

**Focus Constructions in
American Sign Language and
Língua de Sinais Brasileira**

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Introduction

The goals of this study are to examine structures used for focus in American Sign Language (ASL) and Brazilian Sign Language (Língua de Sinais Brasileira, LSB). We propose an analysis of these structures based on distributional evidence from the adult languages.

Secondarily, we look at the acquisition of these constructions, using the acquisition data to evaluate competing analyses of the adult data.

Numerous types of focus have been identified in spoken languages. In this paper, we concentrate on two types of focus in ASL and LSB, namely information (noncontrastive) focus, and emphatic focus. We will first present a brief review of these kinds of focus as discussed in the literature on spoken languages. After this, we will examine the structures for focus in ASL and LSB. We present both our analysis of these structures and competing analyses based on ASL. Finally, we will review our data on the acquisition of focus, arguing that these data support our analysis over the competitors.

1. Types of focus constructions

The literature on focus constructions takes a variety of approaches. Focus may be defined in terms of phonology, syntax, semantics, pragmatics, or discourse, as well as computation (for example, see Büring, to appear; Jackendoff, 1972; de Swart and de Hoop, 1995; Vallduví and Engdahl, 1996; Zubizarreta, 1998). For the present purposes, we adopt the view (common but by no means universal) that information structure-relevant notions such as givenness contribute to define focus and its related counterpart, topic. We furthermore assume that features expressing these information structure components are present in the syntactic representation, motivating, in some languages, overt syntactic movement operations, and specific prosodic patterns.

We follow the general line of thought that divides the information expressed in a sentence into three parts: topic, focus, and the part that is neither topic nor focus.

The focus contains the new information in a sentence. In so-called 'wide' focus, the whole sentence is new. There are numerous types of focus discussed, including identificational (exhaustive) focus, information (noncontrastive) focus, contrastive focus, and emphatic focus. We discuss here in greater detail information focus and emphatic focus.

Information focus is used to introduce new discourse information. Languages vary with respect to whether stress intonation or a special word order is used for information focus. For instance, in the context of an English question such as (2)a or (3)a, the answer in (2)b and (3)b places the new information in its usual pragmatically neutral sentential position (as shown by the comparison with example (1)), employing stress (indicated by underlining) to pick out the focused, new information.

- (1) John ate a pie.
- (2) a. What did John eat?
b. John ate a pie.
- (3) a. Who ate a pie?
b. John ate a pie.

In Hungarian, however, the focused information occurs immediately preceding the verb, as illustrated in (4) (see Kiss 1981 for an extensive discussion of focus in Hungarian).

- (4) a. szereti János Marit
 loves John Mary-acc
 ‘John loves Mary.’
- b. János szereti Marit
 ‘It is John who loves Mary.’
- c. Marit szereti János
 ‘It is Mary whom John loves.’
- (Kiss 1981)

Zubizarreta (1998) argued for a quantifier-variable relationship in this kind of focus. She proposed an analysis employing two parts, as shown in (5): one, an existential presupposition provided by the context question which introduces the variable (A1), and the second, expressing the equative relation between the variable and its value (A2).

- (5) A1: there is an x , such that John ate x
 A2: the x , such that John ate x = the pie
- (Zubizarreta 1998)

Contrastive focus is used to negate information previously given in the discourse. Given the context statement in (6)a, the response in English again involves the neutral word order with stress intonation on the contrastive part (6)b.

- (6) a. John is wearing a blue shirt.
 b. No, John is wearing a red shirt.

In the case of contrastive focus, Zubizarreta's analysis includes both the negation of the context information as well as the assertion of the positive information, resulting in the analysis shown in (7).

- (7) A1: there is an x , such that John is wearing x
A2: it is not the case that the x (such that John is wearing x) = a blue shirt
& the x (such that John is wearing x) = a red shirt
(Zubizarreta 1998)

Finally, emphatic focus (or simply emphasis) is used to negate or affirm information previously presented. Again, in English this is accomplished primarily through stress, as shown in (8). In the case of emphatic focus, there is no quantifier-variable relationship (Zubizarreta 1998).

- (8) a. Context: Someone lied to you.
Response: NOBODY lied to me.
b. Context: I think Mary lied to you.
Response: You are right; Mary DID lie to me.

