

# Wh-in situ questions in Sinhala: A prosodic account\*

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## SUMMARY

Primarily building on Mathieu (2012), this paper claims that Sinhala, an Indo Aryan wh-in situ language realizes its focus by way of prosodic re/phrasing and insertion of boundary tones. Licensing of the wh-in situ phrases are also shown to be realized prosodically. Both, the focus particle of the type *-uy*, and the particle *-də* are claimed to be focus sensitive particles that serve to make discriminations in the focus to derive a different flavour of focus, namely contrastive. Building on Rooth (1985, 1992, 1996), É Kiss (1998) and Neeleman and Vermeulen (2012), these particles are treated as quantifiers with an operator that undergoes covert A' movement to a specifier position of a functional focus phrase projection to bind a variable.

## RÉSUMÉ

Fondé sur le travail de Mathieu (2012), cet article affirme que le cingalais, une langue indo-aryenne avec le wh-in-situ, exprime le focus par la création de domaines phonologiques et l'insertion de tons aux frontières de ces domaines. La particule de focus *-uy* et la particule *-də* sont dites des particules sensible au focus qui servent à distinguer différents types de focus afin de dériver un type de focus particulier, le focus contrastif. À la façon de Rooth (1985, 1992, 1996), É Kiss (1998) et Neeleman et Vermeulen (2012), ces particules sont traitées comme des quantificateurs avec un opérateur qui subit un déplacement A' furtif jusqu'à la position d'un spécificateur d'un syntagme fonctionnel de focus afin de lier un variable et marquer son focus comme contrastif.

## 1 INTRODUCTION

Since Chomsky's (1964, 1977) influential claim that wh-words in English undergo overt movement, and Ross's (1967) discussion of island effects on A' movement, the nature of

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operations involved in *wh*-question formation has been studied extensively in generative grammar. In languages like English, German, Spanish, the *wh*-phrase in a *wh*-question is argued to undergo movement from its argument position to a sentence canonical position like Spec-CP. In languages like Chinese and Japanese the *wh*-words remain in their argument position, thus in situ. The movement of a *wh*-phrase in languages like French is said to be optional.<sup>1</sup>

It is commonly accepted that *wh*-phrases in *wh*-movement languages are licensed by way of their movement to the canonical Spec-CP position in a question. However, as to what licenses the *wh*-in situ phrases in languages has been a topic of debate among linguists for a long time. For example, Huang (1982) argued that they undergo movement at the LF level of a derivation, thus c-commanding the sentence. Cheng's (1991) account predicted that *wh*-in situ languages are languages with Q particles. Chomsky (1995, 2001) came up with a strong versus weak features account. He claimed that the strong *wh* feature on the in situ phrase forces it to remain in situ. But, these claims have recently fallen through due to lack of empirical evidence or explanatory adequacy. For example, Bruening (2007) has shown that there is no correlation between question particles and *wh*-in situ questions and Q particles are neither necessary nor sufficient to license *wh*-in situ phrases in languages.

Richards's (2010) analysis of *wh*-questions proposed that there is a correlation between prosodic boundary marking in DPs and the place of the complementizer and suggests that *wh*-in situ languages are languages that have the complementizer and the prosodic boundaries of DPs on the opposite sides (complementizers at the left edge of the sentence and prosodic boundaries of DPs at their right edge or vice versa).

Following this line of debate, in an attempt to account for licensing of *wh*-in situ phrases in questions, Mathieu (2012) came up with a generalization:

- (1)
  - a. A language tends to be a *wh*-in situ language if it expresses focus via tone variation and dephrasing rather than pitch accents and deaccenting (such languages tend to have no lexical stress).
  - b. A language tends to be a *wh*-movement language if it expresses focus via pitch accents and deaccenting rather than tone variation and dephrasing (such languages tend to have lexical stress).

Mathieu's (2012) proposal is inspired by Richards (2010). However, Mathieu's (2012) account is claimed to be novel and superior. While Richard's account considers the place of the complementizer and the boundaries of DPs, Mathieu's account is concerned with the way in which focus is realised to decide whether a language is a *wh*-in situ or movement one. Besides, while Richard (2010) shows that only DPs are associated with prosodic boundaries Mathieu (2012) shows that XPs other than DPs could have prosodic boundaries too.

Accordingly, this paper, building on Mathieu (2012), claims that *wh*-in situ facts in Sinhala, an Indo Aryan *wh*-in situ language, are in line with his generalization in (1).

Thus, the paper shows that focus in Sinhala is primarily realized by way of prosodic re/phrasing and insertion of boundary tones. The focus of *wh*-in situ phrases in Sinhala are also marked by the insertion of low (L) and high (H) boundary tones. In support of this analysis, evidence will also be drawn from other varieties of Sinhala that use tone variations to mark the edges of *wh*-phrases.

However, Sinhala has a variety of focus particles used in focus and question constructions.

<sup>1</sup> Mathieu (2004), however, argues that the optionality of *wh*-movement in French is not real.

For example, Sinhala makes use of the particle of the type *-uy* (realized as *-ay*, *-oy*, *-iy*, etc depending on the phonological environment) in certain type of focus constructions.<sup>2</sup> Claims in the literature (Gair 1998; Kariyakarawana 1998; Slade 2011) are that these particles constitute another method of marking focus in Sinhala. Sinhala also has the particle *-də* surfacing in a wh-construction in Sinhala. In the literature of wh-questions in Sinhala for a long time, the particle *-də* has been labelled as a Q particle in the sense that it is this particle *-də* that licenses the wh-in situ phrases in Sinhala (Gair 1998; Kariyakarawana 1998; Hagstrom 1998; Kishimoto 2005; Cable 2010; Slade 2011). Then, a question arises as to what the role of the particle *-uy* and the so-called Q particle *-də* used in focus and wh-constructions in Sinhala is.

