Syntax of *either* in *either…or…* sentences

Abstract

I propose an analysis of *either* in *either...or...* sentences that suggests a broader generalization about the syntax of all focus-sensitive operators. I argue that *either* originates inside the disjunction phrase, c-commanding the leftmost contrastive focus. Then it is internally merged as the sister of the disjunction phrase. Either copy of *either* may be pronounced. When *either* appears higher than the sister of the disjunction phrase, bare argument ellipsis has occurred in the second disjunct. This analysis of *either* is consonant with the generalization that all focus-sensitive operators occupy two positions in a sentence (e.g. Cable (2007), Hirsch (2017), and Quek and Hirsch (2017)). If this analysis of *either* is correct, then it not only indicates that *either* is a focus-sensitive operator, but also adds another data point to this universal generalization.

1. Introduction

This paper proposes an analysis of the syntax of *either* in *either … or …* sentences. Consider the placement of *either* in examples like (1):

(1)John will eat either rice or beans.

An obvious expectation to entertain concerning the position of *either* is that it might always appear as the sister of a disjunction phrase (c.f. Quine 1967; p.44; Dougherty 1970; Stockwell et al. 1973; Neijt 1979; Sag et al. 1985). In (1), if we assume that *rice or beans* is a disjunction phrase (*DisjP*), and *rice* and *beans* are the *disjuncts*, then *either* does appear adjacent to this DisjP and is its sister:

(2)John will eat either [$_{\text{DisjP}}$ rice or beans].

As Larson (1985), Schwarz (1999), den Dikken (2006), among others have observed, this view that *either* must be the sister of DisjP is challenged by examples like the following:

(3)a. John will either eat rice or beans.
b. John either will eat rice or beans.
c. Either John will eat rice or beans.

(4)a. John will either eat rice or he will eat beans.
b. John either will eat rice or he will eat beans.

Assuming that DisjP is still *rice or beans* in (3a-c), *either* is higher than the sister of DisjP and separated from the DisjP by overt material. For this reason, I call examples like (3a-c) *either-seems-high* sentences, adapting den Dikken's (2006) terminology. In (4a,b), the DisjP coordinates two TP clauses, and *either* appears to be embedded in the first disjunct. Because *either* appears lower than the sister of DisjP in (4a,b), I call such examples *either-seems-low* sentences. *Either*-seems-high and *either*-seems-low sentences apparently violate the generalization that *either* is always the sister of a disjunction. In contrast, I call sentences like (2)

either-seems-normal sentences for the reason that *either* seems to be in its "normal" position, i.e. the sister of DisjP. This paper will present an analysis of *either*-seems-normal, *either*-seems-high and *either*-seems-low sentences.

I will argue, following previous proposals by Schwarz (1999) and Han and Romero (2004) that *either*-seems-high sentences are an illusion created by ellipsis. *Either* is the sister of DisjP, and when it seems high, ellipsis has applied in the noninitial disjuncts.

Ellipsis alone is not enough, however. It cannot account for *either*-seems-low sentences because there is nothing to elide there. It also cannot explain some other observations about *either* to be discussed below. For instance, observations made by den Dikken (2006) involving islands suggests that *either* moves (an idea building on Larson (1985)). Additionally, there are scope facts observed by Larson that pose difficulty to an analysis involving only ellipsis.

For these reasons I argue that in addition to ellipsis, *either* also moves (following Larson but differing in the starting and ending points of the movement). It moves from a position inside the DisjP to the sister of the DisjP. This movement explains the island facts. And as I will explain later, movement of *either* together with ellipsis accounts for the scope facts. Also, this movement of *either* can be either overt or covert. When it is covert, we get *either*-seems-low sentences.

This proposal is schematized below. *Either* moves from inside the DisjP to the sister of DisjP. When *either* seems higher than the sister of DisjP, ellipsis has applied to the second disjunct, creating the illusion that DisjP is smaller than it actually is, and *either* is higher than it actually is.

(5)Either$_i$ [$_{DisjP}$ [$_A$ t$_i$ X …] or [$_B$ ~~X~~ …]]

According to this analysis, *either*-seems-high sentences (3a-c) result from the combination of movement of *either* to the edge of DisjP, pronunciation of *either* in its higher position, and ellipsis. The elided parts are illustrated below, and note that *either* in all these sentences is pronounced next to DisjP and is hence the sister of the DisjP:

(6)a. John will either [$_{DisjP}$ eat rice or ~~eat~~ beans].
b. John either [$_{DisjP}$ will eat rice or ~~will eat~~ beans].
c. Either [$_{DisjP}$ John will eat rice or ~~John will eat~~ beans].

As we have seen, in *either*-seems-high sentences *either* is pronounced in its moved position – an instance of overt movement. By contrast, the *either*-seems-low sentences are a result of pronouncing *either* in its base position, an instance of covert movement. When the movement of *either* is covert, *either* is pronounced in its base position (bold font indicates the pronounced copy from now on), creating *either*-seems-low sentences:

(7)a. Either$_i$ John will **either$_i$** eat rice or he will eat beans.
b. Either$_i$ John **either$_i$** will eat rice or he will eat beans.

As mentioned earlier, there are two components to this analysis: ellipsis and movement of *either*. They explain four empirical generalizations: a) non-constituent disjunction and verb-particle constructions; b) *either*-seems-low; c) islands; and d) scope. For ease of naming, I will call the first generalization *(evidence for) ellipsis* because they are facts that suggest that ellipsis can happen. Island facts and *either*-seems-low sentences motivate the movement of *either*. Ellipsis and movement together explain observations I will present concerning scope. To show the logic

of the proposal, I will only present an abstract characterization of these generalizations in this section, and the following sections will present the data that support each of them.

Schwarz (1999) and Han and Romero (2004) have argued that all *either*-seems-high sentences are indeed derived from ellipsis. (8a) is an abstract form of an *either*-seems-high sentence, with *either* separated from the apparent DisjP by overt material ... *X* .... They argue that (8a) must be derived from (8b), i.e. ellipsis of ... *X* ... in the second disjunct:

(8)a. … either … X … [$_{DisjP}$ A or B]
b. … [$_{DisjP}$ either [$_{Disj'}$ … X … A or ~~… X …~~ B]

If we accept their argument, then the highest position *either* can occupy is the sister of DisjP. When it seems higher, ellipsis has happened in the noninitial disjuncts.

Ellipsis cannot be the whole story because in *either*-seems-low sentences, *either* appears embedded in the DisjP and there is nothing to elide. These sentences tell us that in addition to the sister of DisjP, *either* occupies another position in the structure: somewhere inside the DisjP.

Are these two positions related or independent of each other? Evidence from island effects suggests that *either* moves from inside the DisjP to the sister position of DisjP. As observed by den Dikken (2006), *either* cannot be separated from DisjP by an island in *either*-seems-low sentences:

(9)*… [$_{DisjP}$ … [$_{island}$ … either …] or …]

These observations, taken together, suggest that *either* occupies two positions in the structure, one inside DisjP and one adjacent to the left edge of DisjP. I add the higher position of *either* below:

(10) *… [$_{DisjP}$ either [$_{Disj'}$ … [$_{island}$ … either …] or …]

If we posit movement of *either* from the lower position to the edge of DisjP, the island facts can be understood as the banal restriction that movement of *either* may not cross an island:

(11) *… [$_{DisjP}$ either$_i$ [$_{Disj'}$ … [$_{island}$ … t$_i$ …] or …]

Once we posit movement of *either* and allow this movement to be covert, *either*-seems-low sentences follow naturally. They are simply a result of covert movement of *either*, i.e. pronouncing the base copy of *either* inside the DisjP.

The final important generalization is Larson's (1985) observation about the scope of disjunction: *either* marks the scope of disjunction in *either*-seems-high sentences but not in *either*-seems-normal sentences.

To understand this statement, let me first explain what scope of disjunction means. Take a simple sentence like the following as an example. Rooth and Partee (1982) have observed that it has at least three readings, out of which two are relevant to the current discussion:

(12) Sherlock is looking for a burglar or a thief.
Reading 1: Sherlock is looking for a criminal and would be satisfied with any individual x meeting the description "x is a burglar or x is a thief"
Reading 2: Either one of two things is happening: (1) Sherlock is looking for a burglar; or (2) Sherlock is looking for a thief. (modeled on Rooth and Partee:(13))

Reading 2 is significant because in this reading, the disjunction holds between two TP clauses, Sherlock is looking for a burglar or Sherlock is looking for a thief. This disjunction is larger than what is apparently disjoined in (12), i.e. a disjunction between two DPs, a burglar or a thief. For this reason, they call Reading 2 the *wide scope reading* of disjunction (though note that the indefinites in each disjunct do not necessarily take equally wide scope, as I will discuss in section 2, so this is technically the wide scope of *or*).

Note that these two readings differ in the scope of disjunction relative to the scope of the intensional verb *looking for*. Then the same readings can be described in terms of the relation between the scope of disjunction and the scope of *looking for*. Because in reading 1 the scope of disjunction is lower than that of *looking for*, I call it the *narrow scope reading* of disjunction:

(13) Sherlock is looking for a burglar or a thief.
Reading 1 (narrow scope of disjunction): *looking for* > DisjP
Reading 2 (wide scope of disjunction): DisjP > *looking for*

Having defined the scope of disjunction, let us look at Larson (1985)'s observation that *either* marks the scope of disjunction in *either*-seems-high sentences but not in *either*-seems-normal sentences.

Following is an *either*-seems-high configuration, with *either* separated from the apparent DisjP (not the actual DisjP due to ellipsis) by overt material. Suppose that X and Y are intensional verbs. The scope of disjunction is fixed at the surface position of *either*:

(14) Fixed scope in *either*-seems-high sentences
… X … either … Y … [$_{DisjP}$ ... or …]
↑
scope

Contrast it with an *either*-seems-normal configuration, with *either* appearing next to the DisjP. Now the scope of disjunction can be either above the intensional verb X or below X:

(15) Ambiguous scopes in *either*-seems-normal sentences
… X … either [$_{DisjP}$ ... or …]
↑ ↑
scope scope

The following sentences show this abstract generalization with actual data. Larson (1985) has observed that among the three readings of the *either*-seems-normal sentence ((16), its *either*-seems-high counterparts (17a) and (17b) only have the reading where the scope of disjunction coincides with *either*'s surface position:

(16) Sherlock pretended to be looking for either a burglar or a thief. (3 readings)
Reading 1 (*pretended* > *looking for* > DisjP): Sherlock pretended to be looking for someone who is either a burglar or a thief.
Reading 2 (*pretended* > DisjP > *looking for*): Sherlock pretended to do one of two things: (1) be looking for a burglar; or (2) be looking for a thief.
Reading 3 (DisjP > *pretended* > *looking for*): One of two things happened: (1) Sherlock pretended to be looking for a burglar; or (2) Sherlock pretended to be looking for a thief.

(17) a. Sherlock pretended to either be looking for a burglar or a thief.
Reading 2 only (*pretended* > DisjP > *looking for*)
b. Sherlock either pretended to be looking for a burglar or a thief.
Reading 3 only (DisjP > *pretended* > *looking for*) (Larson 1985:221)

Consider the frozen scope of (17a) and (17b) first. It follows from the conclusion drawn from the first empirical generalization that *either*-seems-high sentences involve ellipsis. Once the elided material is recovered, we get the corresponding reading of each sentence. (18a) recovers the elided material in (17a), and now the actual DisjP is *looking for a burglar or looking for a thief*, which is exactly the intermediate scope of disjunction we get. Likewise, once the elided material is recovered for (17b), we get the corresponding wide scope reading (18b).

(18) a. Sherlock pretended to either be looking for a burglar or ~~be looking for~~ a thief.
b. Sherlock either pretended to be looking for a burglar or ~~pretended to be looking for~~ a thief.

Therefore, the scope of disjunction is the actual disjunction once we recover the elided material. Because in *either*-seems-high sentences *either* is the sister of the actual DisjP, and the actual DisjP is the scope of disjunction, *either* marks the scope indirectly. The scope of disjunction is always the sister of the higher position of *either*.

Having explained the fixed scope of *either*-seems-high sentences, let us now look at the *either*-seems-normal sentence in ((16). Its ambiguity results from the movement of *either*. Because *either* can move overtly or covertly, *either* in ((16) is ambiguous between *either* pronounced in its derived position and *either* pronounced in its base position. If *either* is pronounced in its derived position in ((16), its sister, i.e. *a burglar or a thief*, is the actual DisjP and the scope we get (19a). If *either* moves covertly, then the sister of its unpronounced copy is the actual DisjP. If that unpronounced copy is between *pretended* and *looking for*, we get the intermediate scope (19b); if it is above *pretended*, we get the wide scope (19c).

(19) a. Sherlock pretended to be looking for **either** [$_{\text{DisjP}}$ a burglar or a thief].
b. Sherlock pretended to be either$_i$ [$_{\text{DisjP}}$ looking for **either$_i$** a burglar or ~~looking for~~ a thief].
c. Sherlock either$_i$ [$_{\text{DisjP}}$ pretended to be looking for **either$_i$** a burglar or ~~pretended to be looking for~~ a thief].

To summarize, we have seen four empirical generalizations, ellipsis, *either*-seems-low sentences, islands, and scope, the first of which motivates the ellipsis part of the analysis, and the second two of which motivate the movement of *either*. The last generalization about scope can be

accounted for by a combination of ellipsis and movement. The conclusions drawn from each generalization are summarized below:

(20)

a. Ellipsis	->	The highest position *either* can be is the sister of DisjP: … either [$_{DisjP}$ … X … A or ~~… X …~~ B]
b. *Either*-seems-low	->	*Either* can occur embedded in the DisjP
c. Islands	->	*Either* moves to be the sister of DisjP: *… either$_i$ [$_{DisjP}$ … [$_{island}$ … t$_i$ … or …]]
d. Scope	->	Scope is the actual DisjP when elided material is recovered

The remaining sections will provide the empirical data supporting each of these generalizations. Before that, I will reiterate my proposal about *either* formally:

(21) Syntactic analysis of *either*

a. *Either* occupies two positions in a sentence. One is structurally higher than the other. I call *either* in the high position *high either*, and *either* in the low position *low either*.
b. Low *either* is inside the DisjP. There is a lower bound to how low it can be: low *either* must c-command the leftmost focus.
c. High *either* is in the left periphery of DisjP (Spec, DisjP).[1]
d. *Either* moves overtly or covertly from the low position to the high position.

This proposal is schematized below. *Either* starts from a position inside the DisjP c-commanding the leftmost focus Focus$_1$. Then it moves to Spec, DisjP. This movement can be overt or covert. In other words, either copy of *either* can be pronounced.

(22) [$_{DisjP}$ Either$_i$ [$_{Disj'}$ [$_A$ … t$_i$ … Focus$_1$ …] or [$_B$ … Focus$_2$ …]]]

Independent of all of this, ellipsis may apply. Specifically, it is stripping / bare argument ellipsis that creates *either*-seems-high sentences. Extending the derivation in (22), stripping of repeated material X in the second disjunct is added below:

(23) [$_{DisjP}$ Either$_i$ [$_{Disj'}$ [$_A$ t$_i$ X Focus$_1$ …] or [$_B$ ~~X~~ Focus$_2$ …]]]

Having presented the proposal, I will now show how a theoretician will go about analyzing *either* … *or* … sentences using this proposal. Analysis of any sentence involves these three steps. The first step is to locate low *either*. In order to do that, we must find the leftmost focus and make sure that low *either* c-commands it. The second step is to locate high *either*. Because it occupies Spec, DisjP, it is necessary to identify DisjP. The final step is to determine whether the *either* we see is high or low.

