

Defocus leads to syntax-prosody mismatches in right dislocated structures

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1 Introduction

- One important question in the study of language is how abstract, syntactic structure is linearized and produced as audible strings.
- **Prosody**: mediating between syntax and phonology
- However, syntax-prosody mismatches often arise
- **Focus** has been extensively studied as one major source of the mismatches.

Today's goal:

- Examine the role of focus, particularly the *lack* of focus (**defocus**), in syntax-prosody mapping,
- through the lens of **right-dislocated structures** in Cantonese and Mandarin

Background: two views on focus rephrasing effects

Focus has phonetic effects on prosody (Jackendoff 1972; Pierrehumbert and Beckman 1988; Truckenbrodt 1995; Büring 2001): focal prominence (e.g. increased F0 peak) and post-focal reduction (e.g. reduced F0 range).

(1) REPHRASING view: focus = prosodic head

(Pierrehumbert and Beckman 1988; Truckenbrodt 1995; Selkirk 2008, *i.a.*)

Focus, as least in languages that mark focus by prominence, triggers rephrasing when focus is misaligned with prosodic edges.

(2) focus → prominence → prosodic head → aligned with edges → rephrasing

(3) NO-REPHRASING view: focus ≠ prosodic head

(Féry and Ishihara 2010; Féry 2013; Ishihara 2011, 2016)

Focus, even in languages that mark focus by prominence, does not necessarily trigger rephrasing. Prominence can be a result of direct manipulation of pitch register.

(4) focus → pitch register ↗ rephrasing

Recent empirical findings that support the NO-REPHRASING view:

- **No boundary insertion:** e.g. focus does *not* block downstepping in Japanese (e.g. Ishihara 2016)
- **No boundary deletion:** e.g. phrasing effects on F0 peak and duration are retained in post-focal fields in Mandarin (Zhang, Wagner, and Clayards 2021; Yuan 2022)

While the role of the ***presence*** of focus in phrasing is subject to debate, little attention has been paid on the **absence/lack** of focus, i.e. **defocus**.

Defocus is particular relevant in right-dislocated structures in Cantonese and Mandarin, where the dislocated chunks resist focus interpretation.

They are the ideal languages to study since:

- (i) Cantonese: No post-focal reduction (Wu & Xu 2010) ➔ no rephrasing by *presence* of focus;
- (ii) Mandarin: Focus has been shown to have no rephrasing effects despite robust post-focal reduction (Zhang, Wagner, and Clayards [2021](#); Yuan [2022](#)).

Right dislocated structures in Cantonese and Mandarin have two types (SFP=sentence-final particles):

- (5) *Baseline* [YP XP SFP]

[Mingzai wui heoi Meigwok aa3]. (Cantonese)

[Xiaoming hui qu Meiguo a]. (Mandarin)

Ming will go US SFP

'Ming will go to the US.'

- (6) Gapped right dislocation (RD) main chunk + RD chunk [_ XP SFP] **YP**

[_ wui heoi Meigwok aa3] **Mingzai.** (Cantonese)

[_ hui qu Meiguo a] **Xiaoming.** (Mandarin)

will go US SFP Ming

Lit.: 'Will go to the US, Ming.' (i.e. 'Ming will go to the US.')

- (7) Gapless dislocation copying (DC) main chunk + DC chunk [YP XP SFP] **YP**

[Mingzai wui heoi Meigwok aa3] **Mingzai.** (Cantonese)

[Xiaoming hui qu Meiguo a] **Xiaoming.** (Mandarin)

Ming will go US SFP Ming

Lit.: 'Ming will go to the US, Ming.' (i.e. 'Ming will go to the US.')

Caveat: right-dislocation \neq afterthought

We only discuss right-dislocation, but not afterthought. They systemically differ in (Frey & Truckenbrodt 2015, Ott and de Vries 2016; Wei and Li 2018, *i.a.*):

- Information structure (new vs. old information)
- Syntactic properties (right adjunction vs. movement)
- Prosodic properties (degree of integration)

(8) Overview of the talk

- a. A variant of right-dislocated structure, dislocation copying (DC), involves **syntax-prosody mismatch**:
biclausal structure syntactically, yet only **one intonational phrase** prosodically
- b. Right-dislocated chunks in Cantonese and Mandarin are always **defocus**
- c. Defocus triggers prosodic rephrasing → Ultimately *weakens* the REPHRASING approach, and *dissociates* the rephrasing by defocus from those by focus

- **Road map**

§2: Defocus

§3: Syntax

§4: Prosody

§5: Proposal

§6: Conclusion

2 Defocus in right-dislocated structures

In the following, we will argue that:

Defocus: The right-dislocated chunks resist focus interpretation.

