Vietnamese focus particles and derivation by phase

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This paper succeeds a previously circulated manuscript entitled "In defense of Closeness." I concentrate on the Vietnamese facts here and am instead preparing a separate manuscript with the related Mandarin facts. I also eschew the OT presentation in that earlier manuscript.

I show that the focus-sensitive operator 'only' *chỉ* in Vietnamese is a sentential modifier and required to be as low as possible in its phase while taking its focus associate in its scope. I show that this "as low as possible" requirement cannot be violated even in order to yield a different meaning. Within a phase-based, bottom-up conception of structure-building, I analyze this behavior as the result of sentential focus particles adjoining as early as possible while being interpretable. The fact that this requirement only holds between different adjunction positions in each phase is naturally explained by the theory of derivation by phase (Chomsky, 2000, 2001) and provides a new kind of evidence for this form of cyclic structure-building. This work also provides cross-linguistic support for one aspect of the controversial analysis of German focus particles as sentential modifiers (Jacobs, 1983, 1986; Büring and Hartmann, 2001), which similarly requires an "as low as possible" requirement on sentential focus particles.

Keywords: Vietnamese, association with focus, sentential *only*, adverb placement, phases

Contents

1 Introduction

This paper describes the distribution of the focus-sensitive 'only' particle *chỉ* in Vietnamese, as in (1). We say that *chỉ* is "focus-sensitive" because the meaning introduced by *chỉ* depends on the placement of *focus*, indicated by capital letters below, elsewhere in the utterance. The focus-sensitivity of *chỉ* parallels the familiar behavior of English *only*, as reflected in the translations in (1).

(1) *Chỉ* **'only' is focus-sensitive:**

    a.   Nam **chỉ**   MUA cuốn sách.
            Nam ᴏɴʟʏ buy   ᴄʟ   book

            'Nam only BOUGHT the book.'

            ⇒ Nam didn't do anything else with the book (e.g. read it).

    b.   Nam **chỉ**   mua cuốn SÁCH.
            Nam ᴏɴʟʏ buy   ᴄʟ   book

            'Nam only bought the BOOK.'

            ⇒ Nam didn't buy anything else (e.g. the magazine).

Focus-sensitive operators such as *chỉ* quantify over a set of alternatives propositions, and the placement of focus contributes to the computation of these alternatives (Rooth, 1985, a.o.). This compositional semantics of focus leads to the requirement that the focused constituent must be in the scope of the focus-sensitive operator. Structurally speaking, the semantics then predicts that *sentential focus particles should be able to associate with any constituent that they c-command*.

This prediction seems to not hold in the general case. Syntactically, *chỉ* is a sentential 'only' and can be adjoined at higher points on the clausal spine (Hole, 2013), for example preceding the subject (2). From this position, *chỉ* takes the subject in its scope and is able to associate with it (2a). However, from this high position in the clause *chỉ* is unable to associate with the constituents 'buy' and 'the book' as was possible when *chỉ* was preverbal (1), even though *chỉ* still c-commands these constituents in (2b–c).

(2) **Pre-subject *chỉ* cannot associate with foci in the verb phrase:**

    a.   **Chỉ** NAM mua cuốn sách.
           ONLY Nam buy CL   book
           'Only NAM bought the book.'

           $\Rightarrow$ No one else bought the book.

    b.   * **Chỉ** Nam MUA cuốn sách.
           ONLY Nam buy CL   book
           Intended: 'Nam only BOUGHT the book.' (=1a)

    c.   * **Chỉ** Nam mua cuốn SÁCH.
           ONLY Nam buy CL   book
           Intended: 'Nam only bought the BOOK.' (=1b)

On the surface, an attractive alternative explanation for the contrasts in (1–2) would be to say that *chỉ* in (2) is a constituent 'only,' adjoined directly to the subject *Nam*, and therefore does not c-command the intended associate in (2b–c). However, I will argue in section 2 below that *chỉ* is uniformly a sentential modifier, as described in Hole (2013). The inability of a higher *chỉ* to associate with a lower focus as in (2b,c) then requires an alternative explanation.

I propose that contrasts such as in (2) are the result of a requirement that focus-sensitive operators be adjoined as low as possible while satisfying the semantic requirement to take their focus associate in their scope. In other words, examples (2b,c) are "blocked" by the availability of (1a,b), respectively, which yield the desired focus association with *chỉ* adjoined in a lower position in the clause. The grammaticality of (2a) reflects the fact that a lower position of *chỉ*, in preverbal position, would not be interpretable with *chỉ* associating with the intended subject associate.

Further study of the distribution of *chỉ* will show that this "as low as possible" requirement is relativized to each phase. I propose to analyze the effects of this requirement as the reflection of a syntactic constraint for focus-sensitive operators to be adjoined as early as possible in their phase. The fact that this requirement is relativized to each phase reflects the cyclic nature of syntactic structure-building, e.g. derivation by phase (Chomsky, 2000, 2001). I will also show that this behavior cannot be explained as a semantically-sensitive process by which *chỉ* must be as low as possible unless a higher attachment yields a different semantic interpretation (cf Fox, 1995, 2000).

By documenting this "as low as possible" behavior of sentential focus particles in Vietnamese, this paper will also indirectly contribute to an ongoing debate regarding the analysis of German

focus-sensitive particles. For reasons specific to German syntax, it is difficult to determine conclusively whether focus-sensitive operators in German are sentential modifiers or sub-sentential constituent modifiers. Jacobs (1983, 1986) and Büring and Hartmann (2001) make the strong but controversial claim that all German focus-sensitive operators are sentential modifiers. This sentential-only approach requires proposing a requirement that focus particles be as low as possible, akin to what I show here for Vietnamese. This constraint has been strongly questioned by critics on conceptual grounds, including Reis (2005) who calls it "spurious" and "more than doubtful." The work here thus contributes to this debate by showing that a grammatical process by which sentential focus particles are placed as low as possible is independently motivated in the genetically unrelated language of Vietnamese.

I will begin in section 2 by introducing some relevant background on focus particle syntax and two 'only' particles in Vietnamese. I will argue that the particle of interest, *chỉ*, is uniformly a sentential modifier, as it has been previously described by Hole (2013). In section 2.2, I will present the "as low as possible" distribution of *chỉ* in Vietnamese. I will also present my argument that this behavior cannot be the result of a semantically-sensitive constraint which would allow focus particles to be adjoined in a higher position if a different meaning is derived. Finally in section 4 I will present my formal proposal. I show that the fact that the "as low as possible" requirement is relativized to the phase forms a new type of argument the cyclic nature of syntactic structure-building (Chomsky, 2001). I conclude in section 5 with a discussion of the relation of the findings here to the broader debate on constraints on the placement of focus particles cross-linguistically.

2 Classifying focus particles

In this section I will discuss the syntactic classification of focus-sensitive particles into sentential and constituent-modifying operators. I then discuss the two 'only' particles in Vietnamese of interest here, *chỉ* and *mỗi*. The goal of this section is to motivate the view that *chỉ* is a sentential 'only', in contrast to the constituent 'only' *mỗi* (Hole, 2013). This will lay the groundwork for the investigation of the structural distribution of *chỉ* in section 3.

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2.1 Two types of focus particles

Focus-sensitive operators can take different syntactic forms. The literature on focus association draws a first-order distinction between focus particles which adjoin to the clausal spine and those which adjoin to non-clausal constituents. In a parallel to the dichotomy between sentential negation and constituent negation, I refer to these two types of focus particles as *sentential* and *constituent* focus particles.[1]

For example, the focus particle *only* in English is ambiguous between a sentential focus particle and a constituent focus particle, which are homophonous. The two uses are demonstrated in (3), where the two variants have equivalent truth conditions. Following Jackendoff (1972), here I will use F-marking to indicate the position of focus, abstracting away from its detailed phonetic realization.