[1] High *either* is the sister of DisjP. I call this position Spec, DisjP because I assume, following den Dikken (2006), that *either* is a phrasal adjunct. Therefore, when *either* merges with its sister, the disjunction phrase projects. See section 6 for arguments that *either* is an adjunct.

(24) Analyze an *either* ... *or* ... sentence in three steps:
a. In order to locate low *either*, identify the first focus. Low *either* must c-command the first focus.
b. To locate high *either* (Spec, DisjP), identify DisjP.
c. Is this high *either* or low *either*? If *either* is in Spec, DisjP, it is a high copy. Otherwise, it is a low copy.

I will now demonstrate analyzing the three types of sentences presented at the beginning with these three steps:

(25) a. John will eat either rice or beans. (*Either*-seems-normal)
b. John will either eat rice or beans. (*Either*-seems-high)
c. John will either eat rice or he will eat beans. (*Either*-seems-low)

First, suppose that in (25a) the foci are *rice* and *beans*. I will explain how to identify foci in section 6. Foci are underlined in (26a), and *either* does c-command the leftmost one *rice*. Next, assuming there is no ellipsis for now, then what appears as DisjP is the actual DisjP (26b). Finally, high *either* is the sister of this DisjP. Low *either* is embedded in *DisjP* but c-commands *rice*. Because no overt material intervenes between high *either* and low *either* in this case, what surfaces in (25a) can be high *either* or low *either*.

(26) a. John will eat either rice or beans. Step 1
b. John will eat either [$_{DisjP}$ [$_{A}$ rice] or [$_{B}$ beans]]. Step 2
c. John will eat [$_{DisjP}$ either$_{i}$ [$_{Disj'}$ [$_{A}$ either$_{i}$ rice] or [$_{B}$ beans]]]. Step 3

The *either*-seems-high sentence in (25b) can be analyzed as well, if we add ellipsis to the picture. First, the foci are again *rice* and *beans*, and *either* c-commands the first focus (27a). The next step is to decide what DisjP really is. It can't be what it appears to be, i.e. a disjunction of two DPs. According to the proposal, the highest position *either* can occupy is Spec, DisjP. If the disjoined constituents are really two DPs, *either* will be higher than it can be. But if we allow ellipsis to take place, then the coordinated elements may be two VPs, with the second main verb being deleted under identity with the first one (27b).[2] The final step is to determine which copy of *either* we see on the surface. It is again ambiguous. High *either* is adjacent to the DisjP, and low *either* can (but doesn't have to) be inside the DisjP c-commanding the VP containing rice. Because no overt material separates these two copies, we do not know which one we hear.

[2] One may wonder if coordinated elements can be larger than two VPs in (27). For instance, can two TPs be coordinated, and ellipsis delete more material than in (27b)? This alternative analysis is schematized below, with the *either* that surfaces being a low *either*:

(i) a. John will either eat rice or beans. Step 1
b. [$_{DisjP}$ [$_{A}$ John will either eat rice] or [$_{B}$ ~~John will eat~~ beans]]. Step 2
c. [$_{DisjP}$ Either$_{i}$ John will [$_{Disj'}$ [$_{A}$ either$_{i}$ eat rice] or [$_{B}$ ~~John will eat~~ beans]]. Step 3

Nothing so far rules out this analysis, but it will be ruled out by a restriction on ellipsis presented in section 5.

(27) a. John will either eat rice or beans. Step 1
b. John will either [$_{DisjP}$ [$_{A}$ eat rice] or [$_{B}$ ~~eat~~ beans]]. Step 2
c. John will [$_{DisjP}$ either$_{i}$ [$_{Disj'}$ [$_{A}$ either$_{i}$ eat rice] or [$_{B}$ ~~eat~~ beans]]. Step 3

Finally, in the *either*-seems-low sentence in (25c), again the foci are *rice* and *beans*. *Either* does c-command the leftmost focus *rice* (28a). Next, the disjuncts here are two clauses (28b). Finally, the surface position of *either* is clearly lower than Spec, DisjP, so it is a low copy. The high copy, which is not pronounced in this case, is in Spec, DisjP (28c).

(28) a. John will either eat rice or he will eat beans. Step 1
b. [$_{DisjP}$ [$_{A}$ John will either eat rice] or [$_{B}$ he will eat beans]]. Step 2
c. [$_{DisjP}$ Either$_{i}$ [$_{Disj'}$ [$_{A}$ John will either$_{i}$ eat rice] or [$_{B}$ he will eat beans]]]. Step 3

Because either the high or low copy of *either* may be pronounced, pronouncing the high copy in (28c) would generate the following sentence, which is acceptable too:

(29) Either John will eat rice or he will eat beans.

Having presented the proposal and how it applies to example sentences, it is important to note that this proposal is a hybrid, combining elements from previous proposals in the literature, but also differing from them in important ways. The empirical observation about ellipsis and the idea that *either*-seems-high sentences are derived from ellipsis come from Schwarz (1999) and Han and Romero (2004), but the proposal differs from them in arguing that this ellipsis is stripping, not gapping. The empirical observations about islands and scope, and the idea that *either* moves come from Larson (1985), but the proposal differs from Larson in the starting and ending points of *either*'s movement. Finally, the empirical observation about *either*-seems-low sentences were first made by Larson (1985), and developed further by den Dikken (2006). Hendriks (2001, 2003) and Den Dikken made the observation that *either* must c-command focus, but I differ from den Dikken on exactly where *either* is base-generated relative to the focus.

Section 2 expands on this comparison of the current proposal with previous ones. It argues that none of the previous proposals can cover all four empirical generalizations discussed in this section, but a combination of them can: the current hybrid analysis.

Sections 3-6 present data supporting each empirical generalization, discussing in sequence ellipsis, islands, scope and *either*-seems-low sentences.

This paper not only provides an analysis of the element *either*, but it also relates to a broader generalization about all focus-sensitive operators. As I will show in section 6, *either* must c-command focus, which is the key property of a focus-sensitive operator. If *either* is a focus-sensitive operator, then it should have the property that all focus-sensitive operators have.

Cable (2007), Hirsch (2017), and Quek and Hirsch (2017) have suggested based on cross-linguistic analyses of focus-sensitive operators (question-particles, *only*, and *even* respectively) that perhaps all focus-sensitive operators have two instances in the structure that relate to each other by agreement and/or movement.

If this cross-linguistic generalization is true, then if *either* is a focus-sensitive operator, it should also occupy two positions in the structure. This is precisely what my proposal argues for: *either* has two positions that are related by movement. If this analysis is on the right track, then it adds another data point, *either*, to the universal generalization.

In the concluding section I compare *either* to other focus-sensitive operators, and raise further questions regarding the focus-sensitivity of *either*, such as why *either* is sensitive to the leftmost focus but not the other foci.

2. Previous proposals

This section discusses previous proposals about *either*, argues that none of them can cover all four empirical generalizations, and thus calls for a hybrid proposal. I repeat and summarize the four empirical generalizations below:

(30) a. Ellipsis: *either*-seems-high sentences are derived by ellipsis.
b. *Either*-seems-low: *either* can appear embedded in the DisjP.
c. Islands: *either* may not be separated from the apparent DisjP by an island.
d. Scope: the scope of disjunction is frozen in *either*-seems-high sentences but ambiguous in *either*-seems-normal sentences.

The first proposal I discuss is what I call the *ellipsis-only account* by Schwarz (1999) and Han and Romero (2004). They argue that *either*-seems-high sentences are derived by gapping. Because gapping cannot delete island boundaries, island restrictions follow from this restriction of gapping.

However, ellipsis cannot be the whole story because it cannot explain *either*-seems-low sentences, which do not involve ellipsis. It also fails to account for the observations about scope, in particular why *either*-seems-normal sentences are ambiguous. The facts, as observed by Larson (1985), are repeated below. In (31a-b), the scope of disjunction is fixed at the surface position of *either*, but in (31c), disjunction can scope below *looking for*, between *pretended* and *looking for*, or above *pretended*.

(31) a. Sherlock pretended to **either** be looking for a burglar or a thief.
b. Sherlock **either** pretended to be looking for a burglar or a thief.
c. Sherlock pretended to be looking for **either** a burglar or a thief.

The ellipsis-only account gets the scope of disjunction by undoing ellipsis in the second disjunct. This successfully accounts for (31a-b):

(32) a. Sherlock pretended to **either** be looking for a burglar or ~~be looking for~~ a thief.
b. Sherlock **either** pretended to be looking for a burglar or ~~pretended to be looking for~~ a thief.

It fails to account for the ambiguity of (31c), however. According to this account, *either* is always in Spec, DisjP. And there can only be ellipsis when *either* does not appear in Spec, DisjP. Then there is nothing to elide in (31c) because *either* is already adjacent to DisjP. So the proposal wrongly predicts only one reading for the third sentence.

This ellipsis-only analysis may be saved if we consider the entire DP disjunction to be a quantifier, and allow this disjunction to raise like other quantifiers do. Then the disjunction can quantifier raise (QR) to various positions on the clausal spine, creating different scopes of disjunction. I call this amendment to the ellipsis-only analysis the *QR-based amendment*.

This QR-based amendment does not actually explain the ambiguous readings of (31c). As Rooth and Partee (1982) and Larson (1985) have noted, when the disjunction scopes high, the indefinites in each disjunct can take scope in their base position, creating "split scope readings". (31c) has the following two readings: 'Sherlock pretended to be looking for any burglar, or he pretended to be looking for any thief.' and 'Sherlock pretended to be looking for any burglar, or be looking for any thief.' These readings do not follow from the QR-based amendment because the DP disjunction would QR as a whole, and therefore the indefinites in each disjunct should always take scope at the same position as the disjunction.

This QR-based amendment faces another issue with *either*-seems-high sentences. It would have to explain why QR of the disjunction is suddenly unavailable when *either* appears high, as in (31a,b), where the scope of disjunction is fixed at *either*'s surface position. Suppose the reason is that this is a disjunction of two vPs, and unlike DP disjunction, vP disjunction cannot QR.

Interestingly, when nothing is elided in the second disjunct, ambiguity arises again. In following sentence, disjunction can take scope between *pretended* and *looking for*, or above *pretended*.

(31a') Sherlock pretended to **either** be looking for a burglar or be looking for a thief.
Reading 1 (*pretended* > DisjP > *looking for*): Sherlock pretended to do one of two things: (1) be looking for a burglar; or (2) be looking for a thief.
Reading 2 (DisjP > *pretended* > *looking for*): One of two things happened: (1) Sherlock pretended to be looking for a burglar; or (2) Sherlock pretended to be looking for a thief.

Notice that according to the ellipsis-only account, (31a') differs from (31a) minimally in whether *be looking for* is elided in the second disjunct or not. But (31a) has only one scope reading, while (31a') is ambiguous. The QR-based amendment would then require the disjoined vP to QR in (31a'), but the disjoined vP with elided material to not QR in (31a). It is not clear why the ability of a constituent to QR would correlate with whether some material in this constituent is elided or not.

The second proposal was made by Larson (1985), which I will call the *movement-only account*. Under this account, *either* always originates in Spec, DisjP. When it appears higher than Spec, DisjP, it moves from Spec, DisjP to that surface position.

(33) Either$_i$ John will eat [$_{DisjP}$ t_i rice or beans].

As I will show in section 3, when *either* appears higher than Spec, DisjP, it has not moved there, but ellipsis has applied. This account also does not explain why *either* can appear low.[3]

[3] Larson (1985) has actually suggested several possibilities for how *either* can end up lower than Spec, DisjP. The first is that *either* lowers from Spec, DisjP to inside DisjP:

(i) [$_{DisjP}$ t_i John will either$_i$ eat rice or he will eat beans].

As we will see with examples in section 6, when *either* appears low, it can be the sister of a constituent inside the first disjunct. I illustrate this abstractly below. Suppose the first disjunct is *...A B C .... Either* can be the sister of B:

(ii) [$_{DisjP}$ … A [either B] C … or … D E F].

The third proposal is den Dikken's (2006) *base-generation account*. According to this proposal, *either* is always base-generated in its surface position and must c-command the leftmost focus. This account cannot explain all the island facts. It also leaves open how to attain the scope facts. Exactly how it falls short is not directly relevant to the current discussion, and will be saved for Appendix A.

To summarize, previous proposals cover subsets of the four empirical generalizations, but fail to cover them all. The following table summarizes which generalizations they can and cannot cover:

(34)

Account	Generalizations it covers	Generalizations it does not cover
Ellipsis-only	• Ellipsis • Islands	• *Either*-seems-low • Scope
Movement-only	• Islands • Scope	• Ellipsis • *Either*-seems-low
Base-generation	• *Either*-seems-low • Ellipsis	• Islands • Scope

3. Ellipsis

This section presents two arguments that show that *either*-seems-high sentences are derived by ellipsis. The first argument claims that ellipsis is necessary to explain disjunction of apparent non-constituents. The second argument is replicated from Schwarz (1999) and Han and Romero (2004), and shows that ellipsis is necessary to explain the observed facts about verb particle constructions.

These arguments show that the highest position for *either* is Spec, DisjP. When *either* appears higher, ellipsis has occurred in the second disjunct, creating the impression that the DisjP is smaller than it actually is, and therefore *either* is higher than it actually is. (35a) is an *either*-seems-high configuration, and (35b) is argued to be its deep structure:

(35) a. … either … X … [$_{DisjP}$ A or B]
b. … [$_{DisjP}$ either [$_{Disj'}$ … X … A or ~~… X …~~ B]]

It is not clear from Larson's suggestion how lowering works, or what positions *either* can lower to. But the sister position of B is so embedded that it is hard to imagine lowering targets this position.

Another possibility suggested by Larson is that instead of lowering, VP and TP are asymmetrically disjoined to create the impression that *either* is lower than Spec, DisjP:

(iii) John will **either** [$_{DisjP}$ [$_{VP}$ eat rice] or [$_{TP}$ he will eat beans]].

Suppose we allow asymmetric disjunction of not only VP and TP, but any constituents. This idea still fails to account for the following example:

(iv) John ate either rice with chopsticks or he ate beans with a fork.

In this example, *rice with chopsticks* is not a constituent and therefore cannot be coordinated with something else.

After arguing for the existence of ellipsis, I will investigate what kind of ellipsis it is. Contra Schwarz (1999) and Han and Romero (2004), I will argue that it is stripping rather than gapping that derives *either*-seems-high sentences.

I will also make novel observations about scope interactions in negative stripping sentences of the form ... *but not ...,* and propose an analysis that accounts for these observations. This analysis follows the idea that the reading of a stripping sentence results from recovering deleted material. While this analysis appears to solve a puzzle in stripping sentences, it is essentially a preview of the analysis of scope in *either*-seems-high sentences, which are just another type of stripping sentences.

3.1. Argument for ellipsis: Disjunction of "non-constituents"

The first argument for ellipsis relies on a simple assumption: only constituents can be disjoined. This is schematized below:

(36) [$_{\text{DisjP}}$ A or B] only if A is a constituent and B is also a constituent

Suppose this is true for all disjunctions. If we see a grammatical disjunction in which the apparent second disjunct is not a constituent, there must be ellipsis in the second disjunct, so that before ellipsis it is a constituent. This is schematized below. C is what surfaces in the second disjunct. While C may not be a constituent on its own, when ellipsis of X is undone, X and C together must be a constituent.

(37) [$_{\text{DisjP}}$ A or [$_{\text{B}}$ ~~X~~ C]] only if A is a constituent and B is also a constituent

To illustrate this with examples, first consider the following sentence:

(38) John ate either rice from Shanghai or beans from Paris.