The right-dislocated chunk is defocus

The definition of focus: we follow Rooth (1992) and define focus as elements that trigger alternatives in focus semantics. These include cases such as contrastive focus, *wh*-question-answer pair, focus particle (e.g. *only*) associates, etc. Discourse new elements (so-called information focus) are not included (cf. Kratzer & Selkirk 2020).

- (9) A focus is an element that triggers a set of alternatives.

Both RD and DC chunks **cannot** receive focus interpretation.

Contrastive focus with stress

First, as already noted by Lee (2017, 2022a) for RD and Cheung (2015) for DC in Cantonese, stress cannot occur in the right-dislocated chunks to mark contrastive focus.

(10) Contrastive focus (stress) (Cantonese)

a. Zoengsaam _ maai-zo gaa sance aa3 {***CAMJAT**_F/ ^{OK}camjat}.

Zoengsaam buy-PFV CL new.car SFP yesterday yesterday

Lit.: 'Zoengsaam bought a new car, *YESTERDAY/yesterday.'

(RD, adapted from Lee:2017:68)

b. Keoi wui heoi jamngokwui gaa3 {***KEOI**_F wui/ *keoi **WUI**_F/ ***KEOI WUI**_F/

3SG will go concert SFP 3SG will 3SG will 3SG will

^{OK}keoi wui}.

3SG will

Lit.: '(S)he will go to the concert, *(S)HE will/*(s)he WILL/*(S)HE WILL/(s)he will.'

(DC, Cheung 2015:261)

Mandarin behaves the same in banning contrastive stress in both RD and DC chunks:

(11) Contrastive focus (stress) (Mandarin)

- a. _ bu qu Meiguo a {***ZHANGSAN**_F/ ^{OK}Zhangsan}. (RD)
not go US SFP Zhangsan Zhangsan

Lit.: 'will not go to the US, *ZHANGSAN/Zhangsan.'

- b. Zhangsan bu qu Meiguo a {***ZHANGSAN**_F/ ^{OK}Zhangsan}. (DC)
Zhangsan not go US SFP Zhangsan Zhangsan

Lit.: 'Zhangsan will not go to the US, *ZHANGSAN/Zhangsan.'

Focus particles with associates

Right-dislocated chunks cannot accommodate focus particles with their associates, like exclusive focus ‘only’ (Lee 2022b).

(12) ‘Only’ focus

a. ??[_ maai-zo ni-bun syu zaa3] **zinghai ngo**. (Cantonese: *RD)

buy-PFV this-CL book SFP only 1SG

Lit.: ‘bought this book, only I.’ (i.e. ‘Only I bought this book.’) (RD, Lee 2022b:12)

b. ??[zinghai ngo maai-zo ni-bun syu zaa3] **zinghai ngo**. (Cantonese: ??DC)

only 1SG buy-PFV this-CL book SFP only

Lit.: ‘Only I bought this book, only I.’ (i.e. ‘Only I bought this book.’)

(DC, Lee 2022b:12)

c. *[{ _/ zhiyou wo} maai-le na-bun shu eryl] **zhiyou wo**. (Mandarin: *RD/*DC)

only 1SG buy-PFV this-CL book SFP only 1SG

Lit.: ‘(Only I) bought this book, only I.’ (i.e. ‘Only I bought this book.’)

It is important to distinguish between focus **particles** (operators) and focused **associates** (focused elements). Only the latter is banned in RD/DC chunks.

(13) ‘Only’ particles vs. ‘only’ focus associates (Cantonese)

- a. [Zinghai Aaming maai-zo ni-bun syu aa3] **zinghai**_F. (particles: DC)

only Ming buy-PFV this-CL book SFP only

Lit.: ‘Only *Ming* bought this book, only.’ (i.e. ‘Only *Ming* bought this book.’)