In order to find an answer, the paper also hypothesizes that both the focus particle *-uy* and the so-called Q particle *-də* are focus sensitive particles. These as focus sensitive particles are compared with focus sensitive adverbs like *only* in English, *cask* in Hungarian, *alleen* in Dutch, and are shown to serve to make discriminations in the focus to derive a different flavour of focus, namely contrastive.<sup>3</sup> In this sense, the so called Q particle does not license wh-in situ in Sinhala. It only serves to mark one type of focus in Sinhala.

It is shown that focus in Sinhala is primarily realized by way of prosodic re/phrasing and boundary tone insertion. Focus realized this way is argued to be new information focus. A focus sensitive particle associating with a focused constituent is claimed to trigger contrastive focus against a set of alternatives. Following our second hypothesis, but as opposed to many existing claims, the focus particle in Sinhala is argued not to constitute another method of focus realization but a method of making discriminations to the regular information focus that is already realized. Accordingly, building on Rooth (1985, 1992, 1996), É Kiss (1998) and Neeleman and Vermeulen, (2012), the focus sensitive particle is treated as a quantifier with an operator that undergoes covert A' movement to a specifier position of a functional focus phrase projection. This way, the movement of the operator for contrastive focus is treated as a scope marking operation.

The organization of the paper is as follows. In section 2, I discuss different methods used to realize focus in languages while attempting to define focus and its different flavours. Section 3 deals with how focus is realized in Sinhala: the role of prosodic re/phrasing in Sinhala and the role of the use of the focus sensitive particle *-uy* to derive a contrastive flavour of focus. Finally, in section 4, I show how the particle *-də* could also be interpreted in terms of a focus sensitive particle to derive a contrastive flavour in a context dependant interpretation of the wh-constituent.

## 2 REALIZATION OF FOCUS IN LANGUAGES

At least, since the times of Halliday (1967), focus has been a very hot topic in Generative Grammar approached from all sound, structure and meaning perspectives. Building on Halliday (1967), Jackendoff (1972), Büring (2009), and Neeleman and Vermeulen (2012) focus could in general be defined as it refers to the grammatical marking of the new information in a constituent highlighted in a sentence uttered in a particular context. Since the times of Jackendoff (1972), the focus is generally marked with an abstract focus feature F assigned to the focused constituent.<sup>4</sup>

<sup>2</sup> Because of the identical nature in their function, disregarding the different phonological realizations, I will refer to these particles in terms of one uniform focus particle as *-uy* whenever I refer to them in this paper.

<sup>3</sup> Sinhala also has the word *witharak* equivalent to *only* in English. But, in terms of its distribution and semantics as a quantifier, it is observed that there is no difference between *witharak* and *-uy*.

## 2.1 METHODS OF REALIZATION OF FOCUS

Cross-linguistically, there are at least three main strategies to realize focus.

- i. Constituent reordering and movement
- ii. Using focus morphemes/particles
- iii. Using prosodic effects

Since this paper mainly deals with the use of prosodic effects and ‘focus’ particles in the focus of Sinhala, I will only introduce these two mechanisms in some detail here.

### 2.1.1 USE OF FOCUS PARTICLES

Many languages such as Chickasaw, Wolof, Zuglo (Afro Asiatic), Ewe (Niger-Congo), and Gùrùntùm use focus morphemes/particles to realize focus. Zuglo uses the focus marker *ná..ya* and Ewe uses the focus marker *é*, (Ermisch 2007). Buring (2009) shows that, Chickasaw, a Muskogean language makes use of the subject and object focus markers *-akot/-akō* and *-ho:t/ho* to mark focus.

- (2)    hat:ak-at            koni-akō            pissa.  
        Man-sub            skunk-foc-obj    sees  
        ‘The man sees [the skunk]<sub>F</sub>.’

(Buring 2009, p.26)

Hartmann and Zimmerman (2006) show that focus in Gùrùntùm is marked by a focus particle *a* that precedes focused constituents.<sup>5</sup>

### 2.1.2 USE OF PROSODIC EFFECTS

Different types of prosodic effects are observed when realising focus in many languages. This area basically falls into two parts:

- i. Use of pitch accent and nuclear stress shift
- ii. Prosodic rephrasing and boundary tone insertion

Truckenbrodt (1995), Buring (2009), among many others, show that there is one to one mapping relationship between syntactic structures and corresponding prosodic structures in languages. They show that one or more syllables form a *prosodic word* (PWd), one or more

<sup>4</sup> In the examples in this paper the focused phrase carrying new information focus will be marked with the feature F. And a focused phrase carrying contrastive focus will be marked with the feature FC(contrast). In the translation of the examples, the constituent that carries new information focus will be stated in *italicised* words, while the constituent that carries contrastive focus will be stated in *it-cleft* forms with the contrastively focused item stated in CAPITALS. The examples drawn from external sources will be presented in their original form. Since the particle *-də* seems to get its focus value from context (ambiguous), though it is treated as a focus sensitive particle, it will still be glossed as F in my examples.

<sup>5</sup> However, as opposed to what has been claimed for these languages, the focus particle in Sinhala is shown not to constitute another method of marking focus on its own, but a method of realising a new flavour of focus.