The two disjuncts in this sentence are *rice from Shanghai* and *beans from Paris*. Both are constituents and DPs. It satisfies the requirement that disjuncts must be constituents.

Now consider the following grammatical sentence. It is a minimal pair with the above sentence, differing only in the PP. Here the PPs *with chopsticks* and *with a fork* are instrumental phrases that modify the verb, so they do not form a constituent with the preceding nouns. In other words, the apparent second disjunct *beans with a fork* is not a constituent.

(39) John ate either rice with chopsticks or beans with a fork.

This apparently violates the generalization that disjuncts must be constituents. But we can in fact maintain this generalization if we posit ellipsis in the second disjunct. Below are two possible derivations for this sentence:

(40) a. John ate either rice with chopsticks or ~~ate~~ beans with a fork.
b. John ate either rice with chopsticks or ~~he ate~~ beans with a fork.

Once ellipsis is undone, now the second disjunct does form a constituent: *ate beans with a fork*, or *he ate beans with a fork*.

Therefore, ellipsis is necessary if we want to maintain the plausible generalization that only constituents can be disjoined.

3.2. Argument for ellipsis: Verb particle constructions

This section summarizes the arguments from Schwarz (1999) and Han and Romero (2004). For the relevance of ellipsis to *either*-seems-high sentences, below is an *either*-seems-high example:

(41) John will either eat rice or beans.

The competing analyses under evaluation are the ellipsis-only account by Schwarz and Han and Romero, and the movement-only account by Larson (1985). According to the former account, *either* is always in Spec, DisjP, but ellipsis may take place in the second disjunct, so that DisjP is bigger than it appears (42a). In contrast, the latter analysis contends that there is no ellipsis at all; *either* moves from Spec, DisjP to its surface position, and DisjP is what we see (42b).

(42) a. John will either [$_{\text{DisjP}}$ eat rice or ~~eat~~ beans].
b. John will either$_i$ eat t_i [$_{\text{DisjP}}$ rice or beans].

Schwarz (1999) has argued based on evidence from verb particle constructions that *either*-seems-high sentences are derived by ellipsis, not movement. First, consider the puzzle below: when *either* precedes the TP, the sentence is degraded compared to preverbal *either*.

(43) a. ??Either this pissed Bill or Sue off. (Schwarz 1999:360)
b. This either pissed Bill or Sue off. (Schwarz 1999:357)

Note that both these sentences are *either*-seems-high sentences, and Schwarz and Han and Romero would analyze them as containing ellipsis in the second disjunct.

A unique and important fact about these examples is that they involve verb particle constructions, and the particle only appears in the second disjunct. Schwarz (1999) argues that the particle *off* is Right Node Raised (*RNRed*) out of each disjunct:

(44) This either pissed Bill t_i or Sue t_j off$_{i,j}$.

Then (43a) is degraded because particles resist RNR:

(45) ??Either this pissed Bill t_i or Sue t_j off$_{i,j}$.

The observation can then be phrased as the following: RNRing the particle is good when *either* is pre-verbal, but degraded when *either* is pre-TP.

Suppose for now that there is ellipsis in the second disjunct in these two sentences just as Schwarz and Han and Romero have argued. Interestingly, the non-elliptical versions have the same level of goodness/ degradation as their elided counterparts:

(43a') ??Either this pissed Bill or it pissed Sue off. (Schwarz 1999:359)
(43b') This either pissed Bill or pissed Sue off.

Schwarz assumes that the particle *off* is also RNRed out of each disjunct in (43a'&b'). Then his conclusion based on (43a'&b') is that RNRing a bare particle to a position above TP is more degraded than RNRing the particle just above VP.

This conclusion can account for the puzzle in (43a,b) if we allow the ellipsis-only analysis. Because *either* is always in Spec, DisjP, its position marks the actual size of the disjuncts. In (43a) it is adjacent to TP, so the disjuncts are TP, and the particle moves across the second disjunct, which is a TP:

(46) ??Either [$_{TP}$ this pissed Bill t_i] or [$_{TP}$ ~~this pissed~~ Sue t_j] $off_{i,j}$.

In (43b) *either* is adjacent to VP, so the disjuncts are VP, and the particle moves across the second disjunct, which is a VP:

(47) This either [$_{VP}$ pissed Bill t_i] or [$_{VP}$ ~~pissed~~ Sue t_j] $off_{i,j}$.

Thus, the puzzle in (43a,b) results from an interaction between RNRing a bare particle and the size of the constituent that this bare particle moves across. The constituent that the particle moves past is the second disjunct, so the size of this disjunct determines whether RNRing the particle across the disjunct is possible. If this disjunct is a TP, RNRing the particle across it is degraded. If this disjunct is a VP, RNRing the particle across it is fine. And whether this disjunct is a TP or a VP is marked by the position of *either*. Because *either* is in Spec, DisjP, its sister is the DisjP.

Imagine that instead of staying in Spec, DisjP, there is a variant of *either* that moves away from Spec, DisjP. If this is the case, the surface position of *either* is no longer an indicator of the size of the disjuncts.

Either's *wh*-counterpart *whether* is precisely such an element that can move away from Spec, DisjP. Literature generally assume that *whether* is *either* with an additional *wh*-feature (e.g. Larson 1985, Han and Romero 2004, den Dikken 2006). Then *whether* and *either* should have almost the identical derivational history in syntax (originating in Spec, DisjP), except that *whether* requires an extra movement step to the CP domain.

Because *whether* always moves from Spec, DisjP overtly to Spec, CP, just from its surface position in Spec, CP, we do not know where it moves from or what the actual disjuncts are. If the actual disjuncts are smaller than TP, then RNRing above them will be fine.

This prediction is borne out, as Schwarz and Han and Romero have observed that replacing *either* with its *wh*-counterpart *whether* improves the sentence:

(48) I wonder whether this pissed Bill or Sue off. (Schwarz 1999:368)

As Han and Romero have pointed out, the reason for the acceptability of (48) is that it can have the following parse. In this parse, what are actually disjoined are two VPs, with the repeated main verb being deleted in the second disjunct. *Whether* moves from the specifier of this DisjP to Spec, CP. Because what are disjoined are two VPs, it is fine to RNR the particle *off* across the second disjoined VP.

(49) I wonder whether$_i$ this [$_{DisjP}$ t_i [$_{VP}$ pissed Bill t_j] or [$_{VP}$ ~~pissed~~ Sue t_k]] off$_{j,k}$.

Having shown how the ellipsis story accounts for the puzzle successfully, I will briefly discuss the inadequacy of Larson's movement-only account (1985). Recall that according to this analysis, there is no ellipsis, so the DisjP is what we see. Then the reason why *either* can appear higher than Spec, DisjP is because it moves from Spec, DisjP to its surface position.

This analysis would attribute the contrast between (43a,b) to the following: when a particle is RNRed, somehow *either* cannot move to as high as the TP domain, but it can still move to VP:

(50) a. ??[$_{TP}$ Either$_i$ this pissed t_i [$_{DisjP}$ Bill t_j or Sue t_k] off$_{j,k}$].

b. This [$_{VP}$ either$_i$ pissed t_i [$_{DisjP}$ Bill t_j or Sue t_k] off$_{j,k}$].

However, this analysis has two weaknesses. First, it cannot explain why (43a') is just as degraded as (43a). In (43a') *either* has not moved because it is already in Spec, DisjP.

Second, this movement analysis cannot account for the *whether* example in (48) because there is no flexibility in the starting position of *whether*. It has to start from Spec, DisjP, immediately before *Bill*. This would be the same as *either*'s starting position in the sentences above. If somehow (50a) is degraded because *either* can't move so high as to the TP domain, it is puzzling why *whether* can move even higher to the CP domain.

(51) I wonder [$_{CP}$ whether$_i$ this pissed t_i [$_{DisjP}$ Bill t_j or Sue t_k] off$_{j,k}$].

3.3. The ellipsis is stripping

The previous two subsections have argued that ellipsis derives *either*-seems-high sentences, i.e. (52a) is derived from (52b). The next question is what kind of ellipsis it is. Contra Schwarz (1999) and Han and Romero (2004), I will argue that it is stripping/ bare argument ellipsis rather than gapping.[4]

(52) a. … either … X … [$_{DisjP}$ A or B]
b. … either [$_{DisjP}$ … X … A or ~~… X …~~ B]

Note that I do not exclude the possibility that gapping (and other types of ellipsis) can occur in *either … or …* sentences. The question of concern here is what kind of ellipsis derives *either*-seems-high sentences, i.e. what is the deletion mechanism in (52b).

Let us call this ellipsis operation *X*. I will show that X is less restricted than gapping on the one hand, but has identical behavior to stripping on the other hand. First, I will show that both X and stripping can do what gapping cannot do. Then I will show that what X cannot do, stripping cannot either.

Based on this I argue that X is stripping, and adopt Depiante's (2000) analysis of stripping: leftward movement of the element that survives ellipsis (*remnant*) out of the ellipsis site, and deletion of the ellipsis site. I will briefly discuss how this analysis accounts for the observed facts about stripping.

[4] I am grateful to an NLLT reviewer for suggesting stripping as a possibility.

However, X seems freer than stripping in that the remnant of X can move to more positions than some have argued that the remnant of stripping can. I will argue that the remnant of stripping can move to more positions than we thought, and so X is no more or less restrictive than stripping. This argument will rely on an analysis of scope interactions in stripping sentences, which is very similar to my analysis of scope in *either ... or ...* sentences that will appear in section 5.

3.3.1. Gapping cannot do what X can do, but stripping can

First, gapping must eliminate at least the finite verb in noninitial coordinates:

(53) a. Charley wrote several books on syntax and Jill ~~wrote~~ several books on semantics.
b. *Charley wrote several books on syntax and Jill read ~~several books on semantics~~.
(Based on Schwarz 1999:353)

X does not have to delete the finite verb:

(54) a. I saw John either at Harvard or ~~at~~ MIT.
b. Either John cooked rice or ~~John~~ baked beans.

Gapping cannot delete part of a preposition phrase and leave the rest:

(55) a. Charley wrote with a pencil and Jill ~~wrote~~ with a pen.
b. *Charley wrote with a pencil and Jill ~~wrote with~~ a pen.
c. *Charley wrote with a pencil and Jill ~~wrote with a~~ pen. (Based on Hankamer 1979:18)

X and stripping can delete part of a preposition phrase:

(56) Charley either wrote with a pencil or ~~wrote with~~ a pen. *X*
(57) Charley wrote with a pencil, but not a pen. *Stripping*

Gapping cannot elide a portion of an object DP:

(58) a. *Charley wrote several books on syntax and Jill ~~wrote several~~ papers on semantics.
b. *Charley wrote several books on syntax and Jill ~~wrote several books on~~ semantics.
(Based on Johnson 2014:13)

X and stripping can elide a portion of an object DP:

(59) a. Charley either wrote several books on syntax or ~~wrote several~~ papers on semantics. *X*
b. Charley either wrote several books on syntax or ~~wrote several books on~~ semantics.

(60) a. Charley wrote several books on syntax, not papers on semantics. *Stripping*
b. Charley wrote several books on syntax, not semantics.

Gapping cannot elide a part of a predicate, an object PP or an AdvP:

(61) a. *Some appeared almost happy and others ~~appeared almost~~ rich.
b. *Some talked only to Smith and others ~~talked only~~ to Jones. (Johnson 2014:15)
c. *Some left extremely quickly and others ~~left extremely~~ sneakily.

X and stripping can delete a part of a predicate, an object PP or an AdvP:

(62) a. John either appeared almost happy or ~~appeared almost~~ rich. *X*
b. John either talked only to Smith and ~~talked only~~ to Jones.
c. Either Charley left extremely quickly or ~~he left extremely~~ sneakily.

(63) a. John appeared almost happy, not rich. *Stripping*
b. John talked only to Smith, not to Jones.
c. Charley left extremely quickly, not sneakily.

Because X is less restrictive than gapping, I assume it is not gapping.

3.3.2. Stripping cannot do what X cannot do

Having shown that stripping can do what X can do, now I will show that what X cannot do, stripping cannot do either.

First, if the constituent that survives X or stripping (*remnant* of X or stripping) contains a preposition, it must be identical to that of the correlate. The preposition cannot be replaced by the semantically empty preposition *of*, suggesting that there is a selectional relation between the verb in the elided structure and the remnant PP:

(64) John either relies on Mary or on/*of Susan. *X*

(65) John relies on Mary, but not on/*of Susan. *Stripping*
(Yoshida et al. 2015:333)

Second, in languages that do not allow preposition stranding, the remnant of X must contain the preposition adjacent to the object DP. Hebrew, for example, does not allow preposition stranding in *wh*-questions:

(66) *Mi David diber im?
Who David talked with
'Who did David talk to?' Wh-*question*
(Depiante 2000:108)

The preposition of a PP object must occur in the remnant of X. I assume that in the following example, the first *o* 'or' is equivalent to English *either*.

(67) David diber o im Maria o *(im) Yael
David talked or with Maria or with Yael
'David talked either with Maria or with Yael.' *X*
(I. Bassi, p.c.)

The preposition of a PP object must occur overtly in the stripping remnant as well:

(68) David diber im Maria, aval lo *(im) Yael
David talked with Maria but not with Yael
'David spoke with Maria but not with Yael.' *Stripping*
(Depiante 2000:108)

Likewise, Greek does not allow preposition stranding in *wh*-questions:

(69) *Pjohn milise me?
Who spoke with?
'Who did s/he speak with?' Wh-*question*
(Depiante 2000:108)

The preposition of a PP object must occur in the remnant of X. Again, I assume that in the following example the first *i* 'or' is the equivalent of English *either*:

(70) I Ana i milise me ton Alec i *(me)tin Katerina
the Anna or spoke with the Alec or with the Katerina
'Anna either spoke with Alec or with Katerina.' *X*
(S. Iatridou, p.c.)

The remnant of stripping must contain the preposition of a PP object as well:

(71) I Anna doulevi stopanepistimio kai ochi *(stin) IBM
'Anna works in the university, and not *(in) IBM.' *Stripping*
(Depiante 2000:108)

To preview the analysis for this fact, Depiante takes this as evidence that the remnant of stripping undergoes movement, so it is subject to the same restrictions that other movements are subject to. In a language that disallows preposition stranding, the preposition cannot be stranded in stripping either. Instead, the preposition must be pied-piped by the stripping remnant. Adopting this analysis for X, the remnant of X must undergo movement as well.

The third behavior shared by X and stripping is that the voice in the first con/disjunct must match the voice in the second:

(72) a. Either Max brought the roses, or Amy ~~brought the roses~~. *X*
b. *Either Max brought the roses, or ~~the roses were brought~~ by Amy.
a. The roses were either brought by Max or ~~brought~~ by Amy.

(73) a. Max brought the roses, but not Amy. *Stripping*
b. *Max brought the roses, but not by Amy. (Merchant 2007:6)
c. The roses were brought by Max, but not by Amy. (Yoshida et al. 2015:336)

Merchant (2007, 2008, 2013) has used voice (mis)match as a diagnostic for the size of the ellipsis site. If an ellipsis does not allow voice mismatch, then this ellipsis must delete at least

VoiceP, which is what he calls *clausal ellipsis*. Following Merchant's analysis, I assume that X like stripping is clausal ellipsis.[5]

Fourth, a complex NP boundary cannot be deleted by X or stripping:

(74) *X*

a. *Either the fact that the president has resigned or ~~the fact that~~ the defense minister has resigned got much publicity.

b. *We have either interrogated the burglar who stole the car or ~~interrogated the burglar who stole~~ the diamonds already.

c. *Either a musician who loved Bach or ~~a musician who loved~~ Mozart arrived.