- b. *[Zinghai Aaming maai-zo ni-bun syu aa3] **Aaming**_F. (associates: *DC)

only Ming buy-PFV this-CL book SFP Ming

Lit.: ‘Only *Ming* bought this book, Ming.’ (i.e. ‘Only *Ming* bought this book.’)

Interim summary

The ban on focus in right-dislocated chunks is summarized below.

Type	Focus	Cantonese		Mandarin	
		RD	DC	RD	DC
Stress	Contrastive focus	✗	✗	✗	✗
Q-A	<i>Wh</i> -words	✗	(✗)	✗	✗
	Ans to <i>wh</i>	✗	(✗)	✗	✗
Focus particles	Copula cleft	✗	(✗)	✗	✗
	‘Only’	✗	(✗)	✗	✗
	‘Even’	✗	(✗)	✗	✗

A defocus projection

The systematic resistance of focus interpretation can be captured by positing a *defocus* projection (also called *anti-focus*), following Lee (2017, 2020). In Cantonese and Mandarin, the right-dislocated chunks occupy a designated syntactic slot for defocus interpretation.

- (14) A defocus is an element that resists focus interpretation, manifested syntactically as right-dislocated chunks in Cantonese and Mandarin RD/DC.

Comparable to:

- (15) a. P-movement/scrambling in Spanish & Italian (Zubizarreta 1998)
b. Scrambling in West Germanic (Molnárfi 2002)
c. Object clitic doubling in Albanian and Greek (Kallulli 2000)
d. Subject/anti-focus markers in Bantu languages (Zeller 2008)

All of which resist focus interpretation.

3 Syntax: Monoclausal vs. Biclausal analyses

In the following, we will argue that:

While RD is monoclausal, DC is biclausal

Below, we will not replicate arguments from the literature for RD, but rather we will focus on **DC**, since this will be the case that gives rise to syntax-prosody mismatch.

For DC, we suggest that it has **biclausal** structure and involves deletion in a sluicing-like manner (Cheung 2015; cf. Shi 1992, Tang 2018).

(16) The **biclausal** analysis of DC

a. [CP₁ main chunk [C' SFP]] [CP₂ [DefocusP DC chunk [TP  main chunk]]]





b. [CP₁ main chunk [C' SFP]] [CP₂ [DefocusP DC chunk [~~TP  main chunk~~]]]

(17) [CP₁ Ming will go to US [C' SFP]] [CP₂ [DefocusP Ming [~~TP  will go to US~~]]]

We argue against the monoclausal analysis in Lai (2019) and Lee (2021), which relies on multiple copy realization (i.e. suspension of Copy Deletion).

(18) The monoclausal analysis of DC (*to be rejected*)

[CP <DC chunk copy> + main chunk [C' SFP [DefocusP <DC chunk copy> []]]]



Against DC = monoclausal + multiple-copy realization

The major evidence comes from **imperfect copying**, where the DC chunk is distinct from materials in the main chunk.

(19) Imperfect copying

- a. Gam **keoi_k** zau-m-zau hou ne1 **Faatgwok-lou_k**? (Cantonese)
so 3SG leave-not-leave good SFP France-man
'So is it better for him to retreat, the French guy?' (Cheung 2015:230)
- b. **Ta** lai-le ma, **ta xianzai**? (Mandarin)
3SG arrive-PFV SFP 3SG now
'Has he arrived, (he) now?' (Shi 1992:176)

Although a monoclausal analysis (Lai 2019, Lee 2021) equipped with *partial* Copy Deletion (instead of no deletion) might be able to derive copying with pronouns (19a) and partial copying (19b), it faces difficulties in cases where the non-identical DC chunk cannot be “put back” to the main chunk:

- (20) a. [DP **Go gaa** [NP **hungsik ge paauce**]] sei-zo fo aa1maa3 [DP go gaa
 that CL red MOD sport.car die-PFV fire SFP that CL
 [NP je]]!
 thing
 Lit.: ‘That red sport car stalled, that thing!’ (Cantonese)
- b. *[DP **Go gaa** [NP **hungsik ge (je) paauce (je)**]] sei-zo fo aa1maa3!
 that CL red MOD thing sport.car thing die-PFV fire SFP

Thus, a biclausal structure is needed for DC.

We also have arguments from movement properties to reject a right adjunction alternative which has a monoclausal structure.

