and further empirical studies are needed to see whether a unification of stripping and gapping is possible.

(43) a. *Some have served mussels to Sue and others ~~have served~~ swordfish.*
[Johnson 2009: (1)]

b. **Some had eaten mussels because others ~~had eaten~~ shrimp.*
[Johnson 2009: (13)]

c. **Some will eat mussels because others ~~will eat~~ shrimp.*

d. **Some had eaten mussels and she claims that others ~~had eaten~~ shrimp.*
[Johnson 2009:(15)]

e. **Some will eat mussels and she claims that others ~~will eat~~ shrimp.*

f. %*Some will eat mussels and she claims others ~~will eat~~ shrimp.*

[16] All examples in (43) become grammatical with pseudogapping, which, in the current approach would involve focus movement to a low focus projection in the lower clausal cycle. The (low) FocP closes off the extended *v*P phase, making the *v*P a SOD and hence elidable (see Merchant 2007, 2008, Bošković 2014).

To conclude, I have proposed that a zero spell-out approach to ellipsis, together with a dynamic phasehood view, provides a straightforward account of the *Embedded Stripping Generalization*—the restriction that stripping can only apply in embedded clauses when the complementizer is missing. While puzzling for other ellipsis approaches, this distribution follows from a zero spell-out approach combined with the view that embedded root clauses are CP-less. Furthermore, following the proposals in Nevins (2008), Ortega-Santos et al. (2014), and Yoshida et al. (2015), I have shown that *why*-stripping and sluice-stripping are compatible with the zero spell-out approach to ellipsis, and that the distribution of negation in stripping remnants can be derived from a parallelism requirement and a constituent negation structure. More speculatively, I have suggested that the generalization proposed in van Craenenbroeck and Lipták (2006, 2008), namely that *that*-stripping is only possible in languages in which *wh*-movement targets FocP rather than CP, can be derived if a head equipped with the operator property in the CP always constitutes a phase head (possibly in addition to the top projection of the CP domain). If the current account can be maintained after considering the stripping and phasehood properties of a larger set of languages, a general consequence of the system would be that stripping can be used as a phase detector in the CP-domain.

Lastly, the zero spell-out approach also extends to other types of ellipsis: sluicing (CP phase, TP SOD), NP-ellipsis (DP phase, NP SOD), pseudogapping (FocP phase, *v*P SOD; see fn. 16), and VP-ellipsis (*v*P phase, VP SOD). While the account proposed here covers the basic cases of these constructions, the distribution of the different types of ellipsis is far more complex, and a detailed account of the structural and phasal properties of

these constructions will need to consider each type of ellipsis separately.

6. References

Agbayani, Brian, and Ed Zoerner. 2004. Gapping, pseudogapping and sideward movement. *Studia Linguistica* 58.3:185-211.

Arano, Akihiko. 2014a. Agreement and Spell-Out of 'Intermediate Projections'. Ms., University of Connecticut. Storrs.

Arano, Akihiko. 2014b. Spell-Out of intermediate projections. In *Papers from the 14th Conference of The English Linguistic Society of Japan 31*, 3-9.

Baltin, Mark. 2010. The non-reality of doubly filled COMPs. *Linguistic Inquiry* 41.2:331-335.

Bobaljik, Jonathan D., and Susi Wurmbrand. 2005. The domain of agreement. *Natural Language and Linguistic Theory* 23.4:809-865.

Bobaljik, Jonathan D., and Susi Wurmbrand. 2015. Questions with declarative syntax tell us what about selection? In *50 Years Later: Reflections on Chomsky's Aspects*, ed. by Ángel J. Gallego and Dennis Ott, 13-32. Cambridge, MA: MIT, Department of Linguistics and Philosophy, MIT Working Papers in Linguistics.

Bošković, Željko. 1997. *The syntax of nonfinite complementation: An economy approach*. Cambridge, MA: MIT Press.

Bošković, Željko. 2014. Now I'm a phase, now I'm not a phase: On the variability of phases with extraction and ellipsis. *Linguistic Inquiry* 45.1:27-89.

Bošković, Željko, and Howard Lasnik. 2003. On the Distribution of Null

Complementizers. *Linguistic Inquiry* 34.4:527-546.

Bromberger, Silvain. 1992. *On what we know we don't know: Explanation, theory, linguistics, and how questions shape them*. Chicago: University of Chicago Press.

Castillo, Juan Carlos, John E. Drury, and Kleanthes K. Grohmann. 2009. Merge Over Move and the Extended Projection Principle: MOM and the EPP Revisited. *Iberia: An International Journal of Theoretical Linguistics* 1.1:53-114.

Chomsky, Noam. 1973. Conditions on transformations. In *A Festschrift for Morris Halle*, ed. by Stephen R. Anderson and Paul Kiparsky, 232-286. New York: Holt, Rinehart and Winston.