‘exhaustive identification’. She shows that identificational focus represents a subset of a set of entities that is contextually or situationally given. She claims that when triggering identificational focus, the focused constituent, as an operator moves to the spec-P of a higher functional projection to take scope and bind a variable. English cleft constructions are also argued to involve identificational focus involving a focus related functional head.<sup>8</sup>

She also shows that further distinctions can be made within identificational focus as [+contrastive] versus [-contrastive]. She suggests that an interpretation [-contrastive] is triggered when the identificational focus operates on an open set of entities. An interpretation [+contrastive] is said to be triggered when the identificational focus operates on a closed set of entities whose members are known to the participants of the discourse. This type of focus is shown to occur when focus sensitive adverbs such as *only* in English or *csak* in Hungarian associate with a focused DP by introducing an evaluative presupposition into the meaning of the sentence.

To distinguish between identificational focus and information focus, she applies a few tests such as the coordination test and the quantifier test.<sup>9</sup> Applying the coordination test, she shows that when two focused DPs are coordinated in one sentence and in another sentence one of the focused DPs is dropped, if the second sentence is not a logical consequence of the first one, it involves identificational focus because the second one again involves independent exhaustive identification (É Kiss 1998, p. 250). Another test she employs is the quantification test. She shows that identificational focus in English and Hungarian does not allow for universal quantifiers such as *also*, *even*, and existential ‘quantifiers’ such as *somebody/something*, (É Kiss 1998, p. 252).

However, for my analysis, building on Neeleman and Vermeulen (2012) and based on the empirical evidence for focus facts observed in Sinhala, I only rely on a two way contrast for my analysis: *New information focus* and *Contrastive focus*.

The term ‘new information focus’ with reference to focus in Sinhala will be used in the sense that it conveys ‘new’ and ‘non-presupposed’ information, that is represented by a subset of an open set of entities. New information focus in Sinhala will be shown to be realised by way of prosodic phrasing and boundary tone insertion in Sinhala. The term ‘contrastive focus’ will be used in the sense that the assertion made in a proposition in relation to one proposition marks a contrast against at least one more proposition. It is shown to operate on a contextually/situationally dependant closed set of entities whose members are known to the participants of the discourse or are discourse related. It will necessarily involve strongly presupposed information, quantification properties and assertion or negation of the presupposed information.

In the sense of É Kiss (1998) and Neeleman and Vermeulen (2012), contrast is a relationship between two sets. For example, in a sentence like that in (7b), the contrast expresses as to what extent the set of (contextually or discourse dependant) vehicles is contained in the set of the things that I bought. Thus, (7b) asserts that one member of the set of vehicles is also a member of the set of the things that I bought. It also expresses that there is at least one other member of the

<sup>8</sup> However, Reeve (2012) argues against this functional projection approach to cleft constructions in English. Building on empirical evidence from both English and Russian Reeve claims “ the evidence that a functional head F has any syntactic or semantic role to play in these languages is weaker than is often claimed” (Reeve, 2012, p. 158).

<sup>9</sup> In my analysis of different flavours of focus in Sinhala, I will treat identificational focus in É Kiss’s spirits as contrastive focus in Sinhala and will apply the same tests to show how the two, information focus and contrastive focus are very different. However, contrastive focus in Sinhala functions on a closed set as opposed to Hungarian (-contrastive ) identificational focus.

set of vehicles that is not contained in the set of the things that I bought.<sup>10</sup>

- (7) a. Did you buy the car or the jeep?  
b. I only bought [the jeep]<sub>FC</sub>

Neeleman and Vermeulen (2012) argue that contrastive focus encodes a negative statement and differs from regular focus and proposes the following semantic notation for contrastive focus (applied to (7b)).

- (8)  $\langle \lambda x [I \text{ bought } x], \text{ the jeep, } \{ \text{the car, the van...} \} \rangle$   
 $\exists y [y \in \{ \text{the car, the van} \} \ \& \ \neg [I \text{ bought } y]]$

The notation for a construction with the focus sensitive adverb *only* in a sentence like (7b) would be like that in (9).

- (9)  $\langle \lambda x [I \text{ bought } x], \text{ the jeep, } \{ \text{the car, the van...} \} \rangle$   
 $\neg \exists y, y \in \{ \text{the car, the van...} \} [I \text{ bought } y]$

This would mean that there is no alternative to the jeep such that I bought that alternative. This way É Kiss (1998) and Neeleman and Vermeulen (2012) treat the focus sensitive adverbs in terms of quantifiers showing that they denote extended relations between the focus semantic value and the ordinary semantic value of a sentence which serve to trigger a contrast. They claim that a focus sensitive adverb introducing a quantificational value over the alternatives could also licence A'-movement.

Building on all this, I show that the focus sensitive particle *-uy* in Sinhala also functions like a quantifier or an operator to mark exhaustive identification of a subset of a contextually or situationally given set of entities in Sinhala. I also show that it as an operator undergoes covert movement to a specifier of a functional foc-P position in a matrix clause to take scope and bind a variable.

### 2.3 INTERPRETING FOCUS

Rooth (1985) analysed focus as functioning to trigger a set of alternatives. The idea behind this approach was that the function of focus is to trigger a set of alternative propositions that will contrast with the one selected for focus. This was attested with question answer congruence where the set of alternatives evoked by focus was argued to be similar to the set of alternatives evoked by the respective question.<sup>11</sup>

Besides, Rooth's (1985) 'alternative set' theory shows that an expression with focus has two different semantic values: the expression's 'ordinary semantic value' and its 'focus semantic value'. The ordinary semantic value of an utterance will be the regular semantic denotation of the sentence. For example, the ordinary semantic value for (10) will be its presupposition that John introduced Bill to Sue. This is represented with  $[[\alpha]]^0$ . Its focus semantic value will be  $[[\alpha]]^F$ , which represents the set of all alternative propositions of the form John introduced Bill to x. The focus semantic value is said to consist of a set of alternatives from which the ordinary semantic

<sup>10</sup> Based on Neeleman and Vermeulen (2012).