(75) *Stripping*

a. *The fact that some politician has resigned got much publicity, but not the defense minister.

b. *We have interrogated the burglar who stole the car already, but not the diamonds.

c. *A musician who loved Bach arrived and Mozart too. (Depiante 2000:113)

Neither stripping nor X can delete an adjunct island boundary either:[6]

(76) *X*

a. *Either although Mary will go in the morning or ~~although~~ John will go in the afternoon, Tim still refuses to go.

b. *Either because Mary will clean the room or ~~because~~ John will wash the dishes, the apartment will be cleaner than before.

c. *Either as long as Mary will attend the party or ~~as long as~~ John will DJ, it will be a blast.

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[5] The only exception I can think of is (52a), repeated below. Here X only deletes the preposition, and is therefore not clausal ellipsis.

(i) I saw John either at Harvard or ~~at~~ MIT.

Thus, this example calls for a more precise definition of clausal ellipsis. If the ellipsis operates on the clausal spine, it must delete at least VoiceP. But if it only operates on a simple argument / adjunct (e.g. *at MIT*), then it is not required to delete VoiceP because there is no VoiceP to delete.

[6] It has also been noted in the literature (e.g. Larson 1985 and den Dikken 2006) that *either* can't be separated from the apparent DisjP by a finite clause boundary (*either* occurs in one of the bracketed positions):

(i) <??Either> he <??either> said <%either> that <either> he <either> would <either> eat <either> rice or beans.

However, an acceptability judgment survey conducted by Hofmeister (2010) indicates no significant difference between the judgment of the high positions of *either* above C and the lower positions below C. These positions are considered to be equally good, which suggests that the restriction on the clause-boundedness of high *either* may not be correct.

Similarly, there has been disagreement in the literature on whether stripping across an embedded finite clause is possible:

(ii) Every linguist here claimed that NLLT should publish a certain kind of review on his oldest book, but not other kinds of reviews on his oldest book. (Yoshida et al. 2015:342)

Lobeck (1995:27), for example, considers it impossible to strip across an embedded finite clause, contra Depiante (2000) and Yoshida et al. (2015). For these reasons, I do not list this as a restriction on X or stripping here.

(77) *Stripping*
   a. *Although Mary will go in the morning, the event is still overcrowded, but not John.
   b. *Because Mary will clean the room, the apartment will be cleaner than before, but not John.
   c. *As long as Mary will DJ at the party, it will be a blast, but not John.

The properties of stripping listed above have led to Depiante's (2000) analysis: stripping involves leftward movement of the remnant followed by clausal ellipsis:[7]

(78) John relies on Mary, but not [on Susan]$_i$ ~~John relies t_i~~.

In order for ellipsis to take place, the elided phrase (E) must be parallel to the antecedent phrase (A). Depiante claims that the phrase that corresponds to the remnant in the first conjunct *on Mary* (*correlate*) undergoes LF movement in parallel. With the movements of the correlate and the remnant, A and E are identical, and ellipsis is licensed:

(79) [On Mary]$_j$ [$_A$ John relies t_j], but not [on Susan]$_i$ [$_E$ ~~John relies t_i~~].

This analysis accounts for the properties of stripping in the following ways. Because the elided phrase contains the verb that selects for the remnant, the remnant must contain the preposition (*on* in (65)) that is selected for by the verb (*relies*). Because stripping involves movement of the remnant, in languages that ban preposition stranding, the preposition cannot be stranded by the movement of the stripping remnant. Parallelism requires identity between the elided phrase and the antecedent phrase, including the Voice head. The movement of the remnant is subject to island constraints, therefore the stripping construction cannot occur across islands.

According to Depiante, the remnant has to move left because in English preposition stranding is only possible with leftward movement such as *wh*-movement and topicalization, and not with rightward movement such as heavy NP shift:

(80) a. *I talked to t_i yesterday [the man with long hair]$_i$.
   b. I talked t_i yesterday [to the man with long hair]$_i$. (Depiante 2000:108)

Because X has the same properties as stripping, I assume it is stripping, and apply Depiante's analysis of stripping to X.[8] Thus, in an *either*-seems-high sentence, the remnant moves out of the

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[7] This is actually not a completely faithful illustration of Depiante's analysis. Depiante assumes that *not* is constituent negation, and moves together with the PP:

(i) John relies on Mary, but [not on Susan]$_i$ ~~John relies t_i~~.

I differ from him in assuming that *not* is sentential negation and base-generated in its surface position. One reason to adopt this sentential view of *not* is that the compositional semantics of sentential negation is more straightforward than that of constituent negation (Merchant 2003). The other reason is that the sentential view of negation makes the later discussion easier, which studies the scope of negation relative to other scope-bearing elements.

[8] Stripping has been studied in many works (Fiengo and May 1994; Hankamer and Sag 1976; Kim 1998; Lobeck 1995; May 1991; McCawley 1988; Merchant 2004; Reinhart 1991; Ross 1969; Depiante 2000, among others). Out of these, Merchant and Depiante have the same line of analysis. For a comparison of Depiante's proposal with Hankamer and Sag (1976), Reinhart (1991), May (1991), Kim (1998), Heim and Kratzer (1998), McCawley (1988), Hudson (1976), and Lopez (1999, 2000), see Depiante, based on which I have chosen to follow Depiante.

ellipsis site, and in parallel the correlate moves out of the antecedent phrase at LF. After these movements, the antecedent phrase and the elided phrase are identical, licensing stripping of the elided phrase:

(81) John either [on Mary]$_j$ [$_A$ relies t$_j$] or [on Susan]$_i$ [$_E$ ~~relies t$_i$~~].

3.3.3. Stripping is freer than we thought, and as free as X

Depiante (2000) and Merchant (2004) suggest that the remnant of stripping undergoes focus movement, landing in the specifier of the focus phrase FP. According to Depiante, FP is projected above TP. According to Merchant, FP is above CP.[9]

In (81), however, the remnant of X lands below TP. The disjunction in (81) coordinates two T', and then merges with the subject *John*, so presumably the remnant and the correlate move to somewhere between T' and TP, and does not move to a position above TP or CP:

(82) [$_{TP}$ John [$_{DisjP}$ either [$_{T'}$ [on Mary]$_j$ [$_A$ relies t$_j$]] or [$_{T'}$ [on Susan]$_i$ [$_E$ ~~relies t$_i$~~]]]].

If the remnant of stripping always lands above TP or CP, then does the fact that the remnant of X in (81) lands below these projections indicate that X is not stripping?

I want to argue that even in stripping, the remnant cannot always land above TP or CP. Then stripping is freer than we thought, allowing its remnant to land in multiple positions on the clausal spine, as Yoshida et al. (2015) have already suggested. And X is no freer than stripping.

I will show that the stripping remnant can move to somewhere below TP through a study of the interaction of scope-bearing elements in some stripping sentences, which has not been discussed before to my knowledge. I will use the island constraints on stripping to account for these scope interactions.

It is worth mentioning that this analysis is essentially a preview of my analysis for scope in *either*-seems-high sentences, which will be presented in detail in section 5. The analyses of the scope interactions in stripping and *either ... or ...* sentences bear a lot of similarity because as I argue in this section, X is stripping. Then if the observations about scope in *either ... or ...* sentences are parallel to those in stripping sentences, the same analysis should apply to both constructions.

The analysis of stripping sentences begins with Lappin's (1996) observation about some apparent island violations in stripping. As we have seen earlier, stripping cannot occur across complex NP islands or adjunct islands. However, Lappin has observed some apparent island violations that are nevertheless acceptable. Take the following sentences as examples:

(83) Sherlock solved the case [$_{AdjunctP}$ due to finding an open window], but not blood stains.
(84) Everyone was surprised by [$_{Complex\ NP}$ John's decision to greet Sue], but not Mary.

[9] In fact, Merchant proposed this analysis for English fragment answers, and later suggested that it can be extended to English stripping as well. The landing site of the stripping remnant must land above CP in order to account for the island sensitivity of stripping in Merchant's system.

I want to argue that these apparent island violations do not actually violate island constraints (see Depiante (2000:footnote 39) for a similar suggestion). Take (83) as an example. Following are some of its available and unavailable readings:[10]

(85) Sherlock solved the case due to finding an open window, but not blood stains.
Available reading: Sherlock solved the case due to finding an open window and not finding blood stains.
Unavailable reading: Sherlock found both an open window and blood stains. He solved the case due to finding an open window, and he solved the case not due to finding blood stains. An open window is the critical clue, and blood stains are not.

In the available reading, the scope of negation is embedded in the adjunct clause, whereas in the unavailable reading, negation takes scope out of the adjunct clause, and in particular above *due to*.

I also observe that negation cannot scope out of the adjunct clause in which it is syntactically present. Conversely, when negation is present in the matrix clause, it cannot take scope inside an embedded adjunct clause. This observation is shown by the examples below, where one sentence lacks the reading that the other sentence has:

(86) Sherlock solved the case due to not finding blood stains.
Available reading: Sherlock solved the case due to discovering an absence of blood stains.

(87) Sherlock didn't solve the case due to finding blood stains.[11]
Available reading: Sherlock solved the case, and found blood stains, but finding blood stains is not the reason for his solving the case.

In addition, suppose that to get a reading for a stripping sentence, we need to recover the deleted material. Then the available reading of (83) corresponds to the occurrence of negation below *due to* in the underlying structure before stripping, and the unavailable reading corresponds to the occurrence of negation above *due to*. The following sentences correspond to the underlying structures of the available reading and unavailable reading of (83) respectively:

(88) a. Sherlock solved the case due to [$_{vP}$ finding an open window], but not [$_{vP}$ ~~finding~~ blood stains].
b. *[$_{TP}$ Sherlock solved the case due to finding an open window], but not [$_{TP}$ ~~Sherlock solved the case due to finding~~ blood stains].

Recall that in the analysis for stripping, the remnant *blood stains* must move out of the ellipsis site. I add this movement step below:

[10] There are other available readings, but since they are not relevant to the current discussion, I omit them here.
[11] Because the adjunct clause can attach to various positions on the clausal spine, this sentence also has the following reading (with the adjunct clause attaching above matrix negation): 'Sherlock didn't solve the case, but he did find blood stains, and finding blood stains is the reason why he didn't solve the case.' What is crucial is that example (86) does not have this reading.

(89) a. Sherlock solved the case due to [$_{vP}$ finding an open window], but not [blood stains]$_i$ [$_{vP}$ ~~finding t_i~~].
b. *[$_{TP}$ Sherlock solved the case due to finding an open window], but not [blood stains]$_i$ [$_{TP}$ ~~Sherlock solved the case due to finding t_i~~].

In (89b) the remnant moves across the adjunct island, and the corresponding reading is thus blocked. In contrast, the remnant in (89a) does not move across the adjunct island, so the corresponding reading is present.

Since the presence or absence of the island-offending remnant movement correlates with the presence or absence of the relevant reading, we can get negation to scope above *due to* by turning the entire island into the stripping remnant. Consider the following example, which does have the high scope for negation:

(90) Sherlock solved the case due to finding an open window, but not due to finding blood stains.
Available reading: Sherlock found both an open window and blood stains. He solved the case due to finding an open window, and he solved the case not due to finding blood stains. An open window is the critical clue, and blood stains are not.

The high scope for negation is available now because the entire island moves as the remnant, and this movement does not cross any island boundary:

(91) [$_{TP}$ Sherlock solved the case due to finding an open window], but not [due to finding blood stains]$_i$ [$_{TP}$ ~~Sherlock solved the case t_i~~].

This analysis makes a prediction. If we block the only available parse in (89a), then the sentence should become ungrammatical. This prediction is borne out by following sentences.

(92) a. *Due to finding an open window, Sherlock solved the case, but not blood stains.
b. #The veteran CEO was successful due to having charisma, but not experience.

Example (92a) is ungrammatical because the conjuncts are clearly two finite TPs, and now the remnant must move across the adjunct island:

(93) *[$_{TP}$ Due to finding an open window, Sherlock solved the case], but not [blood stains]$_i$ [$_{TP}$ ~~due to finding t_i, Sherlock solved the case~~].

Example (92b) is infelicitous because the only available reading that does not offend the adjunct island is contradictory: 'The veteran CEO was successful due to having charisma, and not having experience,' assuming that *veteran* is synonymous to *experienced*.[12]

[12] Interestingly, some speakers report that the sentence is OK without *but* and with a lot of prominence on the contrastive foci *charisma* and *experience*:
(i) The veteran CEO was successful due to having CHARISMA, not EXPERIENCE.

Some literature has treated *but* as optional in stripping (e.g. Merchant 2003). In other words, (i) would be considered to involve stripping just as (92b) does. However, the observed contrast between them suggests that they are not the same. Perhaps (i) does not involve stripping. The fact that (i) creates exceptionally wide scope of negation out of the

Note that in the available parse (89a), the remnant has to move to a position within the adjunct clause. Assuming that there is no CP or TP (at least Spec, TP, since the subject is absent) embedded in this adjunct clause, the remnant has to move to somewhere in the vP (or T') domain. This contradicts Depiante's (2000) and Merchant's (2004) claims that the remnant movement always targets the focus position above TP or CP.

Likewise, the reader can verify that the same considerations apply to (84). I omit the analysis here for the sake of space. To get the reading of (84), the remnant has to move to a position within the complex NP, which only contains TP and not CP.

Therefore, in general cases of stripping, remnant movement can target positions below TP as well as positions above TP and CP. Then if the ellipsis that creates *either*-seems-high sentences is indeed stripping, it must also have the liberty to allow the remnant movement to target various positions.

To summarize, this section has argued that not only are *either*-seems-high sentences created by ellipsis, but this ellipsis is stripping. Also, stripping is freer than we thought, involving remnant movement to various positions on the clausal spine. A stripping sentence may have multiple readings because it is ambiguous between structures where the remnant moves to different positions. The respective readings arise from recovering deleted material. When the remnant movement offends island constraints, the respective reading disappears.

In the rest of this paper I will assume that stripping creates *either*-seems-high sentences: the remnant moves out of the ellipsis site, and the ellipsis site is deleted. If *either*-seems-high sentences involve stripping, and my analysis for the scope interactions in stripping in this section is correct, then this analysis should also apply to *either*-seems-high sentences. Section 5 shows in detail how it applies there.

4. Island sensitivity

Although *either*-seems-high sentences are created by ellipsis, ellipsis alone is not sufficient. This section argues for the need to posit movement of *either* by showing that the position of *either* is sensitive to islands.

The ellipsis-only account cannot cover *either*-seems-low sentences because there is nothing to elide in these sentences:

(94) a. John will either eat rice or he will eat beans.
b. John either will eat rice or he will eat beans.

In light of these *either*-seems-low sentences, let us suppose that in addition to the sister of DisjP, there is another position for *either*, i.e. the surface position of *either* in these *either*-seems-low sentences, as was previewed in section 1.

Then are these two positions of *either* related or independent of each other? Evidence involving islands suggests that the higher position (sister of DisjP) is created by *either*'s movement from the lower position (inside DisjP).

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adjunct island suggests that it may involve a sluicing-like ellipsis, which can delete island boundaries. I leave to future research a syntactic analysis of *but* such that a clause with *but* involves stripping, whereas a clause without *but* involves sluicing.