(21) Right adjunction (to be rejected)

[_{CP} [_{CP} main chunk SFP] [_{adjunct} **RD/DC chunk**]]

Free feel to ask us in the Q&A!

In a nutshell:

- (22) a. The right-dislocated chunks in RD/DC are **defocus**
b. RD is monoclausal, DC is **biclausal**

4 The uniform prosody of right-dislocated structures

Despite that the syntax of RD and DC is not uniform, we argue that they do share uniform prosody in having **one intonational phrase** (ι).

(23) The prosodic phrasing of RD and DC (only ι shown)

a. RD: One clause, one ι

[_{CP} main chunk [_{C'} SFP [_{DefocusP} RD chunk]]]
() ι

b. DC: Two clauses, one ι

[_{CP1} main chunk [_{C'} SFP]] [_{CP2} [_{DefocusP} DC chunk]]
() ι

In other words, there is a syntax-prosody mismatch in DC.

Three pieces of evidence:

- (24) a. Phonological: boundary tone placement in Cantonese
- b. Phonological: tone sandhi in Mandarin
- c. Phonetic: acoustic experiment in Cantonese and Mandarin

4.1 Placement of boundary tones in Cantonese

Cantonese has a boundary tone LH% in questions, which can only occur at the right edges of intonational phrases. It realizes as local F0 rising on the last syllable (Wong, Chan & Beckman 2005, B. Xu & Mok 2011, Zhang 2014).

(25) (Mingzai wui heoi Meigwok)_i LH% ?

Ming will go US

‘Will Ming go to the US?’

It is degraded to place boundary tones such as LH% in RD (Yip 2020), in contrast to question particle *aa4*. This is expected if RD constitutes one ι and there is no ι boundary before the RD chunk.

(26) Placement of LH% question intonation in Cantonese

a. *RD*

[_ wui heoi Meig**wok** { *LH% / **aa4** }]? keoi
 will go US SFP 3SG

‘Will s/he go to the US?’

b. *DC: perfect copying*

[Keoi wui heoi Meig**wok** { *LH% / **aa4** }]? keoi
 3SG will go US SFP 3SG

‘Will s/he go to the US?’

Crucially, such placement is also banned in **DC**, suggesting that there is no (right) ι boundary before the DC chunk as well.

The same applies to other DC variants.

Cantonese offers *negative* evidence from boundary tones:

→ showing **absence** of *right* ι boundaries before DC chunk

→ In other words, the main chunk does *not* form a separate ι excluding the DC chunk, rather, it forms an ι together with the DC chunk.

(27) $[\text{CP}_1 \text{ main chunk } [\text{C}' \text{ SFP}]] \quad] \quad [\text{CP}_2 [\text{DefocusP DC chunk}]] \quad]$
 $\iota_1(\quad)_{t_1} \quad \iota_2(\quad)_{t_2}$
 \uparrow
 $\times \text{ LH\%}$

4.2 Tone 3 sandhi in Mandarin

Mandarin offers another type of phonological evidence: **third tone sandhi**. T3 sandhi applies to consecutive T3, where the first one changes from a low tone to a rising tone, similar to the contour of tone 2 (Shih 1986, Shih 1997, Chen 2000, *i.a.*).

(28) Tone 3 sandhi in Mandarin

- a. T3-T3 → **sT2**-T3
[21]-[21] → **[35]**-[21]
L-L → **LH**-L
- b. 'alcoholic, lit. wine-ghost'
jiu3-gui3 → **jiu2**-gui3
[21]-[21] → **[35]**-[21]

Mandarin T3 sandhi may apply across phonological phrase ϕ boundaries, such as a subject-VP juncture, but **not** across ι boundaries, such as a clausal juncture between adverbial and main clauses.

(29) Tone 3 sandhi can apply across a subject-VP juncture

[CP Zuo2-tian1 [Subj na4-xiang1 shao1-**jiu3**^[21>35]] [VP **shao3**^[21]-le0 yi1-ping2]]
 ϕ_1 (yesterday that-box Soju miss-PFV one-bottle) ϕ_2
 ‘Yesterday, one bottle of Soju went missing from that box of Soju.’