(3) **English sentential and constituent *only*:**

    a. Nam **only** likes [Ngan]$_F$.   *sentential only*

    b. Nam likes **only** [Ngan]$_F$.   *constituent only*

Further investigation shows that these two *only*s behave differently. Most notably, sentential *only* always takes scope in its pronounced position (4), whereas constituent *only* can lead to scope ambiguities (5). See Taglicht (1984), Rooth (1985, ch. 3), and Bayer (1996) for discussion of such contrasts.

(4) **Sentential focus particles take surface scope:** (based on Taglicht, 1984, 150)

    a. They were advised to **only** learn [Spanish]$_F$.   *advised > only*

    b. They were **only** advised to learn [Spanish]$_F$.   *only > advised*

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[1] A note on terminology is in order here. In much previous literature, these two categories have been called *adverbial* vs *adnominal* focus particles (see e.g. Büring and Hartmann, 2001), which I have resisted in my work as constituent particles can adjoin to non-nominal constituents such as PPs. Hole (2013) uses the terms *adverbial* vs *adfocus*, but focus particles can adjoin to focus-*containing* phrases, not necessarily directly to focused constituents (i.e. they can pied-pipe). In my own previous work I have used *adverbial* vs *constituent-marking* for this distinction. However, an anonymous *JEAL* reviewer rightly notes that the term *adverb* can be used to describe modifiers in positions other than the clausal spine as well, making all *adverbial vs other* classifications potentially misleading. This reviewer suggested the *sentential* vs *constituent* terminology, in a parallel with negative particles. I adopt this suggestion here with great thanks.

This parallel between focus-sensitive operators and negation, as well as other logical operators such as conjunction, is unsurprising from the perspective of their semantics: the classic focus-sensitive operators of *only*, *even*, and *also* all ultimately quantify over propositions in their semantics, just as negation and coordination does. See Chapter 3 of Rooth (1985) for relevant discussion of the relation between sentential and constituent variants of logical operators.

(5) **Constituent focus particles can lead to scope ambiguities:** (Taglicht, 1984, 150)

They were advised to learn **only** [Spanish]_F. $\checkmark$*advised > only*, $\checkmark$*only > advised*

This dichotomy between sentential and constituent focus particles is further supported by the fact that some particles only take one form or the other: for example, English *also* is unambiguously a sentential modifier, even though *only* and *even* are ambiguous between sentential and constituent uses.[2] However, by far the best motivation for this distinction between sentential and constituent focus particles is the fact that some languages lexicalize them differently, as we will see in Vietnamese.

Next I turn to the structural relationship between these two types of focus particles and the focused constituents that they associate with, which I will also call their *focus associates*. Both sentential and constituent focus particles follow the c-command requirement in (6):

(6) **The c-command requirement on association with focus:** (Jackendoff, 1972; Rooth, 1985; Tancredi, 1990; Aoun and Li, 1993; McCawley, 1995; Bayer, 1996, a.o.)

A focus-sensitive operator must c-command its associate.

To see the effects of this requirement, consider the data in (7):

(7) **Patterns of association with *only*:** (based on McCawley, 1995, 172)

   a.   i.   John **only** put [salt]_F on the potatoes.

         ii.   John **only** put salt on [the potatoes]_F.

         iii.   * [John]_F **only** put salt on the potatoes.[3]

   b.   i.   John put **only** [salt]_F on the potatoes.

         ii.   * John put **only** salt on [the potatoes]_F.

         iii.   John put salt **only** on [the potatoes]_F.

         iv.   John put salt on **only** [the potatoes]_F.

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[2]But see Wagner (2013) for a proposal that English sentential *even* and constituent *even* differ in their semantics, supporting the view that these are two homophonous particles.

[3]Jackendoff (1972) notes that the configuration in (7aiii) is however grammatical with *even*, and it is also grammatical with *also* (Krifka, 1998, a.o.). Erlewine (2014) argues that this is a systematic difference between different focus-sensitive operators based on their semantics: *even* and *also* can associate with focused material which has moved out of its scope, while *only* cannot. Association with non-exclusive particles therefore systematically allows certain superficial exceptions to the c-command requirement in (6). Discussion in this paper will therefore concentrate on exclusive particles such as *only* which do obey this strict c-command requirement.

The preverbal *only* in (7a) is able to associate with any postverbal choice of focus, whereas *only* in a postverbal position (7b) must associate with a focus in the immediately following constituent. This pattern is explained by the generalization that focus-sensitive operators must c-command their focus associates (6), together with different adjunction positions for *only*. *Only* in (7a) is a sentential *only*, adjoined to VP and therefore c-commanding all of the material within the VP.[4] The *only* in (7b) are constituent *only*s, narrowly adjoined to DP or PP constituents, and therefore must associate with a focus within these constituents.

This generalization in (6) has been argued to follow from the compositional semantics of focus association itself, as in the work of Rooth (1985, 1992). Here I will simply adopt this well-established structural requirement in (6) as a descriptive generalization, without presenting its theoretical motivation.[5]

The c-command requirement (6) and patterns of association as in (7) can be an important clue for analyzing a particular focus particle as a sentential or constituent modifier. Consider the case of English pre-subject *only*, as in (8).

(8) **Two parses for English pre-subject *only*:**

Only [the Queen]$_F$ can be depicted on currency.

   a. [$_{TP}$ **only** [$_{TP}$ [the Queen]$_F$ can be depicted on currency]]   sentential *only*

   b. [$_{DP}$ **only** [$_{DP}$ the Queen]$_F$] can be depicted on currency   constituent *only*

Because the focused constituent *the Queen* is preverbal, *only* in (8) could conceivably be a sentential *only* adjoined to the entire clause or a constituent *only* adjoined narrowly to the subject. In both cases, *only* will satisfy the c-command requirement on focus association. However, notice that a pre-subject *only* as in (8) is unable to associate with a focus that follows the subject, as seen in (9).

(9) **Limited association with pre-subject *only*:**

   * **Only** the Queen can be depicted on [currency]$_F$.

This requirement for pre-subject *only* to associate with (a part of) the subject suggests that English pre-subject *only* is a constituent *only* as in (8b), and that sentential *only* cannot adjoin to TP as in

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[4]Throughout this paper, I will not distinguish between the constituents *v*P and VP, using the label VP throughout. See also footnote 21.

[5]In addition to Rooth's original work, for textbook-style introductions to focus semantics and Rooth's Alternative Semantics framework, see Part 3 of Kadmon (2001) and Chapter 4 of Beaver and Clark (2008).

(8a).[6] As we will see later with Vietnamese, however, evidence of this form is not necessarily con-clusive: we might have good reason to believe that a particle is a sentential modifier and nonethe-less observe such a restricted pattern of focus association.

2.2 Two 'only's in Vietnamese

Vietnamese has a morphologically rich system of focus-sensitive operators. Various operators in Vietnamese with *even*, *also*, and *only* semantics, in different configurations, are described in detail in Hole (2013). Here I will concentrate on two 'only' particles described there, *chỉ* and *mỗi*.[7]

Hole (2013) argues that *chỉ* is a sentential 'only,' whereas *mỗi* is a constituent 'only.' A sentence with a given focus can have one, the other, or both, to yield the same meaning.[8,9] An example is given in (10) below. In this example, with a postverbal focus, *chỉ* is adjoined in a preverbal position on the clausal spine whereas the constituent modifier **mỗi** is adjoined directly to the focus. I gloss the sentential 'only' *chỉ* as ONLY$_{sent}$ and the constituent 'only' *mỗi* as ONLY$_{cons}$.