As den Dikken (2006) has observed, *either* in *either*-seems-low sentences may not occur below a complex NP boundary, negation or a preposition. I add another observation that *either* in *either*-seems-low sentences may not occur below an adjunct clausal boundary:

(95) *Either* can't occur below a complex NP boundary in *either*-seems-low sentences:
a. *John revised [$_{NP}$ his decision to **either** eat rice] or he revised his decision to eat beans.
b. *John revised [$_{NP}$ his decision **either** to eat rice] or he revised his decision to eat beans.
c. John **either** revised [$_{NP}$ his decision to eat rice] or he revised his decision to eat beans.
(based on den Dikken 2006:(74))

(96) *Either* can't occur below negation in *either*-seems-low sentences:
a. *John [$_{NegP}$ didn't eat **either** rice] or he didn't eat beans.
b. John **either** [$_{NegP}$ didn't eat rice] or he didn't eat beans.
c. **Either** John [$_{NegP}$ didn't eat rice] or he didn't eat beans. (den Dikken 2006:(47))

(97) *Either* can't occur below a preposition in *either*-seems-low sentences:
a. *John was reading [$_{PP}$ from **either** a book] or he was reading from a magazine.
b. John was reading **either** [$_{PP}$ from a book] or he was reading from a magazine.
c John was **either** reading [$_{PP}$ from a book] or he was reading from a magazine.
(den Dikken 2006:(73d))

(98) *Either* can't occur below an adjunct clausal boundary in *either*-seems-low sentences:
a. *John went home [$_{AdjP}$ after **either** eating rice] or he went home after eating beans.
b. John **either** went home [$_{AdjP}$ after eating rice] or he went home after eating beans.

Complex NP and adjunct clauses are islands to movement. Assuming that *either* is not nominal, negation would also be an island to its movement too. I follow den Dikken (2006) in assuming that only nominals can escape from a PP, then *either*'s movement would be blocked by P as well. Therefore, in these examples, *either* must move covertly across the island boundary, creating an island violation. Specifically, *either* moves covertly to the sister position of the DisjP.[13]

Recall that *either* surfaces as the sister of DisjP in *either*-seems-high sentences. Therefore, I argue that *either* is always base-generated inside the DisjP, and then moves to Spec, DisjP. In *either*-seems-low sentences, *either* moves covertly, whereas it does so overtly in *either*-seems-high sentences.

Recall the terminology introduced in section 1: I call the origination site of *either* low *either* (*either*'s surface position in *either*-seems-low sentences), and the landing site high *either*

[13] A reviewer has asked about the acceptability of *either* below a complementizer in *either*-seems-low sentences. Here are the reported judgments:

(i) ?He said that he either would eat rice or that he would eat beans.
(ii) ??He said that he either would eat rice or claimed that he would eat beans.

These sentences do not sound so bad to my informants, which indicates that the covert movement of *either* is not clause-bound:

(i) ?He said either$_i$ that he either$_i$ would eat rice or that he would eat beans.
(ii) ??He either$_i$ said that he either$_i$ would eat rice or claimed that he would eat beans.

(*either*'s surface position in *either*-seems-high sentences). Then high *either* is created by movement of low *either*, and low *either* must not occur inside an island:

(99) *… either$_H$ … [$_{island}$ … either$_L$]

One may wonder if *either*'s movement violates the coordinate structure constraint (CSC). I assume that CSC is a ban on movement from one of the coordinates to outside the coordinated structure (100a). Here in (100b), *either* has not moved outside DisjP, but to Spec, DisjP, so it does not violate CSC.

(100) a. *XP$_i$ ... [$_{DisjP}$ [$_A$ … t$_i$ ...] or [$_B$ …]]
b. ... [$_{DisjP}$ either$_i$ [$_{Disj'}$ [$_A$ … t$_i$ ...] or [$_B$ …]]]

Another naturally question to ask is why *either* moves. Presumably this movement is triggered by agreement with the disjunction head. In response to the probing disjunction head, *either* moves to Spec, DisjP and agrees with it.[14]

There is morphological evidence for this agreement relation. In the negative version (*neither…nor…*), spreading of the negative feature to both disjunction coordinators *neither* and *nor* suggests that they do share features.

Having examined the island-related facts in *either*-seems-low sentences, let us review Larson's (1985) observation about island facts in *either*-seems-high sentences. *Either* cannot be separated from the apparent DisjP by a complex NP boundary or negation, as (101) and (102) show respectively. I add my own observation that an adjunct clausal boundary cannot separate *either* from DisjP either (103).

(101) *Either* and the apparent DisjP can't be separated by a complex NP boundary:
a. ***Either** John revised [$_{NP}$ his decision to eat rice or beans.
b. *John **either** revised [$_{NP}$ his decision to eat rice or beans.
c. *John revised **either** [$_{NP}$ his decision to eat rice or beans.
d. John revised [$_{NP}$ his decision to **either** eat rice or beans.

(102) *Either* and the apparent DisjP can't be separated by negation:
a. ??**Either** John [$_{NegP}$ didn't try to eat rice or beans.
b. ??John **either** [$_{NegP}$ didn't try to eat rice or beans.
c. John [$_{NegP}$ didn't try to **either** eat rice or beans.

(103) *Either* and the apparent DisjP can't be separated by an adjunct clausal boundary:
a. ***Either** John went home [$_{AdjP}$ after eating rice or beans.
b. *John **either** went home [$_{AdjP}$ after eating rice or beans.
c. John went home [$_{AdjP}$ after **either** eating rice or beans.

[14]I remain agnostic about whether *or* itself is the disjunction head, or whether there is another covert disjunction head that agrees with both *either* and *or*. What is important is that *neither* and *nor* do share negative morphological features, which is a byproduct of their agreement with each other or their agreement with the disjunction head.

These island effects in *either*-seems-high sentences can be accounted for by the ban on stripping across island boundaries, discussed in section 3.3.[15]

Since *either* moves, one may wonder if the movement of *either* can rule out these island facts alone, so we would not need to appeal to the restrictions on stripping. After all, as the diagram in (99) shows, while low *either* cannot occur below an island boundary, high *either* (*either* in *either*-seems-high sentences) cannot occur above an island boundary either. However, this cannot cover the island facts fully. If *either* originates outside the island, then its movement should not cross any island boundary:

(104) … either$_H$ … either$_L$ [$_{island}$ …]

So far nothing prevents *either* from originating outside the island in (101)-(103), which would lead to legal movement of *either*, contrary to fact. Therefore, the island facts in *either*-seems-high sentences can only be fully accounted for by the restrictions on stripping.

Because the island facts in *either*-seems-high sentences follow from the restrictions on stripping, and the island facts in *either*-seems-low sentences follow from *either*'s movement, the island facts in these two types of sentences are not completely identical. As we have seen in (97), low *either* may not occur below P, but high *either*'s position is not sensitive to P:

(105) High *either* and the apparent DisjP can be separated by P:
a. John was **either** reading [$_{PP}$ from a book or a magazine.
b. John **either** was reading [$_{PP}$ from a book or a magazine.
c. **Either** John was reading [$_{PP}$ from a book or a magazine.

This is because stripping can occur across a preposition:

(106) John was reading from a book, not [a magazine]$_i$ ~~John was reading from t$_i$~~.

The following sentences add the legal step of stripping to (105):

(107) a. John was **either** reading from a book or [a magazine]$_i$ ~~reading from t$_i$~~.
b. John **either** was reading from a book or [a magazine]$_i$ ~~was reading from t$_i$~~.

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[15] To be precise, section 3.3 has only shown that stripping cannot occur across a complex NP or adjunct boundary. Whether it can occur across negation is less clear, as judgments are not categorical but only degraded. My informants said that while (i) sounds a bit awkward, (ii) is worse.

(i) ?John asked Mary to be vegetarian abruptly, not vegan.
(ii) ???John asked Mary not to be vegetarian abruptly, not vegan.

I use the adverb *abruptly* as a modifier of the event of asking to make sure that stripping applies across the embedded infinitive, including negation in (ii):

(i) ?John asked Mary to be vegetarian abruptly, not vegan$_i$ ~~John asked Mary to be t$_i$ abruptly~~.
(ii) ???John asked Mary not to be vegetarian abruptly, not vegan$_i$ ~~John asked Mary not to be t$_i$ abruptly~~.

Notice that (102a,b) are only reported to be degraded compared to (102c) as well. This can be understood as following from the restriction on stripping, as stripping of negation is likewise considered degraded.

As I have noted before, movement of *either* does not have to cross the island boundary as long as *either* originates out of the island. The following sentences add a possible origination site of *either* so that *either*'s movement respects the PP island:

(108) a. John was **either**$_j$ reading t_j from a book or [a magazine]$_i$ ~~reading from t_i~~.
b. John **either**$_j$ was reading t_j from a book or [a magazine]$_i$ ~~was reading from t_i~~.

To summarize, this section has argued that an ellipsis-only account is not sufficient, and that we need the movement of *either* to account for *either*-seems-low sentences. Specifically, *either* moves covertly in *either*-seems-low sentences, and moves overtly in *either*-seems-high sentences. The island facts in *either*-seems-low sentences follow from the fact that *either*'s movement respects islands, whereas the island facts in *either*-seems-high sentences result from the restriction that stripping cannot delete island boundaries because the movement of the stripping remnant is constrained by islands.

5. *Either* marks scope in *either*-seems-high sentences

This section shows that the two components to my proposal, ellipsis and movement together can account for crucial observations concerning scope. I will first discuss the observation by Larson (1985) that *either* marks scope in *either*-seems-high sentences. This fact follows from ellipsis because the scope of disjunction is the actual DisjP when elided material is recovered (along the same line as my analysis for negative stripping sentences). Because the actual DisjP is the sister of *either*, *either* marks the scope indirectly.

I will then discuss the observation that *either*-seems-normal sentences are ambiguous. A combination of ellipsis and movement of *either* can account for this fact. *Either* in *either*-seems-normal sentences can move covertly. It is the high copy of *either* (high *either*) that marks the scope of disjunction, because the scope is its sister. When *either* moves covertly, as it does in *either*-seems-normal sentences, there can be multiple possible positions for the high copy, and therefore multiple possible scopes.

To begin, I repeat the examples from section 1 in which *either* marks scope in *either*-seems-high sentences:

(109) a. Sherlock pretended to **either** be looking for a burglar or a thief.
Only reading (*pretended* > DisjP > *looking for*): Sherlock pretended to do one of two things: (1) be looking for a burglar; or (2) be looking for a thief.

b. Sherlock **either** pretended to be looking for a burglar or a thief.
Only reading (DisjP > *pretended* > *looking for*): One of two things happened: (1) Sherlock pretended to be looking for a burglar; or (2) he pretended to be looking for a thief.

As I have shown in section 3, *either*-seems-high sentences result from stripping, and the meaning of a stripping sentence is its underlying structure, with the deleted material recovered. Adopting

this analysis for (109a,b), once we undo ellipsis, the underlying structures correspond to their readings respectively:[16]

(110) a. Sherlock pretended to either be looking for a burglar or ~~be looking for~~ a thief.
b. Sherlock either pretended to be looking for a burglar or ~~pretended to be looking for~~ a thief.

In addition, Larson (1985) has also observed that *either*-seems-normal sentences are ambiguous. The following sentence is also replicated from section 1 and is the *either*-seems-normal counterpart to (109a,b). This sentence is ambiguous:

(111) Sherlock pretended to be looking for **either** a burglar or a thief. (3 readings)
Reading 1 (*pretended* > *looking for* > DisjP): Sherlock pretended to be looking for someone who is either a burglar or a thief.

Reading 2 (*pretended* > DisjP > *looking for*): Sherlock pretended to do one of two things: (1) be looking for a burglar or (2) be looking for a thief.

Reading 3 (DisjP > *pretended* > *looking for*): One of two things happened: (1) Sherlock pretended to be looking for a burglar or (2) he pretended to be looking for a thief.

The ambiguity of (111) follows from movement of *either*. Because its movement can be overt or covert, *either* in (111) is ambiguous between a high copy and a low copy. If it is a high copy, then its sister, i.e. *a burglar or a thief*, is the actual DisjP and we get reading 1. If *either* is a low copy, then there can be multiple possible positions for the high copy. If that unpronounced high copy is between *pretended* and *looking for*, we get reading 2; if it is above *pretended*, we get reading 3:

(112) a. Sherlock pretended to be looking for [$_{DisjP}$ **either$_i$** a burglar or a thief].
b. Sherlock pretended to be [$_{DisjP}$ either$_i$ looking for **either$_i$** a burglar or ~~looking for~~ a thief].
c. Sherlock [$_{DisjP}$ either$_i$ pretended to be looking for **either$_i$** a burglar or ~~pretended to be looking for~~ a thief].

Reviewers have reported that they can get the disjunction to take scope out of islands in *either*-seems-normal sentences, which is potentially a problem for this analysis. I will argue that it is not a problem, but a suggestion that there is another coexistent mechanism that can also derive the scope of disjunction. For the purpose of organization, I delay this discussion to the end of this section.

Once we consider the movement of *either*, we may return to *either*-seems-high sentences and ask why *either* in those sentences can't be a low copy, i.e. why it can't move covertly. Specifically, recall the *either*-seems-high sentence (109a) with only the intermediate scope of disjunction. Why can't the following be a derivation of (109a), which would incorrectly predict that it also has reading 3, wide scope of disjunction?

[16] Recall from section 3.3 that stripping involves movement of the remnant out of the ellipsis site. For the sake of convenience, I leave out the remnant movement in my illustration in some examples, and simply cross out the deleted part, but the reader should bear in mind that the remnant always moves.

(113) Either$_i$ Sherlock pretended to **either$_i$** be looking for a burglar or ~~he pretended to be looking for~~ a thief.

I argue that the identity restriction on ellipsis rules out this derivation. In order for ellipsis to apply, the antecedent phrase (*A*) must be identical to the elided phrase (*E*):[17]

(114) [$_{\text{DisjP}}$ [$_{\text{Disjunct}}$ [$_{\text{A}}$ …] …] or [$_{\text{Disjunct}}$ [$_{\text{E}}$ ~~…~~] …]]

This identity condition interacts with a peculiar property of *either…or…* sentences, i.e. there is only one (low) *either* present inside a DisjP.[18] As I will show in section 6, this low *either* must be present in the first disjunct, and cannot be present in the noninitial disjuncts. Because the elided phrase is in the noninitial disjunct, and *either* can only be in the first disjunct, there is no *either* in the elided phrase. In order to be identical, its antecedent must also exclude *either*. Thus, the generalization is that ellipsis can only apply if *either* is not contained in the antecedent:

(115) a. [$_{\text{DisjP}}$ [$_{\text{Disjunct}}$ either [$_{\text{A}}$ …] …] or [$_{\text{Disjunct}}$ [$_{\text{E}}$ ~~…~~] …]]
b. [$_{\text{DisjP}}$ [$_{\text{Disjunct}}$ [$_{\text{A}}$ …] either …] or [$_{\text{Disjunct}}$ [$_{\text{E}}$ ~~…~~] …]]
c. *[$_{\text{DisjP}}$ [$_{\text{Disjunct}}$ [$_{\text{A}}$ …either …] …] or [$_{\text{Disjunct}}$ [$_{\text{E}}$ ~~…~~] …]]

In order for ellipsis to apply, we must get *either* out of the antecedent. There are two strategies to achieve this goal: (1) *either* is excluded from the antecedent to begin with; or (2) *either* is included in the antecedent but is able to escape the antecedent subsequently.

I will show that all the possible ellipsis cases we have seen so far manage to exclude *either* from the antecedent, but the illegal derivation in (113) fails to do so.