(30) Tone 3 sandhi is not possible across clausal boundaries in complex sentences

[CP Lao3-Wang2 shuo1 yao4 jin1-tian1 **zou3**^[21/*35]], [CP **ke3**^[21]-shi4 mei2 zou3 cheng2]
 ι_1 (Old Wang say want today leave) ι_1 ι_2 (but didn't leave succeed) ι_2
 ‘Old Wang said that he wanted to leave today, but it didn’t work out.’ (Shih 1997:100)

Thus, we can test the juncture strength between the main chunk and the RD/DC chunk by applying T3 sandhi. If there exists an ι boundary, we expect T3 sandhi to be impossible.

T3 sandhi is **allowed** in RD, as well as DC.

(31) Tone 3 sandhi in Mandarin RD and DC

a. *RD*

– xǐhuān hē **jiǔ**^[21>35] **Lǎo**^[21]wáng
like drink wine Laowang

Lit.: 'likes drinking wine, Laowang.'

b. *DC: Perfect copying*

Lǎowáng xǐhuān hē **jiǔ**^[21>35] **Lǎo**^[21]wáng
Laowang like drink wine Laowang

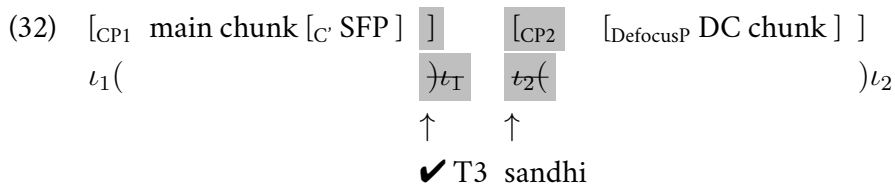
Lit.: 'Laowang likes drinking wine, Laowang.'

Same for other DC variants.

Mandarin offers *positive* evidence from tone 3 sandhi:

➔ showing **absence** of both *left* and *right* ι boundaries before DC chunk

➔ the DC chunk does not form a separate ι , but rather, it forms a ι together with the main chunk.



4.3 Acoustic evidence for the prosody of right-dislocated structures

Prosodic structure should be reflected phonetically.

Three prosodic cues for intonational phrase boundaries (Cantonese: Chow 2005a, 2006, 2008; Li 2017, Li & Mok 2017; Mandarin: Yang & Wang 2002, Chow 2005b), which are examined in the experiment for DC:

- (33) $[_{CP1} \text{ main chunk } [_{C'} \text{ SFP }]]$ $[_{CP2} [_{\text{DefocusP}} \text{ DC chunk }]]$
 $\iota(\quad)?$ $? (\quad) \iota$
 $\uparrow \quad \quad \uparrow \quad \uparrow$
final lengthening? pause? pitch reset?

Stimuli:

A 2x2 factorial design, differing in number of clauses (mono- vs. bi-clausal) and word order (canonical vs. right-dislocated) (number of syllables indicated by σ).

Target sentences: 12 lexical sets x 4 conditions = 48 (plus 24 fillers)

	Monoclausal	Biclausal
Canonical	<i>MonoCl</i> : $S_{\sigma\sigma}$ Adv $_{\sigma\sigma}$ V $_{\sigma\sigma}$ O $_{\sigma\sigma}$ SFP $_{\sigma}$	<i>BiCl</i> : $S_{\sigma\sigma}$ Adv $_{\sigma\sigma}$ V $_{\sigma\sigma}$ O $_{\sigma\sigma}$ SFP $_{\sigma}$, $S_{\sigma\sigma}$ Adv V O SFP
Right-dislocated	<i>RD</i> : Adv $_{\sigma\sigma}$ V $_{\sigma\sigma}$ O $_{\sigma\sigma}$ SFP $_{\sigma}$ $S_{\sigma\sigma}$	<i>DC</i> : $S_{\sigma\sigma}$ Adv $_{\sigma\sigma}$ V $_{\sigma\sigma}$ O $_{\sigma\sigma}$ SFP $_{\sigma}$ $S_{\sigma\sigma}$

Participants: 14 native speakers of Cantonese (F: 7), 13 native speakers of Northern Mandarin (F: 9)

Note: only partial results (8 spkr) are presented today for Cantonese; full results for Mandarin