(10) **Two 'only's in Vietnamese:**

    a. Nam **chỉ**   mua [cuốn sách]$_F$.
        Nam ONLY$_{sent}$ buy CL   book

    b. Nam mua **mỗi**   [cuốn sách]$_F$.
        Nam buy ONLY$_{cons}$ CL   book

    c. Nam **chỉ**   mua **mỗi**   [cuốn sách]$_F$.
        Nam ONLY$_{sent}$ buy ONLY$_{cons}$ CL   book
        'Nam only bought [the book]$_F$.'   (a = b = c)

A range of contrasts support the idea that *chỉ* is a sentential 'only' and *mỗi* is a constituent 'only.' Consider the examples in (11) below with a preverbal locative PP adjunct 'at school.' For 'only' to associate with 'school,' it must be outside of the PP on the clausal spine (11a), rather than inside

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[6]In the case of English, there is independent evidence that pre-subject *only* is a constituent *only*, because it can take wide scope, in a higher clause, under certain circumstances; cf (4–5). See Bayer (1996, 59–60) for such evidence.

[7]I limit attention here to exclusive focus particles, as non-exclusive focus particles are systematically less strict in their surface c-command requirement. See footnote 3 above.

Some examples here will also have a preverbal *mới* (not to be confused with ONLY$_{cons}$, which is *mỗi*) and clause-final *thôi*. I gloss both as PRT here. For *mới*, see Nguyen (2012); Hole (2013). For *thôi*, see Hole (2014).

[8]The case of both 'only' operators cooccurring to yield one semantic invocation of exclusive semantics, in (10c), must be thought of as a type of concord process. I will leave open the question of the compositional semantics of such examples.

[9]See Jannedy (2007) for a description of the prosodic correlates of F-marking in Vietnamese.

the PP (11b). In contrast, the constituent 'only' *mỗi* is naturally adjoined directly to the focused constituent, inside the PP (11c).

(11) **'Only' associating into a preverbal PP:**

    a.   Tôi **chỉ**   [[$_{PP}$ ở [trường]$_F$] học   tiếng anh].
        I   ONLY$_{sent}$ at school   study English

    b.   * Tôi [$_{PP}$ ở **chỉ**   [trường]$_F$] học   tiếng anh.
        I   at ONLY$_{sent}$ school   study English

    c.   Tôi [$_{PP}$ ở **mỗi**   [trường]$_F$] học   tiếng anh.
        I   at ONLY$_{const}$ school   study English
        'I only study English at [school]$_F$.'   (a = c)

Further evidence comes from the relative ordering of the two 'only' particles. Consider the examples in (12), which illustrate different options for subject focus with 'only.' When both *chỉ* and *mỗi* cooccur, they must be in *chỉ-mỗi* order (12c), and the reverse *mỗi-chỉ* order is ungrammatical (12d).

(12) **'Only' associating with the subject:**

    a. ✓**Mỗi**   [Nam]$_F$ mua cuốn sách.   b. ✓**Chỉ**   [Nam]$_F$...
        ONLY$_{cons}$ Nam   buy CL   book   ONLY$_{sent}$ Nam
        'Only [Nam]$_F$ bought the book.'

    c. ✓**Chỉ**   **mỗi**   [Nam]$_F$...   d. * **Mỗi**   **chỉ**   [Nam]$_F$...
        ONLY$_{sent}$ ONLY$_{cons}$ Nam   ONLY$_{cons}$ ONLY$_{sent}$ Nam

This is predicted by the view that *chỉ* is a sentential 'only' on the clausal spine and *mỗi* is a constituent 'only' adjoined directly to the subject DP, as schematized in (13) below. The sentential 'only' will necessarily be linearized outside of the constituent 'only.'

(13) **The structure of (12c):**

    [$_{TP}$ **Chỉ**   [$_{TP}$ [$_{DP}$ **mỗi**   [$_{DP}$ Nam]$_F$] mua cuốn sách]]
        ONLY$_{sent}$ ONLY$_{cons}$ Nam   buy CL   book

A reviewer notes that *chỉ* can sometimes appear in utterances between a verb and its object, which is unexpected under the analysis here of *chỉ* as a sentential 'only' which always adjoins to the clausal spine above VP. An example is (14) below.

(14) **Sentential 'only' *chỉ* in postverbal position:**

Tôi đọc   *(#) **chỉ**   (có) cuốn sách [này]$_F$.
I   read   ONLY$_{sent}$ have CL   book this

$\approx$ 'I only read [this]$_F$ book.'

However, two aspects of such examples suggest that they are not true counterexamples to the idea that *chỉ* is unambiguously a sentential 'only.' First, the postverbal *chỉ* must be introduced by a pause, indicated by # above, which is not regularly required between verbs and objects in Vietnamese. Second, postverbal *chỉ* is optionally followed by the existential 'have' verb *có*. Note that *chỉ* in regular preverbal position cannot regularly be followed by *có*, as seen in example (15):[10]

(15)   **Existential *có* cannot be added to regular preverbal *chỉ*:**

Tôi **chỉ**   (*có) đọc cuốn sách [này]$_F$.
I   ONLY$_{sent}$ have read CL   book this

'I only read [this]$_F$ book.'

  I propose that (14) is instead a biclausal utterance, with a pro-dropped object of 'read' which is then described as being a specific book and not others. It is in fact possible to include an overt pronoun in the object position, as in (16), which is then clearly two indepedent clauses. I argue that (14) above is simply a version of (16) with a pro-dropped object.[11]

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[10]In addition to being an existential main verb, *có* has a number of uses as a functional morpheme. For example, Trinh (2005) argues that *có* in some cases is a default realization of T, akin to *do*-support. My argument here does not depend on the precise function of *có* in (14) and (16) below. What is important is that the availability of *có* reveals the presence of additional clausal structure in (14), in contrast to regular uses of *chỉ* where *có* cannot occur (15).

[11]An alternative approach may be to say that (14) is an "amalgam" in the sense of Lakoff (1974) and subsequent work (see e.g. Guimarães, 2004; Kluck, 2011). Two examples from Lakoff (1974) are reproduced in (i) and (ii) below with my paraphrases. Lakoff attributes the observation of examples such as (i) to Avery Andrews, by way of Háj Ross, and (ii) to Larry Horn.

  (i)   John invited [you'll never guess how many people] to his party.
       'John invited some people to his party; you'll never guess how many (people).'

  (ii)   John is going to, [I think it's Chicago] on Saturday.
       'John is going someplace on Saturday; I think it's Chicago.'

In contrast to Vietnamese, English does not allow pro-drop, making it clear that such utterances involve some sort of embedding of the material in brackets in (i–ii), which acts as a comment on the argument interpreted in that position.

(16) **The overt biclausal source for (16):**

Tôi đọc nó.   **Chỉ**   (có) cuốn sách [này]$_F$.
I   read it   ONLY$_{sent}$ have CL   book this

literally: 'I read it. Only [this]$_F$ book.'

Evidence for this biclausal analysis of example (14) comes from the scope of *chỉ* in postverbal position as in (14). As noted above—see (4)—sentential focus particles take scope in their pronounced position. This can be shown independently for Vietnamese *chỉ*, for example in (17a,b) below. In (17a), *chỉ* precedes negation and 'only' unambiguously scopes over negation. In contrast, in (17b), *chỉ* follows the negation and 'only' must scope under negation.