<sup>11</sup> Similar to Hamblin (1963) type semantics.



value is drawn.

After Horn (1969), Rooth (1985) showed how focus sensitive adverbs such as *only* and *even* can place restrictions on the semantic interpretations we make in propositions based on the distinction between assertion and presupposition. The idea is that in a sentence like in (10), it presupposes that John introduced Bill to Sue and also with the use of *only* it asserts that John did not introduce anyone else to Sue, but to Bill. Even if the sentence is negated, the presupposition will be preserved (10b).

- (10) a. John only introduced [Bill]<sub>F</sub> to Sue.  
b. John only didn't introduce [Bill]<sub>F</sub> to Sue.

Within Rooth's (1985) notion of 'set of alternatives', the interaction between presupposition and assertion involving *only* is captured in the following simplified manner in Partee (2009).

- (11) *only* combining with a clause  $\phi$  yields the assertion  $\forall p[(p \in [[\phi]]^F \text{ and True}(p)) \rightarrow p = [[\phi]]^0]$  and the presupposition  $\phi$ .

This way *only*  $\alpha$  presupposes that  $\phi$  and asserts that  $\phi$  is the only true member of  $\phi$ 's alternative set.

## 2.4 THE QUESTION-ANSWERS CONGRUENCE AND PRAGMATICS OF FOCUS

Rooth's (1985) analysis was purely semantic and following the notion of question answer congruence, the set of alternatives introduced by focus was assumed to be similar to that of the question to which the focus was meant to be the answer. Rooth (1992, 1996) however, shows that the alternative set triggered by focus could be related to context too and may not be identical to the set evoked by the question. In order to treat the interaction between a set of alternatives and the context, Rooth (1996) introduced the operator " $\sim$ " (focus interpretation operator) to handle the interface between focus and focus sensitive constructions.

- (12) Where  $\phi$  is a syntactic phrase and C is a syntactically covert semantic variable,  $\phi \sim C$  introduces the presupposition that C is a subset of  $[[\phi]]^f$  containing  $[[\phi]]^0$  and at least one other element (Rooth 1996, p. 279).

The function of the operator " $\sim$ " is said to introduce a presupposed alternative set. C must be a subset of  $[[\phi]]^f$ . The operator " $\sim$ " does not identify and interpret the variable C independently but based on contextual clues. This is different from (Rooth 1985), where the focus identified the set of alternatives. It only shows that whenever there is something focused in a sentence, there is a context dependent set of alternatives.<sup>12</sup>

This analysis fits quite well with our idea of contrastive focus for Sinhala involving focus particles in both focus and question constructions. Because of the ambiguity in the semantic interpretation of a wh-question in Sinhala,<sup>13</sup> I show that the quantification value of the set for the focus in both focus and question constructions is derived from the context.

<sup>12</sup> Rooth (1996) represents this in terms of a discourse tree. For details see Rooth (1996).

<sup>13</sup> This will be discussed in section 4.

### 3 FOCUS IN SINHALA

As in many South Asian languages such as Bengali, Malayalam, Tamil, Hindi (Féry 2009), lexical stress in Sinhala has been shown to be weak, if not non-existent. Although the literature on the topic is not extensive, the available evidence indicates that lexical stress in Sinhala is not an observable phenomenon. This is in the sense that there is no ‘fixed stress’ that can be captured by a regular stress rule for Sinhala. Sometimes, depending on the individual physical properties of phonemes or syllables, they might attract some stress, which again shows that it is unpredictable and a weak phenomenon in Sinhala. Masica (1991) argues that Sinhala has initial word stress, but that it is weak. Following Letterman (1997), Nash (2005) shows ‘intensity’ and ‘duration’ as the key factors for the realization of stress in Sinhala and claims that stress found on initial syllables is sometimes weaker than that found in heavy syllables. Chandralal (2010) argues that although “there are certain tendencies” there appear to be “no strict rules regulating the placement of stress” and generally, “stress is weak and therefore its placement is difficult to specify” (Chandralal 2010, p. 37). Masica (1991) claims that for many of the Indo Aryan Languages spoken today stress is not contrastive. In line with these, Féry (2009) argues that many of the South Asian languages (the group to which Sinhala also belongs) such as Hindi, Bengali, Tamil and Malayalam show common intonational properties. She shows that they belong to a group of languages which she calls ‘phrase languages’, which have no lexical stress and also no pitch accent. Observing similar traits, it is claimed that Sinhala could also be added to this group. And, when stress is weak and unpredictable, there is no way that we can think about contrastive stress. This, then, is in keeping with the claim (Mathieu 2012) that for wh-movement languages such as English, stress is contrastive. And, obviously, Sinhala is a wh-in situ language and there is no evidence for contrastive stress.

#### 3.1 FOCUS CONSTRUCTION IN SINHALA

Gair (1998), Kariyakarawana (1998) and Slade (2011) all treat the use of the focus particles as another strategy of marking focus in Sinhala. For example, Slade (2011) claims that a focused constituent could either be marked by prominence in intonation or it may be followed by an emphatic particle such as *-yi*. He argues that the prominence in intonation alone is sufficient to mark focus and the use of the particle is not mandatory. But, since his analysis is based on syntax and semantics of focus constructions in Sinhala, he does not discuss what he means by phonological prominence. Where, they all treat the use of the particle as another method of focus realization, I show that focus in Sinhala is primarily realized by prosodic re/phrasing and boundary tone insertion, and the particle only serves to derive another flavour of focus and is in any way not obligatory to realise focus in Sinhala.