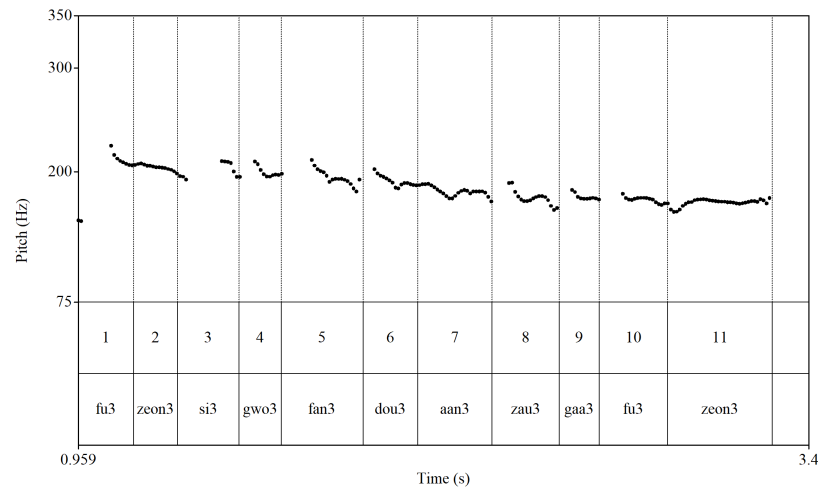
Procedure:

A total of 72 sentences were pseudo-randomized and presented to the subjects in 4 blocks, each block containing 18 sentences. In each trial, one sentence will be visually shown once at a time on a screen with an appropriate context, and subjects will be required to read aloud the sentence. The set of the 18 sentences in a block will be repeated three times in a randomized fashion. The sentences produced were recorded at Dept of Ling, Yale University. In total, 4 conditions x 12 sets x 3 repetitions x 27 subjects = 3888 target token sentences were recorded.

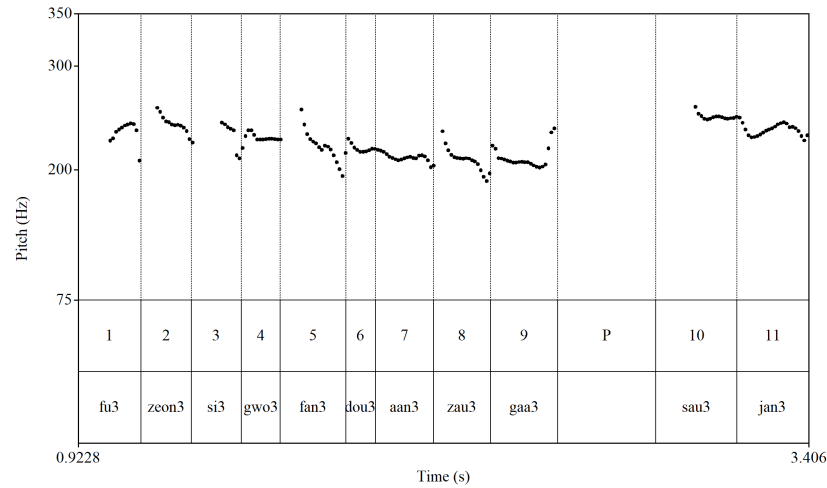
Results

Cantonese

(34) DC: dislocation copying ($\sigma_{10}\text{-}\sigma_{11}\text{=CP2}$) (RD_C_DC_h_T3_C14)



(35) BiCl: canonical bi-clausal structure ($\sigma_{10}\text{-}\sigma_{11}\text{=CP2}$) (RD_C_BiCl_h_T3_C14)