(17) **Sentential 'only' *chỉ* takes surface scope with respect to negation:**[12]

    a. *chỉ* NEG: ✓ONLY > NEG, *NEG > ONLY

       Tôi **chỉ**   không đọc cuốn sách [này]$_F$.
       I   ONLY$_{sent}$ NEG   read CL   book this

       'I only didn't read [this]$_F$ book.' ⇒ I read all other books.

    b. NEG *chỉ*:   *ONLY > NEG, ✓NEG > ONLY

       Tôi không **chỉ**   đọc cuốn sách [này]$_F$.
       I   NEG   ONLY$_{sent}$ read CL   book this

       'I didn't only read [this]$_F$ book.' ⇒ I read (some) other books as well.

Now consider an example with a postverbal *chỉ* as in (14) above, but with a negation preceding the verb 'read': example (18) below. This example is interpreted unambiguously with 'only' taking wide scope above the negation.

(18) **Postverbal *chỉ* as in (14) takes obligatory wide scope:**

Tôi không đọc *(#) **chỉ**   (có) cuốn sách [này]$_F$.
I   NEG   read   ONLY$_{sent}$ have CL   book this

✓ 'I only didn't read [this]$_F$ book.' ⇒ I read all others.   ✓ONLY > NEG (=17a)

* 'I didn't only read [this]$_F$ book.' ⇒ I read some others.   *NEG > ONLY (=17b)

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[12] At first glance, the variable position of *chỉ* with respect to negation in (17) may seem to go against the generalization I intend to motivate in the following section, that *chỉ* must be as low as possible in its phase. I will return to this case below, where I appeal to the fact that the Vietnamese negator *không* is not an adjunct but a verb (Trinh, 2005).

This result is surprising if (18) is monoclausal with *chỉ* structurally below the negation, as the word order seems to indicate, given that *chỉ* takes surface scope with respect to negation in (17) above. Instead, my analysis where *chỉ* is part of an independent clause, describing the object of the preceding clause—what was not read—predicts that 'only' will necessarily take scope above negation, as observed.

Note furthermore that the biclausal utterance in (19)—a variant of (18) with an overt pronoun in object position—is also interpreted together with 'only' scoping unambiguously over the negation.

(19) **Biclausal utterance explains wide scope of *chỉ* in (18):**

Tôi	không	đọc	nó.	**Chỉ**	(có)	cuốn	sách	[này]$_F$.
I	NEG	read	it	ONLY$_{sent}$	have	CL	book	this

literally: 'I didn't read it. Only [this]$_F$ book.'

✓ 'I only didn't read [this]$_F$ book.' ⇒ I read all others.   ✓ONLY > NEG (=17a)

* 'I didn't only read [this]$_F$ book.' ⇒ I read some others.   *NEG > ONLY (=17b)

The superficial availability of *chỉ (có)* in postverbal position as in (14, 18) is thus shown to be an illusion. The distribution of *chỉ* observed above shows that *chỉ* is consistently a sentential 'only' in Vietnamese. At the same time, we saw that *chỉ* can be adjoined at different heights on the clausal spine, in immediately preverbal position (10), above a preverbal PP adjunct (11a), or even above the subject (12). I will now take a closer look at this distribution of *chỉ*.

3   The distribution of sentential 'only' *chỉ*

In this section I will document where the sentential 'only' *chỉ* can be placed and what it then can associate with. The data I present will motivate the following empirical generalization:

(20) **Generalization:**
Sentential focus particles (focus-sensitive sentential modifiers) must be as low as possible while c-commanding their focus associate, within a given phase.

A similar requirement that sentential focus particles must be as low as possible has been independently proposed previously for German by Jacobs (1983, 1986) and Büring and Hartmann (2001),

who advocate for the strong position that all German focus particles are sentential modifiers. However, this position has been very controversial for German (see e.g. Reis, 2005; Meyer and Sauerland, 2009; Smeets and Wagner, to appear). I will discuss this debate over German focus particles and the relation of the findings here at the conclusion of the paper.

I will begin with the placement of *chỉ* in a simplex clause, using the baseline in (21), which includes the temporal adjunct 'yesterday' in its unmarked word order. The clausal spine of (21) is formed of two phases (Chomsky, 2001). As noted in footnote 4 above, I do not distinguish between the traditional categories *v*P and VP here and will use the label "VP" for the lower phase of clauses.

(21) **Baseline: "Adjunct S V O" order**

[$_{CP}$ Hôm qua Nam [$_{VP}$ mua cuốn sách.
    yesterday Nam   buy   CL   book

'Nam bought the book yesterday.'

There are three possible positions for the sentential 'only' *chỉ* to adjoin in (21): immediately pre-verbally (adjoining to VP), immediately preceding the subject (adjoining to TP), or clause-initially (adjoining to TP, above the adjunction of 'yesterday').[13] All three of these positions for *chỉ* involve adjunction within the construction of CP, the higher clausal phase.

In the following data, I place the adverbial 'only' operator *chỉ* in these different structural positions and present the possible readings for each string. The position of F-marking required for the different readings, which is realized prosodically, is reflected only in the translations. I begin with *chỉ* in immediately preverbal position:

(22) **"Adjunct S ONLY V O":**

Hôm qua Nam **chỉ**   mua cuốn sách (thôi).
yesterday Nam ONLY$_{sent}$ buy   CL   book (PRT)

   a. $^{\checkmark}$'Nam only bought [the book]$_F$ yesterday.'

   b. $^{\checkmark}$'Nam only [bought]$_F$ the book yesterday.'

   c. $^{\checkmark}$'Nam only [bought the book]$_F$ yesterday.'

---

[13]I assume adjunction is to maximal projections. In particular, adjunction to the T' bar-level is prohibited. This immediately explains the ungrammaticality of *chỉ* adjoined between the subject and the future marker *sẽ* and anterior marker *đã*, as observed by Hole (2013) and an anonymous reviewer, because these markers realize the head T (Trinh, 2005). The clause-initial adjunction of *chỉ* (23) is to TP, because *chỉ* in this position follows embedding complementizers.

d.   * 'Only [Nam]_F bought the book yesterday.'

e.   * 'Nam only bought the book [yesterday]_F.'

f.   * 'It's only that [Nam bought the book yesterday]_F.'

With *chỉ* in immediately preverbal position (22), 'only' can associate with the verb, the object, or the entire VP—in other words, any constituent that it c-commands. As expected, 'only' cannot associate with the subject *Nam* or the temporal adjunct 'yesterday,' which are not c-commanded by 'only.'

Now consider higher placements of *chỉ*. In (23), *chỉ* immediately precedes the subject *Nam*, and is required to associate with it. This is surprising in light of my arguments in the previous section that *chỉ* is a sentential 'only,' adjoining to the clausal spine. From this position, *chỉ* in (23) is predicted to c-command the VP as well, but the VP and its subconstituents are not valid choices of focus for this example.

(23)   **"Adjunct ᴏɴʟʏ S V O":**

Hôm qua **chỉ**   Nam (mới) mua cuốn sách (thôi).
yesterday ᴏɴʟʏ_sent Nam (ᴘʀᴛ) buy ᴄʟ   book (ᴘʀᴛ)

a.   * 'Nam only bought [the book]_F yesterday.'

b.   * 'Nam only [bought]_F the book yesterday.'

c.   * 'Nam only [bought the book]_F yesterday.'

d.   ✓ 'Only [Nam]_F bought the book yesterday.'

e.   * 'Nam only bought the book [yesterday]_F.'

f.   * 'It's only that [Nam bought the book yesterday]_F.'