Recall from section 3 that this ellipsis is stripping, which involves movement of the remnant out of the ellipsis site and clausal ellipsis. I will illustrate the first strategy to get *either* out of the antecedent, i.e. by excluding *either* from the antecedent to begin with. This is the case where we get one and only one reading for an *either*-seems-high sentence. The scope always coincides with the surface position of *either* in these sentences, and as has been argued, this is because what we see is high *either* whose sister is the scope. I repeat such a case from (110a):

(116) Sherlock pretended to **either** [$_{\text{DisjP}}$ be looking for a burglar or ~~be looking for~~ a thief].

In order to delete *be looking for*, the smallest elided phrase is the VP *be looking for a thief*. Then its antecedent must be the corresponding VP in the first disjunct *be looking for a burglar*:

(117) Sherlock pretended to **either** [$_{\text{DisjP}}$ [$_{\text{A}}$ be looking for a burglar] or [$_{\text{E}}$ be looking for a thief]].

As the first step of stripping, the remnant *a thief* moves out of E. In parallel, the corresponding phrase *a burglar* moves out of A at LF:

[17] It does not matter to the analysis whether identity must hold between the syntactic representations of constituents or semantic representations. Either a syntactic notion of identity or a semantic notion can work here.
[18] While this property may appear peculiar, it may seem less so when we get to section 7, where I discuss Bùlì question-particle. No matter how many *wh*-foci there are in a sentence in Bùlì, there is only one question-particle.

(118) Sherlock pretended to **either** [$_{DisjP}$ [a burglar]$_j$ [$_A$ be looking for t_j] or [$_{Remnant}$ a thief]$_i$ [$_E$ be looking for t_i]].

A and E are identical and of the form *be looking for t*. Then stripping can apply and delete E:

(119) Sherlock pretended to **either** [$_{DisjP}$ [a burglar]$_j$ [$_A$ be looking for t_j] or [$_{Remnant}$ a thief]$_i$ [$_E$ ~~be looking for t_i~~]].

Note that because what we see in this sentence is high *either*, we do not know where it originates from. It may start above A (120a) or below A (120b). Crucially, it cannot start inside A because its presence in A would cause A to be nonidentical to E.

(120) a. Sherlock pretended to **either$_k$** [$_{DisjP}$ either$_k$ [$_A$ be looking for t_j] [a burglar]$_j$ or [$_E$ ~~be looking for t_i~~] [$_{Remnant}$ a thief]$_i$].
b. Sherlock pretended to **either$_k$** [$_{DisjP}$ [$_A$ be looking for t_j] either$_k$ [a burglar]$_j$ or [$_E$ ~~be looking for t_i~~] [$_{Remnant}$ a thief]$_i$].

Now let us return to the illegal derivation that should be ruled out. This is the derivation for an *either*-seems-high sentence, where the disjunction takes scope above *either*'s surface position. In other words, the *either* that surfaces is low *either*, not high *either*. I repeat such a case from (113):

(121) Either$_i$ Sherlock pretended to **either$_i$** be looking for a burglar or ~~he pretended to be looking for~~ a thief.

We apply the two steps of ellipsis to this sentence. First, in order to elide *he pretended to be looking for*, the smallest elided phrase must be the whole TP, and its antecedent must be the whole TP as well. The remnant *a thief* moves out of E, while its correspondent *a burglar* moves out of A in parallel:

(122) Either$_k$ [a burglar]$_j$ [$_A$ Sherlock pretended to **either$_k$** be looking for t_j] or [$_{Remnant}$ a thief]$_i$ [$_E$ he pretended to be looking for t_i].

Notice that A and E are not identical because A has *either* but E does not.[19] This prevents ellipsis from happening.

[19] One may wonder if it matters that *either* in A later moves to Spec, DisjP. It does not, as the presence of the trace of *either* still makes A and E nonidentical:

(i) Either$_k$ [a burglar]$_j$ [$_A$ Sherlock pretended to t_k be looking for t_j] or [$_{Remnant}$ a thief]$_i$ [$_E$ he pretended to be looking for t_i].

The presence of *either*'s trace disrupts the syntactic identity between the antecedent and the elided phrase. There has been a lot of debate in the literature around whether the identity condition on ellipsis is syntactic or semantic (see Sag (1976), Williams (1977), Fiengo and May (1994), Takahashi and Fox (2005), Hartman (2011), Griffiths and Liptak (2014), among others). Most recently, Messick and Thoms (2016) have provided convincing arguments that we need a syntactic condition on identity, and that A'-traces should count in calculating identity. I assume that *either* moves to an A'-position, indicated by the fact that it can cross finite clause boundaries (see footnote 13). Then following Messick and Thoms' syntactic condition on identity, A and E in (i) are not identical.

Thus, due to the asymmetric nature of *either ... or ...* sentences, i.e. the presence of low *either* in the first disjunct and its absence from the second disjunct, E does not include *either*. By identity, A must not have *either*. We saw a legal *either*-seems-high sentence, where the scope is the sister of *either*'s surface position, and low *either* is excluded from A. The illegal derivation arises when the scope is above *either*'s surface position, and low *either* is trapped in A.

There is another legal ellipsis case we have not examined yet. Ellipsis creates ambiguity for *either*-seems-normal sentences. Recall that in order to get the scope above *either*'s surface position in these sentences, the *either* we see must be low *either*. I repeat (112b,c) below:

(123) a. Sherlock pretended to be either$_i$ [$_{DisjP}$ looking for **either$_i$** a burglar or ~~looking for~~ a thief].
b. Sherlock either$_i$ [$_{DisjP}$ pretended to be looking for **either$_i$** a burglar or ~~pretended to be looking for~~ a thief].

How do these sentences manage to get low *either* out of A? The answer is that *either* starts out in A, but manages to escape A later by being pied-piped by the constituent that moves out of A.

Example (123a) illustrates what this means. In order to elide *looking for*, E has to be at least the VP *looking for a thief*, so A is *looking for a burglar*. As we move the remnant *a thief* out of E, its correspondent *a burglar* also moves out of A. Crucially, low *either*, by virtue of being the sister of *a burglar*, is pied-piped by *a burglar* and escapes A:

(124) Sherlock pretended to be [$_{DP}$ **either** a burglar]$_j$ [$_A$ looking for t_j] or [$_{Remnant}$ a thief]$_i$ [$_E$ looking for t_i].

Now that A and E are identical, ellipsis can apply:

(125) Sherlock pretended to be [$_{DP}$ **either** a burglar]$_j$ [$_A$ looking for t_j] or [$_{Remnant}$ a thief]$_i$ [$_E$ ~~looking for t_i~~].

Thus, we have seen that in addition to excluding *either* to begin with, we can base-generate *either* in A but have it subsequently escape A by being pied-piped by its sister, creating ambiguity in *either*-seems-normal sentences.

A reviewer has asked whether the derivation in (i) violates the ban on subextraction from derived constituents (also known as "freezing effects"), which in this case may ban the movement of *either* out of a derived *either a burglar*. All the discussion in the literature about such freezing effects that I know of concerns subextraction from overtly derived constituents (Lasnik and Saito (1992), Takahashi (1994), Müller (1998) & (2010), Rizzi (2007), Bošković (2008), Corver (2014), Bošković (2018)). In (i), however, *either a burglar* undergoes LF movement, so *either* has moved out of a covertly derived constituent.

Interestingly, covertly derived constituents do not seem to be islands to movement, as the following three examples show:

(ii) a. [Whose books]$_i$ does John read the reviews of t_i?
b. [Whose books]$_i$ does John read reviews of t_i?
c. [Whose books]$_i$ does John read every review of t_i?

Quantifiers in object positions are known to undergo Quantifier Raising (QR), a covert movement at LF. If covertly derived constituents are islands to movement, one would expect subextraction out of a QRed constituent to be ungrammatical. However, (iia-c) are equally grammatical despite the presence of a quantifier in the object position in (iib) and (iic).

This analysis of pied-piping makes two predictions. First, the only requirement is that *either* is pied-piped by its sister. It does not require the constituent that carries *either* out of A to be a DP, as is the only case we have seen so far. *Either* should be able to be pied-piped by a VP as well.

This prediction is borne out. In the following sentence, *either* is adjacent to the VP *be looking for a burglar*, and it has both readings 2 and 3:

(126) Sherlock pretended to **either** be looking for a burglar or be looking for a thief.
✓ Reading 2: *pretended* > DisjP > *looking for*
✓ Reading 3: DisjP > *pretended* > *looking for*

Reading 3 is of more interest to us and corresponds to the following elided sentence:

(127) Sherlock pretended to **either** be looking for a burglar or ~~he pretended to~~ be looking for a thief.

The remnant that survives ellipsis is the VP *be looking for a thief*. To maintain identity, the corresponding VP *be looking for a burglar* has to move out as well. *Either* is adjacent to this VP, and therefore pied-piped by it and escapes A successfully:

(128) $[_A$ Sherlock pretended to $t_j]$ $[_{VP}$ **either** be looking for a burglar$]_j$ or $[_E$ ~~he pretended to~~ $t_i]$ $[_{Remnant}$ be looking for a thief$]_i$.

Another prediction of this analysis is that *either* does not even have to be the sister of the constituent that pied-pipes it. *Either* can be pied-piped by being embedded in this constituent as well. Again, this prediction is borne out. The following sentence has both readings 2 and 3:

(129) Sherlock pretended to **either** be looking for a burglar or to be looking for a thief.
✓ Reading 2: *pretended* > DisjP > *looking for*
✓ Reading 3: DisjP > *pretended* > *looking for*

In particular, reading 3 corresponds to coordination of two finite TPs:

(130) Sherlock pretended to **either** be looking for a burglar or ~~he pretended~~ to be looking for a thief.

In reading 3 the remnant phrase that moves out of E is the infinitival TP *to be looking for a thief*, whose correspondent in the first disjunct is *to be looking for a burglar*. *Either*, by virtue of being embedded in this infinitival TP, naturally moves out with it and escapes A. A and E are identical:

(131) $[_{TP}$ to **either** be looking for a burglar$]_j$ $[_A$ Sherlock pretended $t_j]$ or $[_{Remnant}$ to be looking for a thief$]_i$ $[_E$ ~~he pretended~~ $t_i]$.

As we have seen, *either*…*or*… sentences are inherently asymmetric in that there is only one *either* inside the DisjP, i.e. one low *either*. Because the elided phrase E does not contain *either*, under the identity condition, the antecedent phrase A must not contain it either. So if low *either*

is trapped in A, ellipsis is not possible. In other words, low *either*'s position sets the upper bound of how large E can be: E cannot be so large that its corresponding A contains *either*.

The following example characterizes this generalization abstractly. The remnant that survives ellipsis is Z_2 in the second disjunct, and its correspondent in the first disjunct is Z_1. Notice that there is overt material Y separating *either* from Z_1. Then the largest possible A is the phrase immediately dominating Y (132b), and crucially A cannot be so large that it includes *either* (132c).

(132) a. … X either Y Z_1 or Z_2,
where Z_2 is the constituent that survives ellipsis, and Z_1 is Z_2's corresponding constituent in the first disjunct.
b. … X either [$_A$ Y] Z_1 or [$_E$ ~~Y~~] Z_2
c. *… [$_A$ X either Y] Z_1 or [$_E$ ~~X Y~~] Z_2

In the above configuration, the only possible scope reading is *Y Z_1 or Y Z_2*. There is no ambiguity, and *either* in this configuration must be a high *either*.

Notice also that this configuration instantiates the *either*-seems-high configuration, with *either* appearing higher than the apparent edge of disjunction. Thus, we draw the correct generalization that in *either*-seems-high sentences the only scope we can get is the sister of *either*.

To avoid being trapped in A, *either* can escape A by being pied-piped by the phrase that moves out of A. In this situation the size of the elided phrase E is not restricted, and we can get multiple scopes. One such situation is when *either* is the sister of the phrase that moves out of A, as we have seen with *either*-seems-normal sentences. Everything below is the same as the above configuration, except that there is no material separating *either* from Z_1 any more:

(133) a. … X either Z_1 or Z_2,
where Z_2 is the constituent that survives ellipsis, and Z_1 is Z_2's corresponding constituent in the first disjunct.
b. … X either Z_1 or Z_2
c. … [$_A$ X] either Z_1 or [$_E$ ~~X~~] Z_2
d. [$_A$ … X] either Z_1 or [$_E$ ~~… X~~] Z_2

This is an *either*-seems-normal configuration, and it creates ambiguity. Under the first reading (133b), there is no ellipsis at all, and the disjuncts are just Z_1 and Z_2. Under the readings with ellipsis (133c,d), *either* escapes A by being pied-piped by Z_1, and now A can include material before *either*. Then the disjunction can be *X Z_1 or X Z_2* (133c), or even larger (133d).

Finally, another way of being pied-piped is to embed *either* inside the phrase that moves out of A. The result is almost identical to the *either*-seems-normal configuration above, except that now *either* is embedded in Z_1 rather than being its sister. This configuration instantiates *either*-seems-low because *either* is embedded in the apparent DisjP, and it shows ambiguity too:

(134) a. … X [$_{Z1}$ … either …] or Z_2,
where Z_2 is the constituent that survives ellipsis, and Z_1 is Z_2's corresponding constituent in the first disjunct.
b. … [$_A$ X] [$_{Z1}$ … either …] or [$_E$ X] Z_2
c. [$_A$ … X] [$_{Z1}$ … either …] or [$_E$ … X] Z_2

I must mention that this analysis involving movement and ellipsis fails to explain a reviewer's observation that in *either*-seems-normal sentences, the disjunction can take scope out of islands. My informants also confirm this intuition, as is shown by the following example:

(135) If John eats either shellfish or tuna, he'll have an allergic reaction, (but I can't remember which.)

The analysis proposed here cannot explain this fact. According to the analysis, high *either* marks the scope of disjunction, and is created by movement from low *either*'s position. Then this exceptionally wide scope of disjunction must be derived by covert movement of *either* out of the adjunct island and ellipsis:

(136) Either$_i$ If John eats either$_i$ shellfish or ~~if John eats~~ tuna, he'll have an allergic reaction, (but I can't remember which.)

This movement of *either* violates the adjunct island constraint, and stripping of an adjunct clause boundary is not allowed, as was shown in section 3.3.2. Therefore, the proposal so far does not explain the exceptionally wide scope of disjunction out of islands.

However, there have been other proposals in the literature that derive the exceptionally wide scope of indefinites and disjunctions through the semantics of these elements (e.g. Schlenker (2006) and Charlow (2014)). We can adopt one of these semantic analyses, which is compatible with the syntactic analysis in this paper. Therefore, in addition to the analysis in this paper, there is a different mechanism that can also derive the scope of disjunctions. This mechanism is responsible for the exceptionally wide scope of disjunction in *either*-seems-normal sentences. Appendix B reviews and discusses Schlenker's and Charlow's proposals, and points out potential challenges to these proposals that have not been discussed before to my knowledge.

One might wonder at this point whether we can do away with the current proposal completely, and derive all the empirical generalizations about *either* with the other mechanism, i.e. through the semantics of disjunctions. This is not possible because it would fail to account for the other three empirical generalizations, namely ellipsis, islands, and *either*-seems-low. In other words, the current proposal about *either* is independently motivated by these three empirical observations.

This section shows that a combination of movement and ellipsis can explain most of the observations about scope in *either* ... *or* ... sentences. If it can derive observations about scope in stripping sentences in general (section 3.3.3), nothing should prevent it from also applying in *either* ... *or* ... sentences, just one type of stripping sentences. It falls short in explaining the exceptional scope of disjunction in some cases, which can be covered by another coexistent mechanism.