Pitch reset: Cantonese

(36) Model results

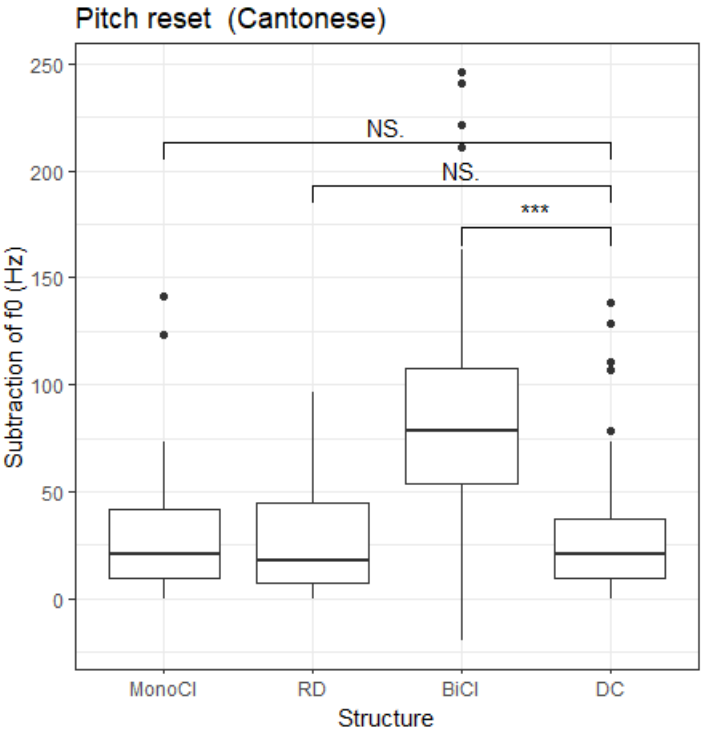
Linear mixed effect regression models w/ *Participant*; *Lexical set*; *Trial* as random effects; *Structure* as fixed effects

Fixed effects:

	Estimate	Std. Error	df	t value	Pr(> t)	
(Intercept)	32.050	7.131	21.759	4.494	0.000185	***
c(Structure)BiCl	61.986	7.316	364.551	8.473	5.98e-16	***
c(Structure)MonoCl	1.444	7.335	364.645	0.197	0.844022	
c(Structure)RD	-3.612	7.316	364.551	-0.494	0.621819	

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

(37) Pitch reset (maxf0 of the 8th/10th syllable - minf0 of the 7th/9th syllable)



Pitch reset: Mandarin

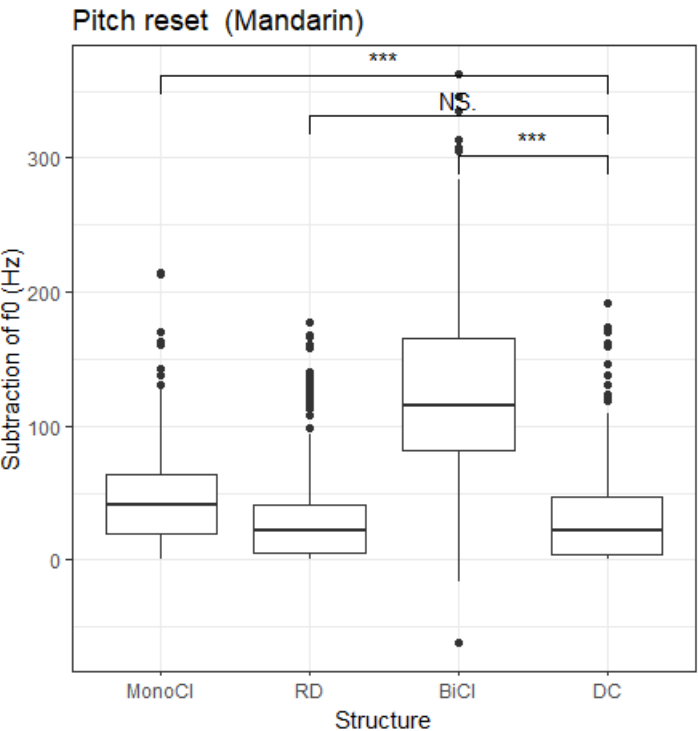
(38) Model results

Fixed effects:

	Estimate	Std. Error	df	t value	Pr(> t)	
(Intercept)	39.939	6.906	30.636	5.783	2.37e-06	***
c(Structure)BiCl	91.443	4.707	1282.526	19.429	< 2e-16	***
c(Structure)MonoCl	13.574	4.690	1281.152	2.895	0.00386	**
c(Structure)RD	-1.637	4.800	1282.652	-0.341	0.73313	