Similarly, consider example (24) where *chỉ* is in clause-initial position. Now *chỉ* must associate with the temporal adjunct 'yesterday' that it immediately precedes, or the entire proposition. Like (23), it is not the case that *chỉ* is able to associate with any constituent in its scope.

13

(24) **"ONLY Adjunct S V O":**

> **Chỉ** hôm qua Nam (mới) mua cuốn sách (thôi).
> ONLY$_{sent}$ yesterday Nam (PRT) buy CL book (PRT)

    a.   * 'Nam only bought [the book]$_F$ yesterday.'

    b.   * 'Nam only [bought]$_F$ the book yesterday.'

    c.   * 'Nam only [bought the book]$_F$ yesterday.'

    d.   * 'Only [Nam]$_F$ bought the book yesterday.'

    e.   ✓ 'Nam only bought the book [yesterday]$_F$.'

    f.   ✓ 'It's only that [Nam bought the book yesterday]$_F$.'

Given that *chỉ* is a sentential 'only' adjoining to the clausal spine, as argued in the previous section, the unavailability of certain readings in (23–24) becomes unexpected. Specifically, the compositional semantics of focus should allow for *chỉ* to associate with *any* constituent in its scope, including the readings in (23a–c) and (24a–d), contrary to fact. These contrasts in (22–24) motivate a requirement that *chỉ* must be *as low as possible* while c-commanding , as in the generalization in (20) above.

As mentioned above, the three positions of *chỉ* in the simplex clause above (22–24) are all in the same phase, the higher phase of the clausal spine (the CP in (21)). Therefore, for any choice of F-marking, there is only one grammatical placement of *chỉ*: an interpretable lower adjunction position for *chỉ* blocks all higher adjunction.

This situation changes with complex clauses with additional phases where *chỉ* can be adjoined. Consider for example (25): here, I have fixed the placement of F-marking on the embedded object *Ngân*. The sentential 'only' could be adjoined in the higher clause (25a) or the lower clause (25b).

(25) **Matrix and embedded positions for *chỉ*, given embedded focus:**

    a. Tôi **chỉ** nói [$_{CP}$ là Nam thích [Ngân]$_F$ (thôi).
        I ONLY$_{sent}$ say that Nam like Ngan (PRT)
        'I only said Nam likes [Ngan]$_F$.'

    b. Tôi nói [$_{CP}$ là Nam **chỉ** thích [Ngân]$_F$ (thôi).
        I say that Nam ONLY$_{sent}$ like Ngan (PRT)
        'I said Nam only likes [Ngan]$_F$.'

Note that it is not simply the case that the placement of *chỉ* is not subject to the "as low as possible" requirement (20) in (25). For example, *chỉ* cannot be in a higher position in the matrix clause and associate with the intended associate in the embedded clause (26). The placement of *chỉ* in (26) is blocked by the "as low as possible" requirement (20) given the availability of *chỉ* in a lower position in the same phase, the matrix CP, as in (25a).

(26)　　* **Chỉ**　　tôi nói [$_{CP}$ là　Nam thích [Ngân]$_F$ (thôi).
　　　　ONLY$_{sent}$ I　say　that Nam like　Ngan　(PRT)
　　　　Intended: 'I only said Nam likes [Ngan]$_F$.' (=25a)

These examples show that the "as low as possible" requirement is still active for complex clauses but is not evaluated across the entire utterance. In particular, we learn from the examples in (25) that the availability of adjoining *chỉ* in an embedded CP does not block the adjunction of *chỉ* in a higher CP. The "as low as possible" requirement must be relativized to syntactic domains of particular size.

We can further motivate that the requirement is relativized to each phase, not simply each CP, based on data such as (27), repeated from (17) above. Here it is important that the sentential negator *không* is a verb which itself selects for a VP (Trinh, 2005), but *không* does not embed a full CP. The availability of *chỉ* above or below *không* given a fixed choice of F-marking on the embedded object contrasts from what we saw above in the simplex clauses (22–24). The introduction of this additional phase boundary allows for this variable placement of *chỉ*.

(27)　**Sentential 'only' *chỉ* above or below the negative verb *không*:**

　　a. Tôi [$_{VP}$ không **chỉ**　　[$_{VP}$ đọc　cuốn sách　[này]$_F$.
　　　 I　　 NEG　 ONLY$_{sent}$　 read CL　 book this
　　　 'I didn't only read [this]$_F$ book.' ⇒ I read (some) other books as well.

　　b. Tôi **chỉ**　　[$_{VP}$ không [$_{VP}$ đọc　cuốn sách　[này]$_F$.
　　　 I　 ONLY$_{sent}$　 NEG　　 read CL　 book this
　　　 'I only didn't read [this]$_F$ book.' ⇒ I read all other books.

The two positions of *chỉ* in (27) also correspond to different meanings, as noted (17) above. This suggests an alternative account for examples such as (25) with the full CP embedding and (27) with negation: perhaps sentential focus particles must be as low as possible, *unless being higher yields a different interpretation*.

The idea that a certain operation cannot take place unless it leads to a different semantics is not new. For example, Fox (1995, 2000) proposes that covert scope-shifting operations such as QR and scope reconstruction are subject to such a semantically-sensitive requirement. This principle is called Scope Economy:

(28) **Scope Economy (Fox, 2000):**

Scope-shifting operations cannot be semantically vacuous.

For our purposes, this alternative revision to generalization (20) is stated in (29):

(29) **A semantically-sensitive revision to generalization (20):**

Sentential focus particles (focus-sensitive sentential modifiers) must be as low as possible while c-commanding their focus associate and *deriving the intended truth conditions*.

In the simple case of the examples in (25), repeated below as (30), this semantically-sensitive characterization in (29) will capture the relevant contrasts. Examples (30a–b) are both grammatical, even though *chỉ* is in a lower position in (30b) than in (30a), because they yield distinct truth conditions. However, note that placing *chỉ* higher, in matrix pre-subject position (30c), will yield the same truth conditions as (30b). (30c) therefore violates (29) and is ungrammatical.

(30) **Matrix and embedded positions for *chỉ*, given embedded focus, repeated from (25):**

    a.   Tôi **chỉ**   nói [$_{CP}$ là   Nam thích [Ngân]$_F$ (thôi).
          I   ONLY$_{sent}$ say   that Nam like   Ngan   (PRT)
          'I only said Nam likes [Ngan]$_F$.'   *only > say*

    b.   Tôi nói [$_{CP}$ là   Nam **chỉ**   thích [Ngân]$_F$ (thôi).
          I   say   that Nam ONLY$_{sent}$ like   Ngan   (PRT)
          'I said Nam only likes [Ngan]$_F$.'   *say > only*

    c.   * **Chỉ**   tôi nói [$_{CP}$ là   Nam thích [Ngân]$_F$ (thôi).
          ONLY$_{sent}$ I   say   that Nam like   Ngan   (PRT)
          Intended: 'I only said Nam likes [Ngan]$_F$.' (=a)

It can be shown, however, that the semantically-sensitive approach in (29) overgenerates in a way that the non-semantically-sensitive, purely syntactic statement in (20) does not. This argument will come from simplex clauses involving quantificational subjects. A baseline of this form is in (31) below. Here I will use a subject universal quantifier. Universal quantifiers in Vietnamese

can be formed using a preverbal *wh*-word (here, *ai* 'who') together with an 'also' operator *cũng* (Bruening and Tran, 2006; Nguyen, 2012).[14] I note first that example (31) must be interpreted with the subject universal quantifier taking scope over ONLY's quantification over its focus alternatives, i.e. that Vietnamese is scope-rigid for relevant purposes.

