



# Royal Netherlands Academy of Arts and Sciences (KNAW) KONINKLIJKE NEDERLANDSE AKADEMIE VAN WETENSCHAPPEN

## Prosodic focus marking in L1 Bai-children learning Mandarin Chinese

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## 1. Introduction

**Focus:** part of a sentence that conveys new information on a topic (Vallduví & Engdahl 1996, Lambrecht 1996).

**Focus is coded by prosodic cues in many languages:** pitch and/or duration.

**Prosodic focus marking in L1 Mandarin speaking children:**

(Yang & Chen 2014a)

- Age 4: start to use **duration** to differentiate focus from pre/post-focus, and **pitch** to differentiate focus from pre-focus.

- Age 8: use **pitch** and **duration** to differentiate focus from non-focus.

**L1 Bai children:** Bai children use Bai at home and learn Mandarin at school



**Prosodic focus marking in monolingual adult speakers of Bai:** only **duration** (Liu, Chen & Van de Velde 2014)

### Research questions:

- Do child L2 speakers of Mandarin mark focus prosodically? (**focus**)
- Do they differentiate different focus types? (**size and contrastivity**)
- Which prosodic cues do they use? (**pitch or duration**)
- Which development path do the children follow to become native-like in their L2?

## 2. Methodology

### 2.1. Experimental materials

#### 5 Focus conditions:

- NF-i** : narrow-focus on the subject NP in sentence-initial position
- NF-m** : narrow-focus on the verb in sentence-medial position
- NF-f** : narrow-focus on the object NP in sentence-final position
- BF** : broad focus
- CF-m** : contrastive-focus on the verb in sentence-medial position

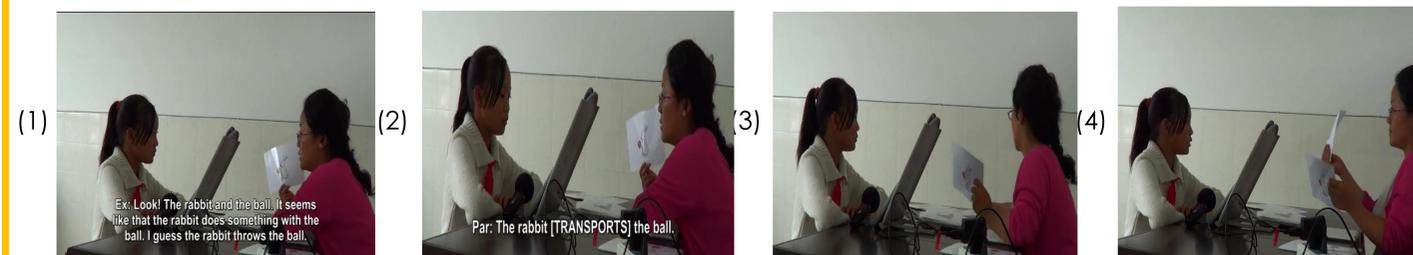
80 SVO target sentences.

Question-answer pairs are embedded in a picture-based game.

### 2.2. Data elicitation

Example: CF (contrastive focus) condition

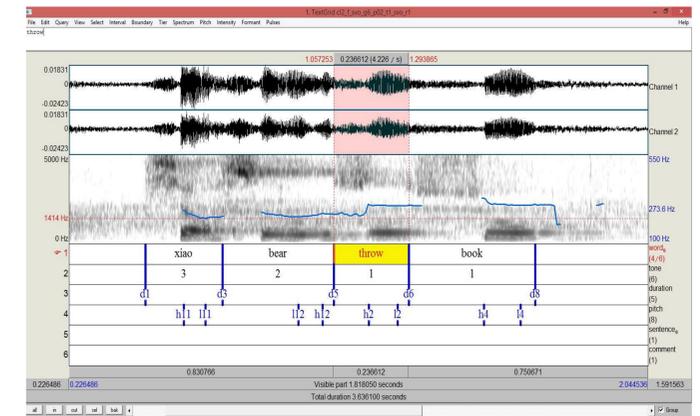
Tone	Subject	Verb	Object
T1	小猫 (cat)	扔 (throw)	书 (book)
T2	小熊 (bear)	埋 (bury)	球 (ball)
T3	小狗 (dog)	剪 (cut)	笔 (pen)
T4	小兔 (rabbit)	运 (transport)	菜 (vegetable)