In contrast to focus, the notion of topic is used to refer to old information. It is the part of the structure which connects the sentence with the previous discourse. It expresses the given, or old information, known as the topic (or 'link' in the terms of Vallduví, 1992). Topics are more generally considered to be 'what the sentence is about' (Reinhart). In some cases, researchers include as topics elements expressing information that is not old, in 'shifted topics' (which change the discourse topic) and 'contrastive topics' (which add some

new distinguishing information to a topic). In very many languages (if not all), the sentence-initial position is used for expressing topic. Some English examples (from Vallduví and Engdahl 1996) are given in (9).

- | | | |
|-----|---------------------------------|-------------|
| | | (topic) |
| (9) | a. John saw the play yesterday. | (John) |
| | b. Yesterday John saw the play. | (yesterday) |
| | c. The play John saw yesterday. | (the play) |

The third part of the sentence is neither topic nor focus – the remainder. In some systems, topic is contrasted with comment; in others, focus is contrasted with ground. Since comment is not the same as focus, and topic is not the same as ground, it might seem that four types of sentence components are needed. However, Vallduví (1992) argues that such a four-way distinction is not needed; rather, the three-way contrast illustrated in (10) is sufficient. We will broadly follow Vallduví's system here.

- (10) $S = \{\text{focus, ground}\}$
 $\text{ground} = \{\text{link, tail}\}$

In the following section, we present the distribution of these kinds of focus in ASL and LSB.

2. Information structure in ASL and LSB

2.1 Previous analyses

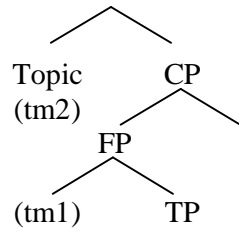
One very common claim made about information structure in sign languages is that they are organized around a ‘topic-comment’ ordering (with some arguing that this is the predominant sentence-level ordering strategy rather than one based on grammatical roles; see, for example, Friedman 1976, and papers in Brennan and Turner 1994). Most researchers would agree that ASL and LSB (as well as other sign languages) are ‘discourse oriented’, in that word order changes are used to accomplish information structuring.

Researchers since Fischer (1975) and Liddell (1980) have noted that ASL places topics in the sentence-initial position, setting them off from the rest of the sentence with a special non-manual marker. Aarons (1994) moved this observation forward by identifying three different non-manual markers accompanying different types of topics.

Aarons (1994) claimed that the first marker, which she called tm1, occurs with moved topics which are used to identify a particular member of the universe of discourse; or for emphasis or contrastive focus. Tm2 topics are base-generated, and include class: member topic-comment structures (‘As for fruit, John likes bananas’). Tm2 topics are also used to introduce new information which changes the discourse topic. Tm3 topics are used with known referents, and introduce a major change in discourse topic (‘shifted topics’). (We will not discuss tm3 topics in this paper.)

Neidle (2002), building on Aarons’ analysis, claims that the left periphery is used for topics and focused phrases in ASL. She re-analyzes Aarons’ tm1 ‘topics’ as moved focus phrases, adopting Aarons’ analysis of tm2 as base-generated topics. She suggests that a functional projection called FP, between CP and TP, is the host for these moved focus phrases. Her analysis is schematized in (11).

- (11) Neidle's (2002) proposed structure for moved focus phrases (tm1) and base-generated topics (tm2)



Aarons' and Neidle's claims are summarized in (12).

- (12) Aarons (1994)

tm1 = moved topic, used to pick out a particular member of the discourse, and for emphasis or contrastive focus

tm2 = base-generated topic, used for topic-comment structures or new information

Neidle (2002)

tm1 = focused phrases moved to [Spec, FP]

tm2 = base-generated topics

Wilbur (1997) also mentions that contrastively focused elements (what she calls topicalization for contrastive focus purposes) may appear in sentence-initial position in ASL, giving the example in (13)a. This example minimally contrasts with (13)b, which Wilbur considers to be topic followed by traditional comment/assertion.