(31) **Subject quantifier baseline:**

Ai   cũng **chỉ**   mua [cuốn sách]$_F$.
who also ONLY buy CL   book

✓ 'Everyone only bought [the book]$_F$.'   *every > only*

* 'The book is the only thing that everyone bought.'   **only > every*

Chỉ in (31) is in the lowest position possible while c-commanding its focus associate, and is predicted to be grammatical under both the purely syntactic generalization in (20) as well as the semantically-sensitive proposal in (29).

The test case is what happens if *chỉ* is adjoined above the quantificational subject and continues to associate with 'the book.' Semantically, the alternatives introduced by the F-marked object below will project to the complement of *chi*, with the universal quantifier composing pointwise with each alternative. We predict this structure to be interpretable, yielding a different reading with *only > every* scope: the book is the only thing that everyone bought. However, this sentence is ungrammatical with the intended reading.

(32) *Chỉ* **cannot be higher, even if it would lead to a different reading:**

* **Chỉ**   ai   cũng mua [cuốn sách]$_F$.
ONLY$_{sent}$ who also buy CL   book

Intended: 'Only [the book]$_F$ is such that$_i$ everyone bought it$_i$.'   *only > every*

The intended meaning in (32) can of course be expressed, but it requires fronting the focus associate to a position above the quantificational subject.

(33) **Fronting can be used to force *chỉ* to scope higher, above *every*:**

✓ **Chỉ**   (**mỗi**)   [cuốn sách]$_F$ ai   cũng (mới) mua ____.
ONLY$_{sent}$ (ONLY$_{cons}$) CL   book who also (PRT) buy

≈ 'Only [the book]$_F$ is such that$_i$ everyone bought it$_i$.'   *only > every*

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[14]See Kratzer and Shimoyama (2002); Shimoyama (2006) for discussion of, and a compositional semantics for, a similar combination of *wh*-phrases and an 'also' operator to express universal quantification in Japanese. See also Tran and Bruening (2013) on the semantics of Vietnamese *wh*-words.

Under the semantically-sensitive formulation in (29), the high placement of *chỉ* associating down with 'the book' (32) is predicted to be possible. Even though *chỉ* can be adjoined lower in the clause as in (31) and c-command its focus associate, the structure in (32) should yield a distinct truth-condition. The fact that (32) is nonetheless ungrammatical, then, shows that the generalization in (29) cannot be correct. That is, the "at low as possible" behavior observed in Vietnamese cannot be the result of a semantically-sensitive condition. In contrast, the purely syntactic formulation of the generalization in (20) above correctly predicts the ungrammaticality of (32). The fact that (32) should yield a different semantics is immaterial to this process which determines the position of focus-sensitive adverbs.

To conclude, in this section I presented data that motivates that the sentential 'only' *chỉ* in Vietnamese is always as low as possible in its phase while c-commanding its focus associate (20). This generalization correctly accounts for the (un)availability of *chỉ* in various positions with different associates, in all data presented here.

4   Focus particles and derivation by phase

In this section I present my formal proposal for the distribution of focus particles in Vietnamese, which derives the empirical generalization documented in the previous section. This generalization in (20) is repeated below in (34). I will show that the distribution of Vietnamese sentential 'only' *chỉ* is best explained by—and in turn supports—the cyclic derivation of syntactic structure by phase, as envisioned by Chomsky (2000, 2001).

(34)   **Generalization, repeated from (20):**
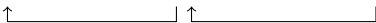
Sentential focus particles (focus-sensitive sentential modifiers) must be as low as possible while c-commanding their focus associate, within a given phase.

As discussed in section 2.1, focus-sensitive operators are subject to a c-command requirement, whereby operators must c-command their intended focus associates. This explains the c-command requirement that is a part of (34). However, the semantics of association with focus itself is insensitive to syntactic locality (Rooth, 1985), and therefore the requirements in (34) that sentential focus particles be adjoined *as low as possible* and that this requirement is *relativized to each phase* are not

explained by the semantics of these particles alone. Furthermore, I showed that these effects do not reflect a semantically-sensitive condition which allows higher focus particle placement if it leads to a different semantics. The behavior observed shows us that there is a hard syntactic constraint governing the adjunction positions of these particles, not just requirements of semantic interpretation (cf Ernst 2002).

I propose that the behavior observed reflects a general principle governing local derivational choices. I will begin with a presentation of the relevant theoretical background, by way of discussion of a similar and well-studied principle, *Merge over Move*. Consider the examples in (35) from Chomsky (2000). These two examples differ in where the expletive *there* is introduced and how far we move *a proof*.

(35) **A motivation for Merge over Move:** (based on Chomsky, 2000, p. 104)[15]

    a.   There is likely ___ to be [a proof] discovered ___ .

    b.   * There is likely [a proof] to be ___ discovered ___ .

Following the construction of the embedded "to be a proof discovered," we must satisfy the EPP requirement of this embedded T head. The contrast in (35) shows that Merge of the expletive *there* to satisfy this EPP requirement is preferable to further movement of *a proof*, blocking the derivation in (35b) where the expletive is instead Merged only at the very last step, in order to satisfy the EPP requirement of matrix T. Chomsky attributes this and similar contrasts to a general Merge over Move principle.

It's important to note that the movement of *a proof* to the edge of the embedded nonfinite TP in (35b) is not independently ruled out, as reflected by the grammatical derivation of (36). The availability of (36) reflects a derivation where *a proof* moves all the way up to satisfy the EPP feature on matrix T and the expletive *there* is never inserted.

(36)   [A proof] is likely ___ to be ___ discovered ___ .

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[15]The fact that the passive VP surfaces in (35b) as *a proof discovered*, rather than *discovered a proof* with *a proof* in its base position, is attributed to a separate, language-specific process, dubbed the "thematization/extraction rule" in Chomsky (2001, p. 20). This is the source of the first/lowest movement step of *a proof* in both structures in (35) and in (36) below.

The availability of both (35a) and (36) is explained by the important notion of the *lexical array* in the Minimalist Program. As outlined in Chomsky (1995, et seq), derivations are constructed out of a set of lexical items which are first preselected from the lexicon, much as a prepared chef lays out all necessary ingredients before beginning to cook. This set of lexical items is called the *lexical array*, and it must be exhausted for convergence of the derivation. The derivation of (36) involves a lexical array that does not include the expletive *there*, whereas (35a) is built from a lexical array that differs minimally in the addition of *there*. Example (35b) reflects another derivation using the same lexical array as for (35a), but violating Merge over Move.

Chomsky (2000) shows that there are cases where Merge over Move appears at first glance to not have taken effect, such as example (37):

(37)   **Merge over Move does not hold over the entire structure:** (based on Chomsky, 2000, p. 103)

There is a possibility [$_{CP}$ that [a proof] will be ___ discovered ___].

The derivation of (37) necessarily includes the expletive *there* in the lexical array. At the point where "will be a proof discovered" has been built and this embedded T's EPP feature must be satisfied, we might expect Merge over Move to predict that the expletive from the lexical array be Merged instead of moving the subject *a proof*. However, the grammaticality of (37) shows that Merge over Move does not force the introduction of the expletive here. Chomsky takes examples of this form to motivate the idea that complex linguistic expressions can be built from a sequence of separate *lexical subarrays*, which each result in a *phase* (Chomsky, 2000, p. 106ff). The lexical subarray for the embedded clause in (37) does not include the expletive *there* and therefore Merge over Move does not block the derivation in (37). Merge over Move holds in (35) because embedded nonfinite TP and passive *v*Ps are not phases,[16] in contrast to the CP embedding in (37).