Chomsky, Noam. 1998. Minimalist inquiries: The framework. In *MIT Occasional Papers in Linguistics*. Cambridge, MA: MIT, Department of Linguistics and Philosophy.

Chomsky, Noam. 2000. Minimalist inquiries: The framework. In *Step by step: Essays on minimalist syntax in honor of Howard Lasnik*, ed. by Roger Martin, David Michaels and Juan Uriagereka, 89-155. Cambridge, MA: MIT Press.

Chomsky, Noam. 2001. Derivation by phase. In *Ken Hale: A life in language*, ed. by Michael Kenstowicz, 1-52. Cambridge, MA: MIT Press.

Collins, Chris. 1991. Why and how come. In *More papers on Wh-movement*, ed. by Lisa Cheng and Hamida Demirdache, 31–45. Cambridge, MA: MIT, Department of Linguistics and Philosophy.

Craenenbroeck, Jeroen van. 2010a. Invisible last resort: A note on clefts as the underlying source for sluicing. *Lingua* 120.7:1714-1726.

Craenenbroeck, Jeroen van. 2010b. *The syntax of ellipsis: Evidence from Dutch dialects*.

New York: Oxford University Press.

Craenenbroeck, Jeroen van, and Anikó Lipták. 2006. The cross-linguistic syntax of sluicing: evidence from Hungarian relatives. *Syntax* 9.3:248-274.

Craenenbroeck, Jeroen van, and Anikó Lipták. 2008. On the Interaction between Verb Movement and Ellipsis: New Evidence from Hungarian. In *Proceedings of the 26th West Coast Conference on Formal Linguistics,* ed. by Charles B. Chang and Hannah J. Haynie, 138-146. Somerville, MA: Cascadilla.

Culicover, Peter W. 1991. Topicalization, inversion and complementizers in English. In *OTS Working papers: Going Romance and Beyond*, ed. by Denis Delfitto, Martin Everaert, Arnold Evers and Frits Stuurman, 1-45. Utrecht: University of Utrecht.

Culicover, Peter W. 1996. On distinguishing A'-movements. *Linguistic Inquiry* 27.3:445-463.

Doherty, Cathal. 1993. Clauses without that: The case for bare sentential complementation in English. Doctoral dissertation, University of California Santa Cruz, Santa Cruz.

Doherty, Cathal. 1997. Clauses without complementizers: Finite IP-complementation in English. *The Linguistic Review* 14:197-220.

Doherty, Cathal. 2000. *Clauses without "that": The case for bare sentential complementation in English*. New York: Garland Press.

Fiengo, Robert, and Robert May. 1994. *Indices and Identity*. Cambridge, MA: MIT Press.

Franks, Steven. 2005. What is that? In *Indiana University Working Papers in Linguistics* 5, ed. by Y. Kitagawa and Dorian Roehrs, 33-62. Indiana.

Gahl, Susanne, and Susan M Garnsey. 2004. Knowledge of grammar, knowl-edge of usage:

Syntactic probabilities affect pronunciation variation. *Language* 80.4:748–775.

Gahl, Susanne, Daniel Jurafsky, and Douglas Roland. 2004. Verb subcategorization frequencies: American English corpus data, methodological studies, and cross-corpus comparisons. *Behavior Research Methods, Instruments, and Computers* 36:432–443.

Gallego, Ángel. 2010. *Phase theory*. Amsterdam/Philadelphia: John Benjamins.

Gengel, Kirsten. 2006. Phases and ellipsis. In *Proceedings of the North Eastern Linguistics Society Annual Meeting 37,* ed. by Emily Elfner and Martin Walkow, 233-246. Amherst: University of Massachusetts, GLSA.

Gengel, Kirsten. 2009. Phases and ellipsis. *Linguistic Analysis* 35:21-42.

Ginzburg, Jonathan, and Ivan Sag. 2000. *Interrogative investigations: the form, meaning, and use of English interrogatives*. Standford, CA: CSLI Publications.

Grano, Thomas, and Howard Lasnik. 2015. How to neutralize a finite clause boundary: Phase theory and the grammar of bound pronouns. Ms., Indiana University and University of Maryland. Maryland & Indiana.

Grice, Herbert Paul. 1975. Logic and conversation. In *Speech acts*, ed. by Peter Cole and Jerry L. Morgan, 41–58. New York: Academic Press.

Grimshaw, Jane. 1991. Extended projection. Ms., Brandeis University. Waltham, Mass.

Grohmann, Kleanthes K., John Drury, and Juan Carlos Castillo. 2000. No More EPP. In *Proceedings of the 19th West Coast Conference on Formal Linguistics,* ed. by Roger Billerey and Brook Danielle Lillehaugen, 153-166. Somerville, MA: Cascadilla.