- | | | | | |
|------|----|--------|-----------|--------------------|
| (13) | a. | (Link) | Focus | Tail |
| | | | <u>br</u> | |
| | | | MARY, | JIM LOVE TEASE [t] |

(Jim doesn't like to tease Jane.) 'It's MARY who Jim loves to tease.'

b. Link Focus (Tail)

_____br

MARY, JIM LOVE TEASE

‘As for Mary, Jim loves to tease her.’

(Wilbur 1997)

Wilbur (1997) also extensively discussed the use of the sentence-final position for focused elements in ASL. She analyzed examples such as (14) as WH-clefts, used to put information in focus in the sentence-final position. She said that the sentence-final position is used for prominence generally. When an element should be made prominent, it must get in the sentence-final position either by moving there, or by everything following it moving out of its way. We broadly follow her suggestion in our analysis presented below.

_____whc

(14) a. JOHN BUY WHAT SHIRT

‘What John bought was a shirt’.

_____whc

b. MARY LEAVE WHY GO-TO CLASS

‘The reason Mary left was to go to class.’

(Wilbur 1997)

Petronio (1993), Petronio and Lillo-Martin (1997), and Quadros (1999) noted the strong use of the sentence-final position for prominent elements in ASL and LSB. They observed that (emphatically) focused heads occupy the sentence-final position, and may appear in the sentence twice: once in the usual sentence-internal position, and also doubled in

the sentence-final position. Some examples of the ‘double’ and ‘final’ constructions in both languages are given in (15) and (16) respectively.

- (15) a. JOHN CAN READ CAN
‘John really CAN read.’
- b. MARY FINISH GO SPAIN FINISH
‘Mary ALREADY went to Spain.’
- c. I LOSE BOOK LOSE
‘I did LOSE the book indeed.’
- d. BABY CRY BABY
‘The BABY is the one crying.’
- e. JOÃO BUY WHAT YESTERDAY WHAT
‘WHAT was it that John bought?’
- f. WHAT JOÃO BUY WHAT?
‘WHAT was it that John bought?’
- (16) a. JOHN ~~CAN~~ READ CAN
‘John really CAN read.’
- b. MARY ~~FINISH~~ GO SPAIN FINISH
‘Mary ALREADY went to Spain.’
- c. I ~~LOSE~~ BOOK LOSE
‘I did LOSE the book indeed.’
- d. ~~BABY~~ CRY BABY
‘The BABY is the one crying.’

e. JOÃO BUY ~~WHAT~~ YESTERDAY WHAT

‘WHAT was it that John bought?’

e. ~~WHAT~~ JOÃO BUY WHAT?

‘WHAT was it that John bought?’

As hinted at by the strikethrough in the examples in (16), Petronio, Lillo-Martin, and Quadros analyze the double and final constructions as related, with the final constructions simply missing an element which is overt in the double constructions. We will return to this point when we discuss the relationship between these constructions and additional focus constructions in section 2.3.

2.2 *Information focus*

In order to move forward in understanding the realization of focus in ASL and LSB, we need to consider question-answer pairs, commonly used to identify the linguistic treatment of information focus. ASL and LSB behave similarly in this regard. New information (the answer to the content question) may be presented in the sentence-initial position. It may also be felicitously left in situ. These options are illustrated in (17).

(17) S1: WHAT YOU READ?

‘What did you read?’

I-focus

S2: BOOK STOKOE I READ

S2: I READ BOOK STOKOE

‘I read Stokoe’s book.’

The non-manual accompanying the new information is what Aarons called tm1. We have labeled it ‘I-focus’. Thus, we agree with Neidle’s observation that tm1 can be used to mark (information) focus. Furthermore, as expected under Neidle’s proposal, a base-generated topic (such as a class: member topic with no gap) may co-occur with I-focus, as shown in (18). (We have labeled the non-manual accompanying the topic-comment topic ‘t-c’; it is what Aarons calls tm2.)

- (18) S1: FRUIT, WHAT JOHN LIKE?
‘As for fruit, what does John like?’
____ t-c ____ I-focus
S2: FRUIT, BANANA, JOHN LIKE MORE
‘As for fruit, John likes bananas best.’

However, we also find that it is possible to have both an informational-focused element and a moved topic in the same sentence, as in (19). We have indicated the non-manual on the topic as simply ‘top’; it, like I-focus, is what Aarons calls tm1.¹

¹ We do not make any specific claims about the type of topic permitted in this position other than ‘old information.’ The status of shifted and contrastive topics is left for future research.