These independently motivated and widely-adopted assumptions of Chomsky's Minimalist Program—constraints on local derivational choices such as Merge over Move and their applicability only within individual phases—offer a very natural explanation for the distribution of focus particles observed here. I propose that the behavior observed, generalized in (34) above, reflects the following general principle:

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[16]The idea that passive and unaccusative *v*Ps are not full-fledged phases has since been controversial; see e.g. Legate (2003). This issue is not relevant for our discussion.

(38) **Adjoin As Soon As Possible:**[17]

    Adjuncts should be adjoined as soon as they will be interpretable.[18]

Because focus particles are adjuncts, there are many points in the derivation where we could choose to Merge in a focus particle from the lexical array.[19] The principle in (38) says that this adjunction should take place as soon as possible. Because only lexical items from the current lexical subarray (ingredients for the current phase) can be considered at a time, this derives the observed "as low as possible" behavior which is relativized to the phase.

Let's see how the idea of derivation by phase and Adjoin As Soon As Possible (38) together correctly derive the distribution of the Vietnamese sentential 'only' *chỉ* observed here. I begin by constructing the lower phase of the clause, VP, in (39). Note that details that are orthogonal to the issue of focus particle placement are simplified here. For example, as noted in footnote 4 above, I do not distinguish between *v*P and VP here. Using the items in the lexical subarray LA$_1$—including the output of an earlier DP phase subderivation—the VP phase is formed.

(39) **Derivation of a VP phase with object focus:**

    a. LA$_1$ = {buy, [$_{DP}$ CL book]$_F$}

    b. [$_{VP}$ buy DP]

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[17]"As soon as possible" here assumes a bottom-up structure-building process. In a model of left-to-right or top-down structure-building, the principle would be restated as Adjoin As Late As Possible.

[18]In the case of focus particles, "being interpretable" here translates into the c-command requirement on focus particles: focus particles must c-command their intended focus associate (6). This can be further formalized without recourse to lookahead in one of at least two ways:

  a) The "intended associate" can be checked by adopting the view that F-marked constituents bear a *focus index F$_i$* (Kratzer, 1991; Wold, 1996; Erlewine, 2014). If the complement of the focus particle is a constant function across different assignments for the relevant focus-index, we know immediately that the focus particle's semantics will be unsatisfied.

  b) Here I have followed the common Roothian assumption that focused constituents are interpreted in-situ at LF (Rooth, 1985, a.o.). However, an alternative would be to require that the focus particle Agree with and Attract its intended associate for covert movement (see e.g. Chomsky, 1976; Drubig, 1994; Krifka, 2006; Wagner, 2006; Erlewine and Kotek, 2014, 2016). In this case, if the intended associate is not in the complement of the focus particle, the derivation will crash. See Erlewine (2015b) for discussion of the derivation of the generalization in (34) using covert focus movement.

Radek Šimík (p.c.) notes that Hagstrom (1998, p. 185) entertains a principle, dubbed "Avoid Flexible Functional Application," which similarly encourages focus-sensitive operators to merge low, specifically in the domain of *wh*-question interpretation.

[19]I take adjunction to be the free Merge of two syntactic objects which each have no remaining selectional or probing features; e.g. maximal projections. See also footnote 13 above.

Work such as Cinque (1999) have observed that many adverbs have specific positions in the clause where they prefer to or must adjoin. Such restrictions are in principle compatible with the principle I propose in (38): the effect of (38) will simply only be observed with adjuncts which have multiple possible positions for adjunction with the phase. As I have shown, Vietnamese sentential focus particles are not required to adjoin to a particular fixed position in the clause, allowing us to see the effects of (38) on their distribution.

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Now consider the derivation of the CP phase in (40). The lexical subarray LA$_2$ includes the functional heads C and T, the lower VP phase from (39), a subject DP *Nam*,[20] and the sentential 'only' *chỉ*. I enumerate the derivational steps taken and their results in (40b).

(40) **Derivation of the CP phase, following (39):**

    a. LA$_2$ = { C, T, VP (39), ONLY$_{sent}$, [$_{DP}$ Nam] }

    b. i. Adjoin ONLY$_{sent}$ to VP   [$_{VP}$ ONLY$_{sent}$ VP]

        ii. Merge T and (i)   [T [$_{VP}$ ONLY$_{sent}$ VP]]

        iii. Merge subject with (ii)   [$_{TP}$ DP [T [$_{VP}$ ONLY$_{sent}$ VP]]]

        iv. Merge C with (iii)   [$_{CP}$ C [$_{TP}$ DP [T [$_{VP}$ ONLY$_{sent}$ VP]]]]

The derivation in (40) begins with the adjunction of 'only' because 'only' will c-command its associate ('the book') from this position and will be interpretable, and therefore Adjoin As Soon As Possible (38) requires that we adjoin immediately at this point. This results in the correct word order: *chỉ* is in immediately preverbal position. Adjoining *chỉ* in at a later stage—for example, after the construction of the TP—is generally possible syntactically and would be an interpretable structure, but violates the Adjoin As Soon As Possible principle, and is therefore ruled out.

In contrast, suppose that F-marking is on the subject *Nam* instead. Following the construction of the VP which contains no F-marking, in (41), we build the CP phase in (42).

(41) **Derivation of a VP phase with no focus:**

    a. LA$_1$ = {buy, [$_{DP}$ CL book]}

    b. [$_{VP}$ buy DP]

(42) **Derivation of the CP phase with subject focus:**

    a. LA$_2$ = { C, T, VP (41), ONLY$_{sent}$, [$_{DP}$ Nam]$_F$ }

    b. i. Merge T and VP   [T VP]

        ii. Merge subject with (i)   [$_{TP}$ DP [T VP]]

        iii. Adjoin ONLY$_{sent}$ to TP (ii)   [$_{TP}$ ONLY$_{sent}$ [$_{TP}$ DP [T VP]]]

        iv. Merge C with (iii)   [$_{CP}$ C [$_{TP}$ ONLY$_{sent}$ [$_{TP}$ DP [T VP]]]]

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[20]For simplicity, I do not assume a VP-internal base position for subjects. See footnote 21 below.

In the derivation of (42), we cannot adjoin 'only' in the first step as we did in (40), because 'only' will not c-command its associate *Nam* here and will therefore not be interpretable.[21] We therefore must wait to adjoin until after the F-marked subject *Nam* has been inserted, so that ONLY will c-command it. The sentential 'only' *chỉ* will therefore occur higher in the clause in this example, even though this higher placement is ungrammatical with a lower focus as in (40).

The higher and lower adjunction points for 'only' in the examples discussed here block one another, because 'only' in both (40) and (42) are introduced in the same lexical subarray: the lexical subarray for the CP phase in a simplex clause. If we instead build a complex clause with multiple phases where 'only' can be included as an ingredient, the one adjunction option will not block the other.

Consider the examples of embedded object focus below, taken from (25) above, with phases labeled:

(43)   **Matrix and embedded positions for *chỉ*, given embedded focus, repeated from (25):**

    a.   [$_{CP1}$ Tôi **chỉ**   [$_{VP1}$ nói [$_{CP2}$ là   Nam [$_{VP2}$ thích [Ngân]$_F$.
           I   ONLY$_{sent}$ say   that Nam   like   Ngan
           'I only said Nam likes [Ngan]$_F$.'

    b.   [$_{CP1}$ Tôi [$_{VP1}$ nói [$_{CP2}$ là   Nam **chỉ**   [$_{VP2}$ thích [Ngân]$_F$.
           I   say   that Nam ONLY$_{sent}$ like   Ngan
           'I said Nam only likes [Ngan]$_F$.'