##### 3.1.1 PROSODIC RE/PHRASING AND BOUNDARY TONE INSERTION

The default prosodic structure for Sinhala is moderate wrapping where at prosodic phrase level, the subject (S) could be wrapped on its own and the IDO, DO, V could be wrapped in one prosodic phrase. For example, in answer to the question in (13a), the whole VP in (13b) could be spoken with just one flat tone.

- (13) a. malli mokə-də keruw-e?  
 brother what did-E  
 ‘What did brother do?’
- b. HL%  
 [malli [nangitə pothak dunn-a]]  
 brother to sister a book gave-A  
 ‘Brother gave a book to sister.’

But, crucially, as shown in (14), if the direct object DP is focused, a new iP of the focused constituent will be created with a L tone marking the left edge and a H tone marking the right edge of the focused constituent. The clause final *-e* of the verb will serve to create a fall of tone to low (L) at the end of the IP.<sup>14</sup>

- (14) a. malli nangitə mokak-də dunn-e?  
 brother to sister what gave-E  
 ‘What did brother give sister?’
- b. L H LL%  
 [malli [nangitə [pothak]<sub>iP F</sub> dunn-e<sup>15</sup>]]  
 brother to sister a book gave-E  
 ‘Brother gave *a book* to sister.’

It has to be noted that a construction without any embedded item in it focused, has *-a* (the central-open vowel) at the clause final position attached to a verb. This clause final *-a* in a declarative triggers a high tone at the end of the clause (13b). The high tone could be as a result of the whole sentence or the VP being focused. But, when any item inside the clause is focused, a shift in the change of the central-open vowel *-a* to the front mid-closed vowel *-e* triggers a down-step in the tone to make it a L tone at the clause final position supposedly to make the H tone on the focused XP more prominent. This is shown in (14b). It is shown that contrary to what has been claimed so far, with *-e* what really happens is not insertion of a morpheme, but a phonological process of vowel change to trigger tone variations. This is also confirmed by the fact that *-a* and *-e* are in complementary distribution. It is also important to note here that as opposed to what happens in English, shifting the nuclear stress (Reinhart 2006), does not help in Sinhala to realize focus. One reason for this is as it was explained earlier, lexical stress is weak or it is not contrastive in Sinhala. So, stress shift for Sinhala cannot be accounted for.

- (15) \* \* \*  
 \* [malli nangitə **pothak** dunn-e]  
 brother to sister a book gave-E  
 ‘Brother gave *a book* to sister.’

### 3.1.1.1 SEGMENTAL EVIDENCE FOR BOUNDARY MARKING FOR FOCUS

Gair and Paolillo (1997), have discussed several phonological processes conditioned by syllable

<sup>14</sup> The same phenomenon is observed in Bengali focus constructions (Hayes and Lahiri 1991).

<sup>15</sup> Slade (2011) treats *-e* as a morpheme and argues that *-e* marks the presupposition of the clause.

structures in Sinhala. They include processes such as vowel shortening and reduction, glide insertion and reduction, gemination, devoicing, etc. These processes could also be applied at word boundary levels. One example of schwa deletion that can even happen when merging two prosodic words (PWds) is shown in (17). A word final schwa /-ə/ could be deleted when the initial sound of the following word is a vowel and the sentence is spoken fast. As shown in (16), if it is spoken at normal speed, the verb final schwa /-ə/ of *yannə* and /o/ of *oonə* could be uttered separately.

- (16) Samantə gedərə [yannə]<sub>ipP</sub> [oonə]<sub>pp</sub>.  
 Saman home go want  
 ‘Saman wants to go home.’

If this is spoken fast, the verb final schwa could be deleted and the two PWds could be wrapped into one pP.

- (17) Samantə gedərə [yannoonə]<sub>pp</sub>.

But, crucially if the verb *yannə* is focused, the verb final schwa could not be deleted even if it is spoken fast.

- (18)                                   L   H                                   LL%  
 [Samantə gedərə [yannə]<sub>ipF</sub>   [oon-e]  
 Saman home go                    want  
 ‘Saman wants to go home.’

It is thus sufficiently clear that there is obligatory boundary marking that happens when an element is focused in Sinhala. This way, I claim that focus in Sinhala is primarily realised by way of prosodic re/phrasing and boundary tone insertion.

### 3.2 FLAVOURS OF FOCUS IN SINHALA

A close examination of semantic and pragmatic implications of focus constructions in Sinhala shows that we can identify two types of focus in Sinhala: *new information focus* and *contrastive focus*.

I show that the regular focus that is realised with boundary tone (L, H) insertion is new information focus. This focus operates on an open set of entities. The question that is asked in (19) would be asked in an open setting where the entity *pothak* (a book) that is identified as focus does not belong to a set of contextually salient set of entities.

- (19) a. malli           nangitə   mokak-də   dunn-e?  
 brother       to sister   what           gave-E  
 ‘What did brother give sister?’  
 b.                                   L   H                                   LL%  
 [malli       [nangitə           [pothak]<sub>ipF</sub>   dunn-e]]  
 brother   to sister           a book       gave-E  
 ‘Brother gave a book to sister.’

Applying Rooth (1985) semantics to the situation in (19), the ordinary semantic value of the sentence is the presupposition that *malli nangitə pothak dunna* ( Brother gave a book to sister). Its focus semantic value is the set of all alternative propositions in the form *malli nangitə x dunna* (Brother gave *x* to sister ), this set of alternatives also includes the proposition that *malli nangitə pothak dunna* ( Brother gave a book to sister). This could also be represented as;

(20)  $\lambda x$  [ brother gave sister *x*] a book, { a pen, a phone, a jeep, a van, a bike,... }

One reason why I call this new information focus, is it involves a presupposition of the form brother gave *x* (something) to sister.<sup>16</sup> This could be a weak kind of proposition (Jackendoff 1972), and identifying this *x* is done via focus and once it is identified, it is given as new information. The other reason is that the proposition expressed with a constituent involving new informationa focus can be canonically negated (21) and its presupposition can be cancelled.