(19) S1: WHAT YOU READ IX SCHOOL?

‘What did you read at school?’

_____ I-focus _____ top

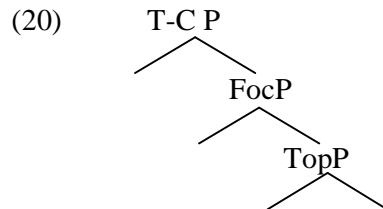
S2: a. BOOK STOKOE, IX SCHOOL, I READ

_____ top

b. IX SCHOOL, I READ BOOK STOKOE

‘At school, I read Stokoe’s book.’

This motivates a more complex structure, schematized in (20), with separate projections for focus and topic in addition to the base-generated topic-comment phrase. (This structure is similar to Rizzi’s (1997) expanded CP structure for Italian, which also employed topic positions both above and below focus.)



2.3 *Emphatic focus*

Although Aarons (1994) claimed that tm1 topics are used for emphasis or contrastive focus, we have found two different means for expressing these information types. Contrastive information may be signed in the sentence-initial position, with a distinct non-manual marker we have labeled C-focus, as in (21). Contrastive focus seems to occupy the same sentence-initial position as information focus.

(21) S1: YOU READ CHOMSKY BOOK?

‘Did you read Chomsky’s book?’

C-focus

S2: NO, BOOK STOKOE I READ

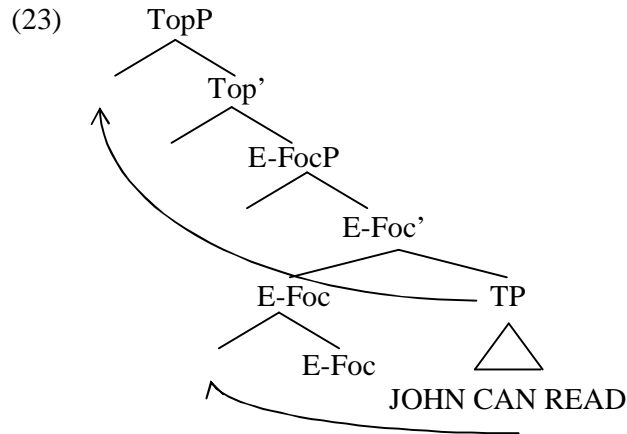
‘No, I read Stokoe’s book.’

Emphatic focus, as mentioned earlier, is found in the sentence-final position, in the doubling and final constructions illustrated in (15) and (16) above. These constructions seem to be restricted to heads, as shown in (22).

(22) * NANCY BUY WHICH COMPUTER YESTERDAY WHICH COMPUTER

* I LOSE BOOK YESTERDAY LOSE BOOK

The double constructions are found with modals, tense signs, verbs, negative signs, quantifiers, nouns, and WH-elements (Petronio 1993; Quadros 1999). We adopt the analysis of these constructions offered by Nunes and Quadros (2004a, b), schematized in (23). On their analysis, the focused element moves to the head of a Focus projection we now identify as E-Focus (as distinct from I-focus). As the prominent element ends up in the sentence-final position, the TP remnant moves to [Spec, TopP]. Following the analysis of doubled elements across languages proposed by Nunes (2004), morphological fusion of the focused element and E-Foc prevents the deletion of the lower copy in the chain, so both copies are overt.

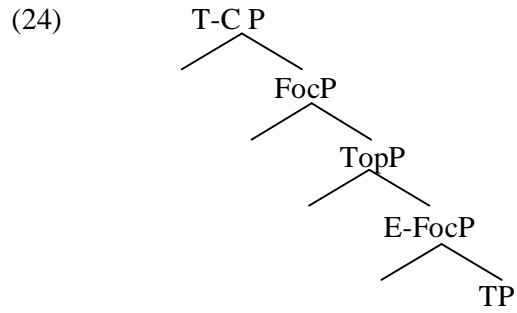


Like doubles, finals are emphatic and restricted to elements without complex morphology. The proposal is that finals are double constructions without the sentence-internal copy (Petronio 1993; Petronio & Lillo-Martin 1997; Quadros 1999; Nunes & Quadros 2004a, b). On the Nunes & Quadros analysis, this is possible because morphological fusion between the emphatic element and E-Foc is optional; when fusion does not apply the tail of the chain deletes as usual.