The availability of both examples in (43) reflects the choice of selecting the sentential 'only' in the lexical subarray for the higher CP, CP1, or the lower CP, CP2.[22] In each clause where 'only' must be used, its adjunction will be subject to the Adjoin As Early As Possible principle. In this

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[21]This raises an important question regarding VP-internal subjects. If the VP-internal subject hypothesis is adopted for Vietnamese, the intended associate of 'only' will be inside the lower phase, and therefore we may expect Adjoin As Soon As Possible to require immediate adjunction, just as it did in (40). Subsequent raising of the subject to Spec,TP will however bleed focus association, because 'only' cannot associate with a focused constituent which has moved out of its scope (Erlewine, 2014).

I believe the correct response is to take such details to motivate a view where the "as low as possible" requirement is used to compare related derivations which converge based on a fixed input lexical array. This is reminiscent of trans-derivational competition between derivations in a "reference set" in early Minimalist work (e.g. Chomsky, 1995). Choosing the optimal derivation cyclically, at the end of each phase (Heck and Müller, 2001; Fanselow and Ćavar, 2001), would derive the desired effects. This transderivational approach is discussed in Erlewine (2015b,a).

[22]Sentential focus particles generally cannot successfully be included in the construction of a VP phase, as their semantics quantifies over propositional alternatives and therefore they must adjoin to a node of propositional type. The VP phase is propositional given the VP-internal subject hypothesis; see footnote 21 above. An exception is if the construction of a VP itself includes a propositional node such as a lower VP as a subpart. This explains the availability of lower *chỉ* adjunction under the negative verb *không* as discussed in (27) above.

case, in both CP1 and CP2, if 'only' is in the lexical subarray, it will adjoin immediately as it then c-commands its intended focus associate and is interpretable. The proposal here successfully models the distribution of the sentential focus particle *chỉ* as documented here.

5 Conclusion

In this paper I described the distribution of exclusive focus particles in Vietnamese. Building on previous descriptive work in Hole (2013), I showed that the focus particle *chỉ* is consistently a sentential 'only,' adjoining to the clausal spine above the verb, and cannot be adjoined to other categories as the constituent 'only' *mỗi* can. The semantics of 'only' predicts that *chỉ* should then be able to associate with any focus in its c-command domain, from any adjunction position. Instead, we observe that the distribution of *chỉ* is limited, following the generalization repeated here:

(44) **Generalization, repeated from (20):**

Sentential focus particles (focus-sensitive sentential modifiers) must be as low as possible while c-commanding their focus associate, within a given phase.

This work shows the necessity of syntactic constraints on adjunct placement, such as the principle Adjoin As Early As Possible that I proposed in section 4, repeated here:

(45) **Adjoin As Soon As Possible:** (=38)

Adjuncts should be adjoined as soon as they will be interpretable.

This principle in (45) is a principle governing local derivational choices just as Chomsky's Merge over Move does, and its effects are similarly observed only within individual phases. This is an immediate consequence the theory of derivation by phase in Chomsky (2000, 2001).

The existence of effects such as what I observe for the distribution of Vietnamese *chỉ* and its sensitivity to phase boundaries forms a new argument for the phase-by-phase cyclic nature of syntactic structure-building. In future work, the boundaries of such "as low as possible" effects could be used as a new empirical diagnostic for phasehood. This consequence highlights the cross-linguistic study of the distribution of focus particles as a potentially significant area of study.

By way of conclusion, I return to the fact, noted in passing above, that the generalization here in (44) is similar to what has been proposed for German focus particles by Jacobs (1983, 1986) and

Büring and Hartmann (2001). Consider the position of *nur* 'only' associating with 'novel' in (46) below. Given the head-final structure of German clauses, we can imagine two possible parses: *nur* could be a sentential 'only' adjoined to a (extended) VP (46a) or could be adjoined directly to the DP containing focus (46b).

(46) **Two hypotheses for German focus operators (Büring and Hartmann, 2001):**

Ich habe **nur** einen ROMAN gelesen.
I have ᴏɴʟʏ a novel read

'I read only a [novel]$_F$.'

a. *Nur as sentential 'only':*

Ich habe [$_{VP}$ **nur** [$_{VP}$ [$_{DP}$ einen [Roman]$_F$] gelesen]]

b. *Nur as constituent 'only':*

Ich habe [$_{VP}$ [$_{DP}$ **nur** [$_{DP}$ einen [Roman]$_F$]] gelesen]

Jacobs (1983, 1986) and Büring and Hartmann (2001) take the strong position that German focus particles are always sentential modifiers, but then must propose a constraint akin to the generalization in (44) above. Büring and Hartmann (2001) calls this a *Closeness* constraint.

(47) **Closeness:** (Büring and Hartmann, 2001, p. 237)

Focus-sensitive adverbs are as close to the focus associate as possible.

In later discussion, Büring and Hartmann (2001) take Closeness to only apply between different adjunction sites on the same extended (verbal) projection, which comes very close to the generalization we reach here based on Vietnamese data.[23] I believe the proposal here based on Adjoin As Early As Possible applying during the derivation of each phase is able to derive the Closeness behavior in German, if it is assumed, with Jacobs (1983, 1986) and Büring and Hartmann (2001), that focus particles in German are indeed always sentential modifiers.

This assumption is however highly controversial. Consider for example the interaction of focus particles with the well-known verb-second (V2) property of German syntax. In V2 clauses such as main clauses, exactly one constituent must occupy the preverbal, "prefield" position. It turns out that focus particles can precede a focused constituent in prefield position, though, as in example

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[23]In Erlewine (in progress), I show that such "as low as possible" effects are also observed in Mandarin Chinese.

(5). If *nur* can adjoin to *Hans* as a constituent 'only,' the verb-second generalization is maintained. However, under the hypothesis of Jacobs and Büring and Hartmann that all German focus particles are sentential modifiers, we are required to analyze such examples as exceptional instances of *verb-third*.

(i) **Focus particles require V3?**

Nur [Hans]_F war betrunken.
ONLY Hans was drunk

'Only [Hans]_F was drunk.'

For this and a number of other reasons, the Jacobs/Büring and Hartmann position remains controversial. See in particular Reis (2005); Meyer and Sauerland (2009); Smeets and Wagner (to appear) for a series of additional arguments against their sentential-only view. Given the apparent imperfections of this approach, the otherwise *sui generis* Closeness constraint (47) which Jacobs and Büring and Hartmann must maintain has itself been criticized as unmotivated.

On the contrary, I have shown here that such an "as low as possible" generalizations on sentential focus particles is alive and well in Vietnamese. In contrast to German where a focus particle such as *nur* may—for example if Reis (2005) is correct—be ambiguous between a sentential 'only' and constituent 'only,' just as English *only* is, in Vietnamese we can clearly identify the exclusive particle *chỉ* as being a sentential 'only' in contrast to the constituent 'only' *mỗi*, making for a clearer exemplar of such an "as low as possible" effect. This shows that the potentially "spurious" and "more than doubtful"—as described by Reis (2005)—Closeness behavior described by Büring and Hartmann (2001) is an independently necessary possibility in natural language. The discovery of this same pattern across genetically unrelated languages is a striking example of the null hypothesis of Universal Grammar, that even genetically unrelated languages will exhibit reflexes of an underlyingly universal computational system.

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