(21)

	L	H	
[[malli	nangitə	[pothak] <sub>ip F</sub>	dunn-e] næ]
brother	to sister	a book	gave-E Neg

‘Brother didn’t give *a book* to sister.’

This way, I claim that focus realised by way of prosodic re/phrasing and boundary tone insertion triggers new information focus in Sinhala.

As introduced in section 2, contrastive focus represents a subset of a closed set of entities that the predicate exclusively holds on to. Also, it will involve strongly presupposed information. Given its distribution, semantic and pragmatic behaviour, I compare the focus particle *-uy* in Sinhala with the focus sensitive adverbs such as *only* in English, *cask* in Hungarian, *alleen* in Dutch and show how it functions as a quantifier with an operator to trigger contrastive focus in Sinhala. It is seen that *-uy* can surface attached to an embedded focused constituent within a sentence (22) or it can surface in a clause final position in an embedded clause and depending on which item is focused, the quantificational value of the particle will associate with that item, which will be contrastively focused (23).

(22)

		L	H	LL%
[malli	[nangitə	[potha-ay] <sub>ip FC</sub>	dunn-e]]	
brother	to sister	the book	gave-E	

‘It was THE BOOK that brother gave to sister.’

(23)

	L	H		LL%
[Saman [[malli	[nangitə] <sub>ip FC</sub>	pothak	dunna kiyala]-ay	kiuww-e]]
Saman	brother to sister	a book	gave that	said-E

‘It was only TO SISTER that Saman said that brother gave a book.’ (Not to mother)

<sup>16</sup> There is a debate going on whether information focus involves presuppositions at all (Jackendoff 1972). And, if this question could be answered in the negative, there cannot be any presupposition that brother gave something to sister. But, the premise that is taken up in this paper is, if the answer is positive there is a presupposition that brother gave something to sister. There is also the argument that there is a weaker presupposition that is related to regular focus and a stronger presupposition that is related to an assertion.

Surfacing either attached to the focused constituent or in a clause final position, *-uy* can function to trigger a contrast in the content of the constituent that is focused against that of another one.

A focus sensitive morpheme such as *-uy* would be used in Sinhala when the focus operates on a closed set of entities whose members are known to the participants of the discourse to identify one entity out of the known entities already in the discourse. Based on the observation that the focus sensitive adverb *only* places restrictions on the semantic interpretation of the focused constituent in terms of contrast and assertion, and based on the semantics and pragmatics equivalence that the focus sensitive particle in Sinhala shares with *only* in English, I apply the same semantic notation given for *only* in (11) for *-uy* in Sinhala. When that is applied to an example like that in (22), we get the interpretation that follows here.

Here, the ordinary semantic value of (22) is the presupposition of (22) *malli nangitā pothā dunna* (Brother gave the book to sister). Its focus semantic value is the set of all alternative propositions in the form *malli nangitā x dunna* (Brother gave *x* to sister) including the proposition that *malli nangitā pothā dunna* (Brother gave the book to sister). According to the rule for the focus particle *-uy* (11), what is presupposed in (22) is that *malli nangitā pothā dunna* (Brother gave the book to sister) and what is asserted by (22) is that there is no other true proposition of the form *Brother gave x (something) to sister* other than (22) itself where *x* is the book itself.

Also, if we interpret (22) in terms of Neeleman and Vermeulen (2012), we would get a semantics like the following.

- (24)  $\langle \lambda x$  [brother gave sister *x*], the book, {the pencil, the pen... }  $\rangle$   
 $\neg \exists y, y \in \{\text{the pencil, the pen...}\}, [\text{brother gave sister } y]$

Why I call this contrastive focus and that it operates on a closed set of entities that are known to both the speaker and the interlocutor is that in order to be contrastively asserted, the entity has to be known to both the parties or might have already been in the discourse or physical context. In relation to (22), the entity *the book* has to be in a context where the super set includes a set of elements that are known to both the speaker and the audience or it could have been there in the previous discourse.

Once the exhaustive identification is done, it is asserted and cannot be negated. The assertion here already involves the presupposition that *malli nangitā pothā dunna* (Brother gave the book to sister) so it is a strong presupposition and cannot be negated.

When we apply the negation test (Neeleman and Vermeulen 2012b), it shows positive results for contrastive focus in focus constructions with *-uy* in Sinhala. A proposition with an asserted constituent cannot be negated canonically in Sinhala (25b).<sup>17</sup> But a Neg particle prefixed to the focus particle can be used to contrastively negate the item that is already focused with a H tone (25c) in the same way that a focus particle marks contrastive focus as shown in (25a).

<sup>17</sup> However, this contrasts with the behaviour of *only* in English where a sentence with *only* in English can be canonically negated while preserving the presupposition.

- (25) a. [malli                   [nangitə                   L    H                   LL%  
brother                   to sister                   [potha-ay]<sub>ip FC</sub>   dunn-e]]  
          ‘It was THE BOOK that brother gave to sister.’
- b. \*[malli                   [nangitə                   L    H                   dunn-e] næ]  
brother                   to sister                   the book                   gave-E Neg  
          ‘It was THE BOOK that brother gave to sister.’
- c. [malli                   [nangitə                   L    H                   LL%  
brother                   to sister                   [[pothə]<sub>ip</sub> new-ey]<sub>ip</sub>   dunn-e]]  
          the book Neg                   gave-E  
          ‘It was NOT THE BOOK that brother gave to sister.’

This negation test shows that the use of the so called focus particle has different syntactic and semantic consequences than realising focus with just boundary tone insertion.