To summarize, the ellipsis part and the movement part of the proposal together account for most of the observations about scope in *either* ... *or* ... sentences. According to the ellipsis part of the proposal, the scope of disjunction is always the actual DisjP when elided material is recovered. Because high *either* is the sister of the actual DisjP, its location is an indicator of the scope. The movement part of the proposal claims that *either* may move covertly, and ambiguity arises when it does so. Due to the identity restriction on ellipsis, the origination site of *either* affects how much material can be elided, and hence what scope readings we can get. The origination position of *either* sets an upper bound to how large the elided phrase can be. The only

exception is when *either* is the sister of or embedded in the phrase that moves out of the antecedent phrase, in which case there is no limit to the size of the elided phrase, and ambiguity arises.

6. *Either*-seems-low and focus sensitivity of *either*

Having discussed island and scope facts and how a combination of ellipsis and movement of *either* can explain them, this section is dedicated to *either*-seems-low sentences. In these sentences *either* appears embedded in the DisjP:

(137) a. John will **either** eat rice or he will eat beans.
b. John **either** will eat rice or he will eat beans.

To reiterate, ellipsis alone cannot explain this fact because there is nothing to elide in these sentences. This follows from the movement part of the story if we assume that *either* originates inside the DisjP and may move covertly.

But exactly where in the DisjP does it originate, and are there restrictions on its origination site? As Hendriks (2001, 2003) has observed, *either* must always c-command the leftmost focus. This observation has been developed by den Dikken (2006), who shows that *either* can occur as the sister of the leftmost focus. I add another argument that supports this claim.

Therefore, as Hendriks and den Dikken have shown, not only can *either* occur as the sister of the leftmost focus, but it can also occur in higher positions inside the DisjP that c-command the leftmost focus. A question still remains that has not been answered before to my knowledge: are these higher positions of *either* inside the DisjP base-generated or derived? I will argue that they are base-generated. In other words, *either* can originate anywhere in the DisjP as long as it c-commands the leftmost focus.

Before showing *either*'s sensitivity to focus I will first define what focus means here. It is contrastive focus, following Hendriks' and den Dikken's observations. The intuition comes from the assumption that a nontautological disjunction phrase always presents disjuncts that differ from each other in some way. I assume that in each disjunct, the part that contrasts from its counterpart in the other disjuncts is contrastively focused, and those that don't contrast are not contrastively focused.

For example, in (138) *rice* in the first disjunct contrasts with *beans* in the second, so they are both contrastively focused (focus is underlined):

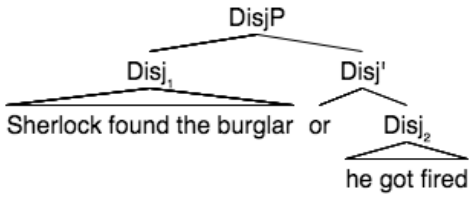
(138) John will eat <u>rice</u> from France or he will eat <u>beans</u> from France.

As Hendriks and den Dikken have observed, *either* in *either*-seems-low sentences, i.e. low *either* in my analysis, must c-command the first focus in a DisjP. Following examples illustrate this observation:

(139) a. Sherlock either <u>found the burglar</u> or he <u>got fired</u>.
b. *Sherlock <u>found either the burglar</u> or he <u>got fired</u>.
c. *Sherlock <u>found the either burglar</u> or he <u>got fired</u>.
d. *Sherlock <u>found the burglar</u> either or he <u>got fired</u>.
e. *Sherlock <u>found the burglar</u> or either he <u>got fired</u>.

Notice that the requirement concerns the linearly first focus. Because the first focus is embedded in the first disjunct, it is not hierarchically higher than the second focus, as the following tree illustrates. *Either* does not c-command the focus in the second disjunct.

(140)



In the last section I will discuss my speculation about why low *either* is sensitive to the linearly first focus.

In this section I develop den Dikken's observation that low *either* only needs to c-command the leftmost focus. In other words, when there are more than one foci in each disjunct, *either* only needs to c-command the leftmost focus, $Focus_1$ below. It does not have to c-command $Focus_2$, $Focus_3$ or $Focus_4$. Den Dikken has already made this observation in three types of cases, to which I add another type of sentences.

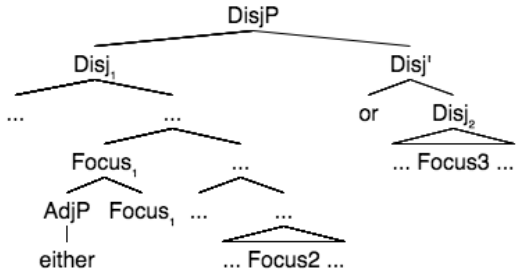
(141) $[_{DisjP}\ [_A \ldots \text{either} \ldots Focus_1 \ldots Focus_2 \ldots]$ or $[_B \ldots Focus_3 \ldots Focus_4 \ldots]]]$

Given Hendriks' and den Dikken's observations about *either*'s position in *either*-seems-low sentences, a question that remains open is how it gets there. Is it base-generated there, or is that position derived by movement from somewhere closer to the leftmost focus? I will show that in *either*-seems-low sentences there can be islands between *either* and $Focus_1$, suggesting that low *either* is not derived by movement from the sister of $Focus_1$, but rather base-generated:

(142) $[_{DisjP}\ [_A \ldots \text{either} \ldots [_{island} \ldots Focus_1 \ldots Focus_2 \ldots]$ or $[_B \ldots Focus_3 \ldots Focus_4 \ldots]]]$

To begin, I will show that low *either* only needs to c-command the leftmost focus. If this is the case, and following Hendriks (2003:39-46) and den Dikken (2006) that *either* is a phrase, then the lowest position *either* can be is an adjunct to the leftmost focus:

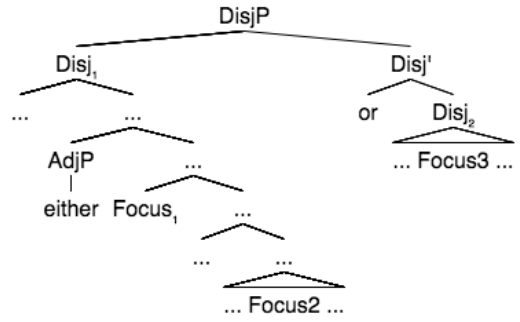
(143)



In the above structure *either* c-commands the first focus by being its sister. Crucially, it does not c-command any other focus. Following Erlewine's (2017) terminology I call this a *local (adjunct) position*, and this *either local either*.

This position contrasts with other possible positions for *either*, which do not have to be so close to the first focus as to be its sister. I call these other positions *non-local (adjunct) positions*. The following tree illustrates one such non-local position.

(144)



A crucial difference between local *either* and non-local *either* is that the former only c-commands the leftmost focus $Focus_1$, whereas the latter may c-command other foci as well, such as $Focus_2$.

To illustrate this with examples, in both sentences below *either* precedes the first main verb, but the placement of focus is different. *Either* can be a local *either* in the first sentence because it can be the sister of the focused verb *eat*. In the second sentence the first focus is *rice*, and *either* is not the sister of *rice*, so it cannot be a local *either*.

(145) a. John will [$_{DisjP}$ [$_{V}$ either <u>eat</u>] rice or <u>cook</u> rice]. Local *either*
b. John will [$_{DisjP}$ either eat <u>rice</u> or eat <u>beans</u>]. Non-local *either*

In the following subsections I will show that *either* can be a local adjunct to the leftmost focus. In this position, *either* only c-commands the leftmost focus and not any other focus, an indication of its sensitivity to only the leftmost focus.

6.1. Low *either*'s intervention between verb and its direct object

In this subsection I first take note of the generalization in English that an adjunct may not intervene structurally between a verb and its direct object. Then I will mention an exception to this generalization: an adjunct may modify the direct object locally, and is no longer a structural intervener. After that, I will show that *either* is subject to this generalization and exception, indicating not only that *either* is an adjunct, but also that *either* can be a local adjunct to the focused direct object. This argument is deeply inspired by den Dikken (2006), who has given three other scenarios of this kind. After presenting the argument in this subsection, I will discuss den Dikken's analysis in the next subsection.

English does not allow adjuncts to intervene structurally between the verb and the object (perhaps due to Case Theory):[20]

[20] See Richards (2016) for an alternative analysis for this requirement.

(146) a. John often eats rice.
b. Often John eats rice.
c. *John eats often rice.

This fact is also manifested by the following examples. (147a-b) are acceptable because the adjunct *often* is not between the main verb and the gerund object. The last example is ungrammatical because *often* does intervene between the main verb and its direct object.

(147) a. John often suggests working on focus.
b. Often John suggests working on focus.
c. *John suggests often working on focus.

Notice that the last sentence is only bad under the reading that *often* modifies the main verb phrase *suggests working on focus* (it is repeated below in (148a)). When it modifies the gerund instead (148b), the sentence is grammatical. The crucial difference between (148a) and (148b) is that in (148a) *often* modifies and attaches to the main verb phrase, whereas in (148b) *often* is a local adjunct to the gerund object, so it does not intervene structurally between the main verb and the object.

(148) a. *John suggests often [working on focus]. Non-local adjunct
b. John suggests [often working on focus]. Local adjunct

Thus, we have seen the generalization that in English adjuncts may not intervene between a verb and its direct object structurally. When the adjunct is a local adjunct to the direct object, it is not a structural intervener.

Assuming that *either* is an adjunct, then it may not intervene between a verb and its direct object, as is shown by the ungrammaticality of the following sentence, where *either* in the first disjunct intervenes between the main verb *ate* and its direct object *rice*:

(149) *John ate either rice with chopsticks or he ate rice with a fork.

If *either*'s structural intervention between the verb and its object is the reason for the ungrammaticality, then this suggests that *either* is an adjunct and is subject to the generalization stated above.

Now I will show that just like other adjuncts, when *either* is a local adjunct to the direct object, it is exempt from this generalization. This exception to the generalization is shown in the following sentence, which differs minimally from the above in that *rice* and *beans* are also focused, and the sentence is grammatical. I call the following sentence having *pair focus*, meaning that two separate elements in a disjunct (*rice* and *chopsticks*) are focused.

(150) John ate either rice with chopsticks or he ate beans with a fork.

If this sentence is grammatical because *either* no longer intervenes structurally between the verb and the direct object, then it should be parsed in the following way, where *either* is a local adjunct to the direct object *rice*:[21]

[21] Some native speakers don't accept (150) or (153a,b). They can be substituted with the following three sentences respectively and still make the same point:

(151) John ate [$_{DP}$ either rice] with chopsticks or he ate beans with a fork.

What is significant about this fact is that despite the presence of pair focus in the first disjunct (*rice* and *chopsticks*), *either* only c-commands the leftmost focus *rice*. This then illustrates a point made earlier by the abstract structure in (142) that no matter how many foci there are in the disjunction phrase, *either* only has to c-command the first one.

Similarly, we can embed the first focus *rice* in a possessed DP, so that *rice* does not c-command the second focus *chopsticks* any more. Yet *either* is still required to c-command *rice*, not *chopsticks*, indicating its sensitivity to linearly the first focus:

(152) a. John ate either Mary's rice with chopsticks or he ate Mary's beans with a fork.
b. *John ate Mary's rice either with chopsticks or he ate Mary's beans with a fork.

In fact, the presence or absence of non-leftmost focus does not even matter to *either*'s position. Even if the instrumental phrase is not contrasted any more (153a) or is deleted altogether (153b), the sentence is still grammatical. This again suggests that low *either* is only sensitive to the position of the first focus, but not to other foci.

(153) a. John ate [$_{DP}$ either rice] with chopsticks or he ate beans with chopsticks.
b. John ate [$_{DP}$ either rice] or he ate beans.

This subsection has shown the generalization that all adjuncts, including *either*, may not intervene between a verb and its direct object structurally. An exception to this generalization is that *either* is a local adjunct to the focused direct object; then it is no longer a structural intervener.

This argument is deeply inspired by den Dikken (2006), who gave three other scenarios of this kind. In these three scenarios, a generalization bans the occurrence of an adjunct due to its structural intervention, unless that adjunct is a local adjunct to the adjacent phrase. While these observations can be found in den Dikken's paper, I consider it necessary to introduce them here, as they also serve as support for my analysis. For this reason, I will repeat only one of his arguments for the sake of space. The interested reader may refer to section 4 of his paper for the other two arguments.

6.2. Low *either*'s intervention between matrix C and the subject

This subsection will follow the logic of argumentation very similar to that of the previous subsection. I will first discuss the generalization that an adjunct may not intervene between matrix C and the subject. Then I will bring up an exception to this generalization: an adjunct may

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(i) John ate either rice with chopsticks or beans with a fork.
(ii) John ate either rice with chopsticks or beans with chopsticks.
(iii) John ate either rice or beans.

I suspect that these speakers prefer to keep *either* closer to the edge of DisjP in *either*-seems-low sentences, as they generally like *either* immediately before the verb (4a,b), but not *either* immediately before the direct object. But this is only a speculation, and I leave this topic to future research.

modify the subject locally, and does not count as a structural intervener. As den Dikken shows, low *either* also follows this generalization, again indicating that it can be a local adjunct to focus.

First, to illustrate the generalization about all adjuncts, consider the following sentences involving the adjunct *possibly*. Depending on where the focus falls (underlined), a sentence may have different readings:

(154) a. Possibly Mary saw John.
As an answer to the question 'Who did Mary see?'
b. Possibly Mary saw John.
As an answer to the question 'Who saw John?'

Turning (154a) into a matrix polarity question is not possible:

(155) *Did possibly Mary see John?
Intended Reading: Is it true that the person that Mary saw was possibly John?

This is due to the generalization that an adjunct may not intervene between matrix C and the subject structurally (cf. (Kayne 1984; Chapter 10) and Richards (2016)):

(156) *Did [$_{TP}$ possibly [$_{DP}$ Mary] see John]?

But the following sentence is an exception to this generalization. It is the polar-question counterpart of (154b):

(157) Did possibly Mary see John?
Reading: Is it true that it was possibly Mary who saw John?

Then the exception to this generalization can be phrased as the following: an adjunct no longer intervenes between matrix C and the subject structurally when it is a local adjunct to the subject and forms a constituent with the subject itself:

(158) Did [$_{DP}$ possibly Mary] see John?

Either is subject to this generalization as well. Consider the following disjunction with contrasted objects:

(159) Either Mary saw John or she saw Bill.

It is impossible to turn this disjunction into a matrix polar question:

(160) *Did either Mary see John or she see Bill?

If this polar question is ungrammatical because the adjunct intervenes between matrix C and the subject, then its structure should be the following:

(161) *Did [$_{TP}$ either [$_{DP}$ Mary] see John or she see Bill]?

Now I will show that the exception to this generalization applies to *either* as well. Consider a sentence that differs minimally from (159) in that the subjects are contrasted instead of the object:

(162) Either Mary saw John or Sue saw him.

Turning this sentence into a matrix polar question is possible:

(163) Did either Mary see John or Sue see him?

This polar question is grammatical because *either* is a local adjunct to the subject *Mary*, and does not intervene between C and the subject structurally:
(164) Did [$_{DP}$ either Mary] see John or Sue see him?

When both the subject and object are focused (pair focus), *either* can also intervene between C and the subject:

(165) Did either Mary see John or Sue see Bill?

The above sentence is grammatical because *either* modifies the subject DP, and does not intervene structurally between C and the subject:

(166) Did [$_{DP}$ either Mary] see John or Sue see Bill?

In this subsection we have seen the generalization that an adjunct may not intervene between matrix C and the subject structurally, and a local adjunct to the subject is not an intervener. The fact that *either* is subject to this generalization again suggests that low *either* can be the sister of the leftmost focus, c-commanding only the leftmost focus but not the other foci.