Neidle, Kegl, MacLaughlin, Bahan, and Lee (2000) disagree with our characterization of doubling constructions as related, focusing strategies. They suggest that doubling comes from a tag or simple repetition, noting, “In ASL, as in many other languages, sentence-final tags (consisting of a repeated but reduced version of basic material from the main clause) occur productively”. As for final constructions, in the case of WH-questions these are analyzed as realizations of regular WH-movement to their hypothesized rightward [Spec, CP]. We found no discussion of other final elements.

2.4 Synthesis

Combining our structures for topic, information focus, and emphatic focus results in the structure given in (24).



E-focus requires topicalization of the remnant to [Spec, TopP]. Base-generated topics can co-occur with emphatic focus, as shown in (25).

- _____ t-c
- (25) a. FRUIT, I LIKE BANANA
 ‘As for fruit, I like bananas.’ (t-c)
- _____ t-c
- b. FRUIT, I LIKE BANANA LIKE
 ‘As for fruit, I really like bananas.’ (t-c plus E-foc)

We summarize the different types of information structure elements discussed here in Table 1.

Table 1. Information structure elements in ASL and LSB

TYPE	ANALYSIS	NON-MANUAL (our notation)	NON-MANUAL (Aarons' / Neidle's notation)
topic (topic-comment)	base-generated	t-c	tm2
focus (information or contrastive)	moved	I-focus	tm1
topic (old information)	moved	top	tm1
emphatic focus	moved + remnant mvmt	E-focus	tm1 (no remnant mvmt)

3. Acquisition of focus

Considering these different types of focus constructions the question that comes up is how children acquire them. We assume that certain aspects of these constructions would be governed by principles of UG, including the possibilities for topic and focus functional projections, the properties of movement, and the principles of chain formation and deletion of copies. However, other aspects must be learned based on the input. In particular, children acquiring ASL and LSB must determine that these languages are discourse oriented, using movement to specified positions for conveying information structure; and that the sentence-final position is the locus of prominence.

Given that aspects of the structures require learning, we might be able to use acquisition data as supporting evidence for one or the other type of analysis presented above. This would be possible if the analyses make different predictions regarding the time-course of acquisition. We think they do. In particular, we take the predictions of our analysis to be

those given in (26). They can be contrasted with the predictions of the competing analysis, given in (27).

(26) The predictions of our analyses

I-focus and E-focus are distinct constructions, so they are not expected to be acquired at the same time.

E-focus doubling and final constructions are related, so they are expected to be acquired at the same time.

(27) The predictions of competing analyses

I-focus and E-focus are not differentiated, so they are expected to be acquired at the same time.

E-focus doubling and final constructions are unrelated, so they are not expected to be acquired at the same time

To test these predictions, we conducted a study of longitudinal spontaneous production data from two children acquiring ASL and two children acquiring LSB. See Lillo-Martin and Quadros (2005) for a detailed description of the methods and results of this study. Here, we simply summarize the results.

Our study looked for the age of first consistent use of I-focus, doubling, and final constructions. We found that all four children showed evidence of I-focus from their first analyzable sessions (having multi-word responses to adult questions). This was significantly earlier than their first use of E-focus doubling or final constructions. On the other hand, there was no (statistical) difference in the timing of acquisition of doubling and final constructions; they came in together. The results are provided in Table 2.

Table 2. Summary of acquisition results

Child	I-focus	Doubling	Final
Aby (ASL)	1;9 ***	2;1	2;0
Sal (ASL)	1;7 ***	1;9	1;9
Ana (LSB)	1;6 **	2;0	2;1
Leo (LSB)	1;10 ***	2;1	2;2

** $p < .005$ *** $p < .001$

4. Conclusions

The child language data show no relationship between the acquisition of I-focus and E-focus.

On the other hand, they show a strong relationship between the acquisition of doubling and final constructions. Therefore, child language data provide additional support for syntactic analyses such as ours connecting doubling and final through E-focus.

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