When we apply the coordination test, (É Kiss 1998) we can see that sentence in (26b) is not a logical consequence of (26a) because it involves contrastive focus. But, the sentence in (27b) could be a logical consequence of (27a) which suggests that it involves information focus.

- (26) a. Mary       eyaatə                   [thoppiyək-uy]<sub>FC</sub>                   [kabbaayək-uy]<sub>FC</sub> gathth-e.  
Mary       for herself                   a hat                   a coat                   picked-E  
          ‘It was A HAT AND A COAT that Mary picked for herself.’
- b. Mary       eyaatə                   [thoppiyək-uy]<sub>FC</sub>                   gathth-e.  
Mary       for herself                   a hat                   picked-E  
          ‘It was A HAT that Mary picked for herself.’
- (27) a. Mary       eyaatə                   [thoppiyək]<sub>F</sub>                   saha                   [kabbaayək]<sub>F</sub>                   gathth-e.  
Mary       for herself                   a hat                   and                   a coat                   picked-E  
          ‘Mary picked *a hat and a coat* for herself.’
- b. Mary       eyaatə                   [thoppiyək]<sub>F</sub>                   gathth-e.  
Mary       for herself                   a hat                   picked-E  
          ‘Mary picked *a hat* for herself.’

When we apply the quantifier test, (É Kiss 1998) we can see that *-uy* in Sinhala does not allow for universal quantifiers such as *also*, *even*, and existential ‘quantifiers’ such as *somebody/something* and *anything* that trigger intervention effects.

- (28) a. \*Mary       eyaatə                   həmə   thoppiyək-uy                   gathth-e.  
Mary       for herself                   every   a hat                   picked-E  
          ‘It was every HAT that Mary picked for herself.’
- b. \*Mary       eyaatə                   thoppiyək-ut-uy                   gathth-e.  
Mary       for herself                   a hat       also                   picked-E  
          ‘It was also a HAT that Mary picked for herself.’

All these tests result in the ‘positive’ for the *-uy* particle involving contrastive focus in Sinhala. These intervention effects approve of our treatment of *-uy* as a quantifier that binds a

variable.

I argue that in the realisation of contrastive focus with a focus morpheme, an operator moves to a functional Foc-P position in the CP layer where as in the realisation of new information focus, as it is the case in Hungarian (É Kiss, 1998) too, such movement is not accounted for.

Besides, it is argued that contrastive focus is realised with a focus morpheme as a secondary step in the process after the regular information focus has been realised with a H tone at the right edge of the focused constituent. It is also seen that even with the particle, it still has an effect on prosodic phrasing and marks a boundary at the right edge of the contrastively focused XP (25a).

Thus, it is observed that the prosodic phrasing is obligatory in the realisation of any kind of focus in Sinhala. And, this is correlated with the observation that Sinhala is a language that lacks lexical stress and the fact that stress is not contrastive in Sinhala provides theoretical and empirical evidence for the claim that a language tends to be a wh-in situ language if it expresses focus via tone variation and rephrasing rather than pitch accents and de-accenting and such languages tend to have no lexical stress (Mathieu, 2012).

#### 4 WH-IN SITU IN SINHALA

As opposed to Kariyakarawana (1998), Hagstrom (1998), Kishimoto (2005), Cable (2010), Slade (2011) that treated the particle *-də* as a Q particle in the sense that it is this particle that licences the wh-in situ phrases in Sinhala, I show that a wh-in situ phrase in Sinhala is licensed prosodically with boundary tone insertion. The role of the particle *-də* is shown to mark the contrastive flavour of focus of the wh-constituent whose focus is already marked prosodically as in regular focus constructions. As opposed to Cable (2010) and Slade (2011), I argue that the Hamblin type set of alternatives and the choice function are introduced by the focus of the wh-word itself and role of the particle *-də* is to derive a new flavour of focus which is contrastive. Thus, I make a distinction between wh-question formation (licensing the wh-phrase) and contrastively focusing the wh-constituent. I show that a Q particle is not necessary to license a wh-phrase in Sinhala.

The first empirical evidence for the above argument comes from a variety of Sinhala that is spoken in the Central parts of Sri Lanka. This variety does not use a particle in the realisation of a wh-question. The method it employs is prosodic phrasing and using low and high tones at the left and the right edges of the wh-constituent as in (29). More evidence comes from another variety of Sinhala spoken in the Southern parts of Sri Lanka. This variety could realise a wh- question with a high tone marking the right edge of a focused wh-constituent as in (29). However, it sometimes employs the particle *-uy* or a variety of it that is used to mark contrastive focus in the main stream Sinhala. Some speakers of this variety of Sinhala would sometimes use either the particle *-uy* or the particle *-də* interchangeably (30).

(29)           L           H                   LL%  
 [Siri   [[monəwə]<sub>ipF</sub> kəæw-e]]?  
 Siri    what                   ate-E  
 ‘What did Siri eat?’

(30)   Siri    monəw-ay/də   kəæw-e?  
 Siri    what                   ate-E  
 ‘What did Siri eat?’



Slade (2011) claims that old Sinhala (8<sup>th</sup> and 10<sup>th</sup> centuries) rarely had the Q particle in wh-questions. In this case, the question could have been realised in the same manner with a high tone as in (29). Slade (2011) also claims that old Sinhala (8<sup>th</sup> and 10<sup>th</sup> centuries) had the particle *-də* in yes/no and alternative questions. So, what follows from this is that the role of the Q particle in a sentence like (31) is to mark a different flavour of focus which is ‘contrastive’. The way it happens is, like in focus constructions, the focus of the wh-word is marked with boundary tone insertion as in (29) and the particle surfacing in different places can associate with the focused wh-word to trigger a semantic difference.<sup>18</sup>

Thus, as in (31a), the particle *-də* appearing at the clause final position in the embedded clause can associate with any wh-word inside the clause.