6.3. Low *either* is created by base-generation, not movement

In *either*-seems-low sentences, (low) *either* not only can surface as a local adjunct to the leftmost focus, but it can also be far away from it, as in these two examples:

(167) a. John will either eat rice or he will eat beans.
b. John either will eat rice or he will eat beans.

How are these nonlocal positions of low *either* created? One possibility is that they are created by movement from the local adjunct position to the focus:

(168) a. John will either$_i$ eat t_i rice or he will eat beans.
b. John either$_i$ will eat t_i rice or he will eat beans.

The other possibility is that they are base-generated there. In other words, *either* can originate anywhere in DisjP, as long as it c-commands the leftmost focus. I will now argue that this is the correct analysis.

Examples like (169a-c) indicate that low *either* can be separated from the leftmost focus by a complex NP island, a PP island, an adjunct island and an inner island:

(169) a. John either made [$_{island}$ the claim that he will eat rice], or he made the claim that he will eat beans.
b. John was either reading [$_{island}$ from a book] or he was reading from a magazine.
c. John is either happy [$_{island}$ because he will eat rice], or he is happy because he will eat beans.
d. John either [$_{island}$ won't eat rice] or he won't eat beans.

Assuming that when *either* moves, it is subject to these islands, then this means that *either* must not have moved across the islands, so it must be base-generated in its surface position.

We have seen in this section evidence that supports the proposal that low *either* is base-generated anywhere in DisjP, as long as it c-commands the leftmost focus.

7. Conclusion and future questions

This paper has argued for an analysis of *either* involving both ellipsis and movement of *either*. I have shown that ellipsis, specifically stripping, derives *either*-seems-high sentences. *Either*-seems-low sentences show that ellipsis alone is not enough. Once we add the movement of *either* to the analysis, the island facts and scope facts can be explained as well. *Either* originates inside the DisjP and moves to the edge of the DisjP. Its position is sensitive to the leftmost focus.

An innovative and important part of this analysis is that *either* occupies two positions in a sentence, and moves. This recalls the proposals that have been advanced for other focus-sensitive operators (e.g. Cable's (2007) for the question-particle, Hirsch's (2017) for *only*, and Quek and Hirsch's (2017) for *even*). In fact, these proposals (along with many others, e.g. Lee (2004), Barbiers (2014), Hole (2015, 2017), and Bayer (2016)) have all suggested that perhaps all focus-sensitive operators share something in common: they have multiple positions in a structure that are related to each other by agreement and/or movement. If my analysis of *either* is correct, it adds another example to this typology of focus-sensitive operators.

A question remains about why there is a need for two copies of a focus-sensitive operator, assuming that a single operator can satisfy all the roles and is simpler to learn. For instance, why must there exist a low *either*, if its sole function is to c-command the leftmost focus? It will eventually move to Spec, DisjP, a position that c-commands the focus anyway. One speculation is that low *either* cues upcoming contrastive focus, while high *either* marks the edge of coordination, following Harris' (2018) discovery with a corpus study and an eye-tracking study.

Another curious property of low *either* is that it is only required to c-command the leftmost contrastive focus, but not the other foci. Different focus-sensitive operators behave differently in this aspect. This recalls the fact that the question-particle in at least some languages is only required to c-command the leftmost focused *wh*-phrase as well. For instance, in a multiple question in Bùlì, only the first *wh*-phrase bears the *ká* morpheme, which is analyzed as the question-particle by Sulemana (2019). And *ká* may move overtly together with the first *wh*-phrase. The other *wh*-phrases cannot bear the *ká* morpheme, must remain in-situ and undergo no

movement, whether overt or covert. This indicates that *ká*, the question-particle in Bùlì, only attaches to the first *wh*-phrase.

Only, however, is required to c-command all the foci in English. For instance, in the following matrix question, pre-subject *only* must be a local adjunct to the subject *Mary*, so it cannot have both foci *Mary* and *John* in its scope. Consequently, we cannot get the reading where *only* associates with both *Mary* and *John*:

(170) Did only Mary see John?
Unavailable reading: Are Mary and John the only two-person pair such that the first person in the pair saw the second person?

Suppose that this difference between *either* and *only* stems from a difference in how they associate with focus. And suppose that in order for a focus-sensitive operator to associate with a focused element, it must always have this focused element in its scope. Then this means that semantically, *either* only associates with the leftmost focus.

This result contradicts the only proposal in the literature about *either*'s association with focus that I know of (Hendriks 2003). This proposal argues that *either* contributes exhaustivity over the possibilities mentioned in a disjunction. For instance, according to Hendriks, the meaning of the following sentence is "if John has a property of the form 'introduced x to Sue', then it is the property 'introduced Bill to Sue' or the property 'introduced Mary to Sue'".

(171) John introduced either Bill to Sue or Mary to Sue.
Semantic Interpretation: $\forall P [[P\{j\} \& \exists y[P= \hat{}\text{introduce'}(y,s)]] \rightarrow [P = \hat{}\text{introduce'}(b,s) \vee P = \hat{}\text{introduce'}(m,s)]]$

The presence of *either* then requires exhaustification over both foci *Bill* and *Mary*. However, for reasons discussed in section 6, *either* in this sentence must be a local adjunct to the direct object *Bill* in order to not intervene structurally between the verb and the direct object. Then *either* does not c-command *Mary*:

(172) John introduced [$_{DP}$ either Bill] to Sue or Mary to Sue.

Thus, we run into a contradiction if we adopt both the assumption that an operator may only associate with the foci in its scope, and Hendriks' proposal about *either*'s contribution to exhaustification over all foci in a DisjP. According to Hendriks, *either* contributes exhaustification over both foci in (172), and yet *either* only c-commands the leftmost focus but not the other one.

This contradiction suggests a revision to either the assumption or Hendriks' proposal. Either a focus-sensitive operator may associate with focus not in its c-command domain, or *either* only associates with the leftmost focus, and does not contribute exhaustivity over all foci. I leave this topic to future research, but suggest that the latter way may be promising, given the following counterexample to Hendriks' claim that *either* introduces an exhaustive inference:[22]

(173) John saw either Mary or Sue, and he also saw Bill.

[22] I am grateful to a reviewer for bringing this counterexample to my attention.

Hendriks would predict the continuation to contradict the preceding clause, contrary to fact because it contradicts the exhaustive inference created by the presence of *either*.

Appendix A. Ellipsis-only account and base-generation account of *either*

As I have mentioned, my analysis of *either* is strongly influenced by previous analyses in the literature. In this appendix I discuss these previous analyses as well as other alternatives I can think of. Having discussed Larson's (1985) movement-only account, and Schwarz's (1999) and Han and Romero's (2004) ellipsis-only account in detail in section 2, this appendix focuses on den Dikken's (2006) base-generation account and other conceivable alternatives.

Recall the four empirical generalizations, each of which was discussed in a previous section:

(174) a. Ellipsis (section 3): *either*-seems-high sentences are derived by ellipsis.
b. Islands (section 4): *either* may not be separated from the apparent DisjP by an island.
c. Scope (section 5): the scope of disjunction is frozen in *either*-seems-high sentences but ambiguous in *either*-seems-normal sentences.
d. *Either*-seems-low (section 6): *either* can appear embedded in the DisjP.

A successful account of *either* should cover all of them. Let us review and evaluate den Dikken's (2006) base-generation account. According to this proposal, *either* is always base-generated in its surface position, and must c-command the leftmost focus.

There is a restriction on where *either* can originate: it cannot be separated from the focused phrase by negation or a complex NP boundary. This restriction results from the notion that the leftmost focus projects a path of θ-role assignment, and *either* must be located on this path. Negation, complex NP and adjunct clausal boundary break off this path.

According to this approach, *either*-seems-high and *either*-seems-low sentences are just a result of base-generating *either* at different locations. In *either*-seems-high sentences, *either* has been merged higher than Spec, DisjP. In *either*-seems-low sentences, *either* has been merged inside DisjP.

This approach can explain only half of the island effects discussed in section 4. The island phenomena we have seen in section 4 are represented abstractly below. (175a) is an *either*-seems-high sentence, where no island may separate *either* from the DisjP. (175b) is an *either*-seems-low sentence, where *either* may not be embedded in an island.

(175) a. *Either … [$_{\text{Neg/Complex NP/Adjunct}}$ … [$_{\text{DisjP}}$ … Focus$_1$ …] or …]
b. *[$_{\text{DisjP}}$ … [$_{\text{Neg/Complex NP/Adjunct}}$ … either … Focus$_1$ …] or …]

This approach can only explain (175a). In (175a) the focus is separated from *either* by negation, complex NP or adjunct clausal boundary. Because negation, complex NP or adjunct clausal boundary breaks the θ-path projected by the focus, *either* fails to be on the θ-path. In (175b), however, *either* is located on the θ-path projected by the focus, and yet the sentence is bad. So the base-generation account cannot explain (175b).

To save the base-generation account, we would then need to divide the restriction on base-generation of *either* into two sub-restrictions. The first sub-restriction applies when *either* is merged outside DisjP: *either* cannot be separated from the focus by negation, complex NP or adjunct clause in this case. The second sub-restriction applies when *either* is merged inside DisjP: *either* and the focus must be separated by negation, complex NP or adjunct clausal boundary if there is one; if there is no negation, complex NP or adjunct clausal boundary, this restriction does not apply.

While the first sub-restriction may be made sense of under the θ-path theory, I cannot think of any basis for the second restriction, i.e. the need for *either* and the focus to be separated by negation, complex NP or adjunct clausal boundary if there is one.

Besides these proposals that have been raised before in the literature, another alternative worth considering is what I call the *non-ATB (non-across-the-board movement) account*: *either* is always in Spec, DisjP. When it appears apparently embedded in DisjP, the subject, and possibly other material such as the auxiliary have non-ATB moved out of the first disjunct.

(176) John$_i$ will$_j$ either [$_{DisjP}$ t_i t_j eat rice or he will eat beans].

Then the island effects arise in *either*-seems-low sentences because somehow negation, complex NP and adjunct clausal boundary cannot non-ATB move.

This approach falls short in several ways. Most importantly, *either* isn't always in Spec, DisjP. As we have seen in section 6, *either* can be a local adjunct to the focus. Also, while the subject's non-ATB movement has been previously proposed in the literature, non-ATB moving the auxiliary and the main verb is far less common.

Appendix B. Exceptionally wide scope of disjunction out of islands

This appendix discusses the fact that disjunction may take scope out of islands in *either*-seems-normal sentences, as is instantiated by the following sentence:

(177) If John eats either shellfish or tuna, he'll have an allergic reaction, (but I can't remember which.)

This appendix will review two candidate theories for driving exceptional scope disjunction that resort to semantic tools. Both theories are compatible with the current syntactic proposal about *either*, which has been independently motivated. I will also point out some issues with these two semantic analyses, and leave it to future research how to resolve them.

The two candidate theories for the semantics of disjunction are Schlenker (2006) and Charlow (2014). Both theories were meant to account for the exceptional scope of indefinites, and were suggested to apply to disjunctions as well.

Schlenker has argued that the exceptional scope of indefinites and disjunctions can be analyzed with choice functions. A disjunction takes as argument the set of the disjuncts. An existential quantifier can be externally merged out of the island, and binds the choice function inside the island, thus creating the exceptional scope of indefinites. Following is the derivation for (177):

(178) ∃F [If John eats F {shellfish, tuna}, he'll have an allergic reaction.]

Under this analysis, *either*'s surface position in (177) could mark the position of the choice function, or the first disjunct that enters the set in the argument of the choice function.

Charlow (2014) has proposed a different analysis of the semantics of indefinites, which can be extended to disjunctions. According to him, indefinites (and possibly disjunctions) denote alternatives. If we allow point-wise composition, these alternatives-denoting expressions percolate their alternative-denoting property all the way up to the levels above the island, creating the effect of exceptional scope. If we only use function application as Charlow does, then the exceptional scope of alternative-generating expressions arises via "scopal pied-piping". The disjunction moves to and takes scope at the island's edge, turning the island's denotation into a set of alternatives. Then the island itself is turned into a scope-taking element, and takes scope at the matrix level. Because the island's alternatives result from the disjunction's alternatives, this creates the effect of expanding the disjunction's alternatives beyond the island boundary.

Following is an analysis of (177) à la Charlow, where the whole sentence denotes alternatives through two movements: movement of the disjunction to the edge of the adjunct island, and movement of the island to a scope position above the conditional:

(179) [[either shellfish or tuna]$_i$ John eats t_i]$_j$ If t_j, he'll have an allergic reaction.

The first movement turns the island itself into a set of alternative propositions about different types of seafood that John eats: {John eats x | x ∈ {shellfish, tuna}}. Then the island is turned into a scope-taking element, which turns the entire sentence into a set of alternative propositions: {if John eats x, allergic reaction | x ∈ {shellfish, tuna}}.

Under this analysis, *either*'s surface position in (177) could mark the point at which the alternative-denoting property starts to percolate.

Having introduced a natural extension of Schlenker's and Charlow's semantic analyses to disjunctions, I will now discuss a few data points that they fail to cover, which suggests future research directions.

First, neither analysis takes into account the surface position of *either*. While my informants agree that disjunction can scope out of islands in *either*-seems-normal sentences, it cannot in *either*-seems-high sentences. The following sentences differs from (177) only in the surface position of *either*. Whereas in (177) *either* appears next to the DP, it appears preverbally below, and the disjunction loses exceptional scope.

(180) #If John either eats shellfish or tuna, he'll have an allergic reaction, but I don't know which.

Thus, we can make the following generalization about the scope of disjunction: in *either*-seems-normal sentences, disjunction can take scope at various positions in the structure, even outside islands. In *either*-seems-high sentences, the scope of disjunction is frozen at *either*'s surface position.[23] Neither analysis along the lines of Schlenker or Charlow depends on *either*'s surface position, so they do not have an account for this.

[23] I do not discuss *either*-seems-low sentences because speakers' judgments are not very clear. However, some speakers have told me that they seem to be able to find (i) grammatical:

(i) If John either eats shellfish or he eats tuna, he'll have an allergic reaction, but I don't know which.

Another issue for extending their analyses to disjunctions comes from the following two counterexamples:

(181) a. *John's decision to eat either rice or beans shocked Mary, but I can't remember which.
b. *If John eats either shellfish or tuna, he isn't pescatarian, but I can't remember which.

Example (181a) is a minimal pair with the following sentence:

(182) John revised his decision to eat either rice or beans, but I can't remember which.

Notice that these two sentences differ only in the position of the complex NP. When it is in the object position, the disjunction can take exceptional scope. But the exceptional scope disappears when the complex NP is the sentential subject.

Nothing in Schlenker's analysis depends on the structural position of the island. Whether it is the subject or the object, we should always be able to externally merge an existential quantifier over choice functions outside it that binds into the island. The analysis à la Charlow cannot explain this contrast either because it is designed to allow multiple embeddings of islands. Suppose that in (181a) the complex NP island is embedded in a subject island. The disjunction can simply move to the edge of the complex NP island before the complex NP island moves to the edge of the subject island, which then moves to the matrix level.

Example (181b) also poses an issue to both analyses. While I leave it for future research, I just want to point out that the failure of the disjunction to take exceptional scope in (181b) seems to correlate with the fact that the consequent clause is definitional. Neither extension of Schlenker's or Charlow's account depends on the property of the matrix clause, so they do not offer an explanation here.

In short, a full account of exceptional scope of disjunction is still lacking, but the two accounts available from the literature are compatible with the syntax that this paper has been defending.

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