Haegeman, Liliane. 2000a. Inversion, non-adjacent inversion, and adjuncts to CP. *Transactions of the Philological Society* 98.1:121-160.

Haegeman, Liliane. 2000b. Negative preposing, negative inversion, and the split CP. In *Negation and polarity: syntactic and semantic perspectives*, ed. by Lawrence Horn and Yasuhiko Kato, 21-61. Oxford: Oxford University Press.

Hankamer, Jorge. 1979. *Deletion in coordinate structures*. New York: Garland.

Hankamer, Jorge, and Ivan Sag. 1976. Deep and surface anaphora. *Linguistic Inquiry* 7.3:391-426.

Harwood, William. 2015. Being progressive is just a phase: celebrating the uniqueness of progressive aspect under a phase-based analysis. *Natural Language and Linguistic Theory* 33:523-573.

Hegarty, Michael. 1991. Adjunct extraction and chain configurations. Doctoral dissertation, MIT, Cambridge, MA.

Heycock, Caroline. 2006. Embedded root phenomena. In *The Blackwell Companion to Syntax*, ed. by Martin Everaert and Henk van Riemsdijk, Vol. II, Chapter 23. Oxford: Blackwell.

Huddleston, Rodney, and Geoffrey K. Pullum. 2002. *The Cambridge Grammar of the English Language*. Cambridge: Cambridge University Press.

Johnson, Kyle. 2001. What VP ellipsis can do, and what it can't, but not why. In *The handbook of contemporary syntactic theory*, ed. by Mark Baltin and Chris Collins, 439–479. Oxford: Blackwell.

Johnson, Kyle. 2009. Gapping Is Not (VP-) Ellipsis. *Linguistic Inquiry* 40.2:289-328.

Klima, Edward. 1964. Negation in English. In *The structure of language: Readings in the philosophy of language*, ed. by Jerry A. Fodor and Jerrold J. Katz, 246–323. Englewood Cliffs, NJ: Prentice Hall.

Ko, Heejong. 2005. Syntax of why-in-situ: merge into [Spec,CP] in the overt syntax. *Natural Language and Linguistic Thoery* 23:867–916.

Koutsoudas, Andreas. 1971. Gapping, conjunction reduction, and coordinate deletion. *Foundations of Language* 7:337–386.

Lasnik, Howard. 1999. On feature strength: Three minimalist approaches to overt movement. *Linguistic Inquiry* 30.2:157-196.

Lasnik, Howard, and Mamoru Saito. 1984. On the nature of proper government. *Linguistic Inquiry* 15:235-289.

Lasnik, Howard, and Mamoru Saito. 1992. *Move-a*. Cambridge, MA: MIT Press.

Legate, Julie Anne. 2003. Some Interface Properties of the Phase. *Linguistic Inquiry* 34.3:506-516.

Lobeck, Anne. 1995. *Ellipsis: Functional heads, licensing, and identification*. New York/Oxford: Oxford University Press.

Merchant, Jason. 2001. *The syntax of silence: Sluicing, islands, and the theory of ellipsis*. Oxford: Oxford University Press.

Merchant, Jason. 2003. Remarks on stripping. Ms., University of Chicago. Chicago.

Merchant, Jason. 2004. Fragments and ellipsis. *Linguistics and Philosophy* 27:661–738.

Merchant, Jason. 2007. Voice and ellipsis. Ms., University of Chicago. Chicago.

Merchant, Jason. 2008. An Asymmetry in Voice Mismatches in VP-Ellipsis and

Pseudogapping. *Linguistic Inquiry* 39.1:169-179.

Merchant, Jason. 2009/11. Ellipsis. Ms., University of Chicago. Article for *Handbook of Contemporary Syntax*, 2nd edition, Artemis Alexiadou, Tibor Kiss, and Miriam Butt, eds. Walter de Gruyter: Berlin.

Morgan, Jerry L. 1973. Sentence Fragments and the Notion 'Sentence'. In *Issues in Linguistics: Papers in Honor of Henry and Renée Kahane*, ed. by Braj Kachru, Robert Lees, Yakov Malkiel, Angelina Pietrangeli and Sol Saporta, 719-751: University of Illinois Press.

Nevins, Andrew. 2008. Sluicing ≠ stripping: evidence from P-stranding. Paper presented at the *3rd Annual Moscow Student Conference on Linguistics*, Moscow.

Ortega-Santos, Iván, Masaya Yoshida, and Chizuru Nakao. 2014. On ellipsis structures involving a wh-remnant and a non-wh-remnant simultaneously. *Lingua* 138:55-85.

Ott, Dennis. 2011. A note on free relative clauses in the theory of phases. *Linguistic Inquiry* 42:183-192.

Pesetsky, David, and Esther Torrego. 2001. T-to-C movement: Causes and consequences. In *Ken Hale: A life in language*, ed. by Michael Kenstowicz, 355-426. Cambridge, MA: MIT Press.