- (31) a. L H LL%  
 [Saman [[malli [kaatə]<sub>ipFC</sub> pothak dunna kiyəla]-də kiuww-e]]  
 Saman brother to whom a book gave that said-E  
 ‘TO WHOM did Saman say that brother gave a book?’
- b. L H LL%  
 [Saman [[malli [nangitə]<sub>ipCF</sub> pothak dunna kiyəl]-ay kiuww-e]]  
 Saman brother to sister a book gave that said-E  
 ‘It was TO SISTER that Saman said that brother gave a book.’ (Not to mother)

However, it is observed that a wh-question formed with a wh-constituent and *-də* is felicitous in both the contexts where it could involve either an open set of entities involving new-information focus (32b) or a closed set of entities that involve contrastive focus (32c).

- (32) a. Siri monəwa-də kəæw-e?  
 Siri what ate-E  
 ‘What did Siri eat?’ Or,  
 ‘What was it that Siri ate?’
- b. L H LL%  
 [Siri [[ambayak]<sub>ipF</sub> kəæw-e]] (new/information focus)  
 Siri a mango ate-E  
 ‘Siri ate *a mango*.’
- c. L H LL%  
 [Siri [[ambayak-uy]<sub>ipFC</sub> kəæw-e]] (contrastive focus)  
 Siri a mango ate-E  
 ‘It was A MANGO that Siri ate.’ (not an apple)

Given the fact that yes/no and alternative questions in old Sinhala had the particle *-də* and the wh-questions in old Sinhala did not have *-də*, (the focus of the wh-word was prosodically realised) and given the use and misuse of the particle *-də* in different varieties and contexts of Sinhala (30), it is assumed that the *-də* particle has got regularised in modern mainstream colloquial Sinhala to appear in all contexts. Then, depending on the context, the question could be interpreted with or without the particle *-də*.

In this sense the wh-question in (32a) is ambiguous as to whether it is to pick a sub set from

<sup>18</sup> The same effects of segmental process are observed in marking boundaries of the wh-phrases as for the regular focus constructions, but due to space constraints they are not able to be presented here.

an open set of entities or a closed one. It cannot also be assumed that there is a fixed set of alternatives evoked by the question because depending on the context, the set for the focus could be small or large, open or closed, specific or non specific.

This is where Rooth's (1992, 1996) analysis of the involvement of pragmatics in question answer congruence comes in use. In terms of Rooth (1992, 1996), identifying the semantic value of a question is similar to anaphora resolution where an operator gets focus value for it from the context. For Sinhala, it is shown that if it is a context with a closed set triggering contrastive focus, the quantifier associated with the particle *-də* will intervene and function as an operator. In a context like this, the quantification value of the focus sensitive particle *-də* will be applied and the question will be interpreted as triggering a contrastive flavour of the answer (32c). This will be uttered in a context where they have been talking about fruits or at a place where fruits are around and the proposition expressed by the utterance goes against the assumptions of interlocutor.

If the set is open (not context or discourse dependant) it will just trigger a regular interpretation of the wh-question, as if the particle *-də* was not there as in OID Sinhala and other varieties of wh-questions in Sinhala. The answer will also trigger just regular new information focus. In this sense the question in (32a) does not contribute anything to the interpretation of the question. The question could have been realised just without the particle as in (29).

This way, it is sufficiently clear that focus in Sinhala gets its quantificational value from its context. When the set in the context is small or discourse related, it will activate the quantificational value of the particle *-də*. In this case, the particle as an operator is argued to move to a functional Foc-P position to trigger contrastive interpretation of the wh-constituent and in the focus in the answer that is expected.

In a context with an open set, when it triggers new/information focus the particle does not do anything. This is not something unusual in languages. Li (2006) argues that *-ne* used in Chinese wh- questions is not a wh-question particle. She proposes the idea that *-ne* that occurs in what she calls 'thematic questions' is a topic marker. In colloquial Japanese, a wh-question could be realised without the particle *-ka*. Jayaseelan (2008), shows that modern Malayalam has lost the so-called Q particle that used to be there in the past. So, it is obvious that in many wh-in situ languages, the Q particles do not play much of a role in licensing the wh-in situ phrase rather than triggering a different flavour in the interpretation of the question as Li (2006) also argues for Chinese.

## 5 CONCLUSIONS

It was shown that Sinhala, an Indo Aryan wh-in situ language has weak or no lexical stress and realizes its focus via demarcative prosodic re/phrasing by marking the edges of the focused phrases with low and high tones respectively. This way, Sinhala patterns with many other South Asian languages such as Hindi, Bengali, Tamil and Malayalam in the way it uses prosodic phrasing to mark focus. Wh-in situ phrase are also licensed prosodically independent of syntax or morpho-syntax. The particle *-uy* and the particle *-də* which had previously been assumed to constitute another method to realise focus and licence wh-in situ phrases respectively were shown to be functioning as focus sensitive particles to derive another flavour of focus known as contrastive focus. Both *-uy* and *-də* were argued to be quantifiers with operators that undergo covert movement to a specifier position of a functional focus phrase projection to take scope and bind a variable. This way, the so-called Q particle *-də* does not play a role in licensing a wh-in

situ phrase in Sinhala. This shows that there is a correlation between prosodic realisation of focus and licensing wh-in situ. Thus, wh- facts in Sinhala are in keeping with Mathieu's (2012) generalization that wh-in situ languages have no lexical stress and realise their focus by way of prosodic re/phrasing and boundary tone insertion.

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