## 3. Analysis and Results

### 3.1. Analysis

- Acoustic measurements: pitch-max, pitch-min, pitch-range, duration.
- Statistical analysis: Mixed effect Modelling
- Focus:
  - NF-m(focus) vs. NF-i (post-focus)
  - NF-m(focus) vs. NF-f (pre-focus)
- Size of focal constituent:
  - (NF-m + CF-m) vs. BF(broad focus)
- Contrastivity:
  - Nf-m (non-contrastive focus) vs CF-m (contrastive focus)
- Interaction between focus types and lexical tones



### 3.2. Results

Aim	Comparison	Duration		Pitch range	
		Age 6-7	Age 11-12	Age 6-7	Age 11-12
Focus vs. Non-focus	NF-m vs. NF-i (post)	✓	✓		
	NF-m vs. NF-f (pre)				
Size	(CF-m & NF-m) vs. BF				
Contrastivity	NF-m vs. CF-m	interaction with tones (T2*/T4*)		interaction with tones (T3*)	
					✓

Figure 1. Mean duration of CF-m (contrastive focus) vs. NF-m (non-contrastive focus) in Age 6-

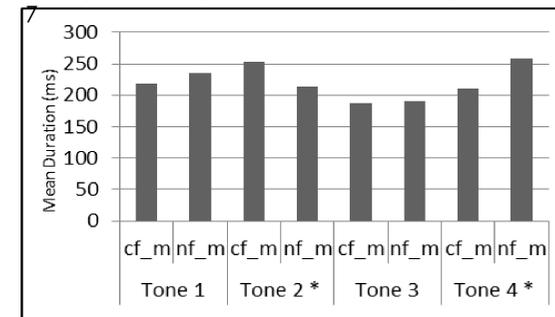
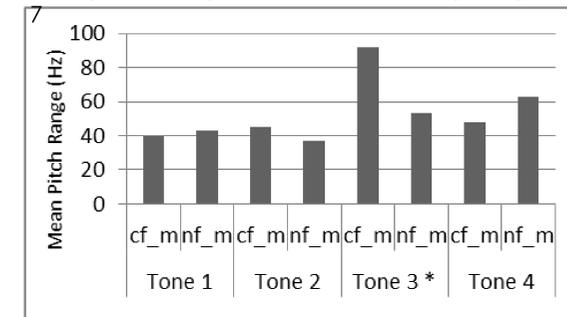


Figure 2. Mean pitch range of CF-m (contrastive focus) vs. NF-m (non-contrastive focus) in Age 6-



Xu(1999) showed that native Mandarin adult speakers can use **pitch and duration** to differentiate focus from non-focus conditions.

## 4. Discussion and Conclusions

- Do child L2 speakers of Mandarin mark focus prosodically? (**focus**)
  - Yes.** Children from **both age groups increased the duration** on verbs under **focus** as compared to **post-focus**.
  - The earlier mastery of the use of duration in L2 to distinguish narrow focus from non-focus suggests (1) that duration as a cue may be easier to learn or (2) that the children benefitted from **positive L1 transfer**.
- Do they differentiate different focus types? (**size and contrastivity**)
  - No.** Child L2 speakers from both age groups **neither used duration nor pitch to differentiate focus** types that differ in the **size** of the focal constituent.
- Which prosodic cues do they use? **Pitch and duration** are used in **different** conditions by different age groups.
- Which development path do the children follow to become native-like in their L2?
  - The acquisition of prosodic focus-marking in Mandarin is a **gradual process** in child L2. L2 Mandarin-speaking children did use **pitch** (albeit not in all tones at younger ages) in addition to duration to **distinguish contrastive focus** from non-contrastive focus.