Pesetsky, David, and Esther Torrego. 2004. Tense, case, and the nature of syntactic categories. In *The syntax of time*, ed. by Jacqueline Guéron and Jacqueline Lecarme, 495-537. Cambridge, MA: MIT Press.

Pesetsky, David, and Esther Torrego. 2006. Probes, Goals and Syntactic Categories. In *Proceedings of the 7th annual Tokyo Conference on Psycholinguistics*. Keio

University, Japan.

Pesetsky, David, and Esther Torrego. 2007. The syntax of valuation and the interpretability of features. In *Phrasal and clausal architecture*, ed. by Simin Karimi, Vida Samiian and Wendy Wilkins, 262-294. Amsterdam: John Benjamins.

Rizzi, Luigi. 1990. *Relativized minimality*. Cambridge, MA: MIT Press.

Rizzi, Luigi. 1997. The fine structure of the left periphery. In *Elements of grammar: Handbook of generative syntax*, ed. by Liliane Haegeman, 281-337. Dordrecht: Kluwer Academic Publishers.

Rouveret, Alain. 2012. VP ellipsis, phases and the syntax of morphology. *Natural Language and Linguistic Theory* 30.3:897-963.

Sag, Ivan. 1976. Deletion and Logical Form. Doctoral dissertation, MIT, Cambridge, MA.

Sauerland, Uli. 2003. Intermediate adjunction with A-movement. *Linguistic Inquiry* 34.2:308-314.

Svenonius, Peter. 1994. Dependent Nexus: Subordinate predication structures in English and the Scandinavian languages. Doctoral dissertation, University of California Santa Cruz, Santa Cruz.

Toosarvandani, Maziar. 2013. Corrective *but* coordinates clauses not always but sometimes. *Natural Language & Linguistic Theory* 31:827–863.

Toosarvandani, Maziar. 2014. Contrast and the structure of discourse. *Semantics & Pragmatics* 7.4:1–57.

Villa-García, Julio. 2012a. Characterizing medial and low complementizers in Spanish: Recomplementation *que* and 'Jussive/Optative' *que*. In *Current Formal Aspects of*

Spanish Syntax and Semantics, ed. by M. González-Rivera and S. Sessarego, 198-228. Cambridge: Cambridge Scholars Publishing.

Villa-García, Julio. 2012b. Recomplementation and locality of movement in Spanish. *Probus: AnInternational Journal of Latin and Romance Linguistics* 24.2:257-314.

Webelhuth, Gert. 1992. *Principles and parameters of syntactic saturation*. Oxford: Oxford University Press.

Wegener, Heide. 1993. Weil—das hat schon seinen Grund. Zur Verbstellung in Kausalsätzen mit weil im gegenwärtigen Deutsch. *Deutsche Sprache* 21:289-305.

Wilder, Chris. 1994. Coordination, ATB, and Ellipsis. In *Minimalism and Kayne's asymmetry hypothesis*, ed. by Jan-Wouter C. Zwart, 291-331. Groninger Arbeiten zur germanistischen Linguistik 37. Groningen: University of Groningen.

Williams, Edwin. 1997. Blocking and anaphora. *Linguistic Inquiry* 28.4:577-628.

Wurmbrand, Susi. 2013. QR and selection: Covert evidence for phasehood. In *Proceedings of the North Eastern Linguistics Society Annual Meeting 42,* ed. by Stefan Keine and Shayne Sloggett, 277-290. Amherst: University of Massachusetts, GLSA.

Wurmbrand, Susi. 2014. The Merge Condition: A syntactic approach to selection. In *Minimalism and Beyond: Radicalizing the interfaces*, ed. by Peter Kosta, Lilia Schürcks, Steven Franks and Teodora Radev-Bork, 139-177. Amsterdam: John Benjamins.

Wurmbrand, Susi. 2015. Complex predicate formation via voice incorporation. In *Approaches to complex predicates*, ed. by Léa Nash and Pollet Samvelian, 248-290. Leiden: Brill.

Wurmbrand, Susi, and Youssef A. Haddad. To appear (2016). Cyclic Spell-Out Derived Agreement in Arabic Raising Constructions. In *Perspectives on Arabic Linguistics XXVIII.*, ed. by Youssef A. Haddad and Eric Potsdam, 193-226. Amsterdam: John Benjamins.

Wurmbrand, Susi, and Koji Shimamura. To appear. The features of the voice domain: actives, passives, and restructuring. In *The verbal domain*, ed. by Robert D'Alessandro, Irene Franco and Ángel Gallego. Oxford: Oxford University Press.

Yoshida, Masaya, Chizuru Nakao, and Iván Ortega-Santos. 2015. The syntax of Why-Stripping. *Natural Language & Linguistic Theory* 33.1:323-270.