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

(39) Pitch reset



Final Lengthening: Cantonese

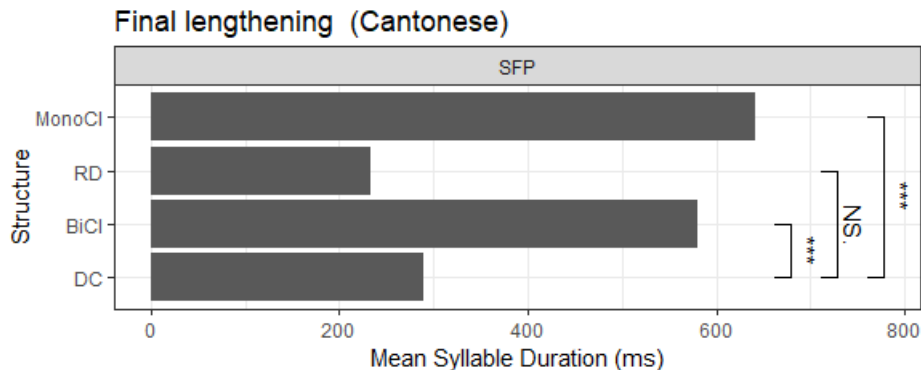
(40) Model results

Fixed effects:

	Estimate	Std. Error	df	t value	Pr(> t)	
(Intercept)	145.090	11.931	21.669	12.161	3.77e-11	***
c (Structure) BiCl	101.795	8.008	364.900	12.712	< 2e-16	***
c (Structure) RD	-7.789	8.008	364.900	-0.973	0.331	
c (Structure) MonoCl	94.935	8.030	364.921	11.823	< 2e-16	***

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

(41) Final Lengthening



Final Lengthening: Mandarin

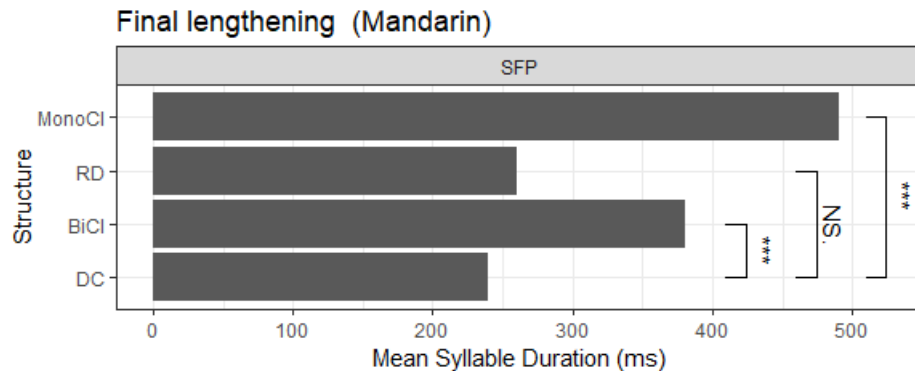
(42) Model results

Fixed effects:

	Estimate	Std. Error	df	t value	Pr(> t)	
(Intercept)	83.508	16.893	15.074	4.943	0.000174	***
c (Structure)BiCl	111.447	3.730	1280.858	29.877	< 2e-16	***
c (Structure)RD	4.788	3.805	1280.863	1.259	0.208428	
c (Structure)MonoCl	107.051	3.716	1280.339	28.806	< 2e-16	***

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

(43) Final Lengthening



A syntax-prosody mismatch

- (44) DC: two CPs, yet one ι .
- $\iota($ $[_{CP1}$ main chunk $[_{C'} \text{ SFP}]]$ $[_{CP2}$ $[_{\text{DefocusP}}$ DC chunk $]]$ $)\iota$

5 Proposal

We propose that *defocus* is the (indirect) source of mismatch. The DC chunk, being defocus, leads to a illegitimate *headless* ι . To avoid headless prosodic constituents, the DC chunk is parsed with the main chunk as one ι , deriving the mismatch.

(45) Defocus elements \rightarrow No prominence \rightarrow Headless ι \rightarrow Rephrasing

A weakened version of the REPHRASING view:

- Integrates insights from NO-REPHRASING view: focus \neq prosodic head
- Maintains a *minimal* role of focus: the **lack** of focus (defocus) \rightarrow headless

Defocus and (non-)prominence:

(46) DEFOC(US)

Assign a violation mark if D is a defocus relative to a focus F and DF is their domain and the highest prominence in DF is within D.

Dissociating headedness from alignment (heads must be on edges) and strict layering (head must be one prosodic level lower):

(47) IntonationalPhrase:Head (ι :HEAD) (as a violable constraint)

Assign a violation mark if an intonational phrase does not have at least one daughter constituent designated as its head.


Syntax-prosody mapping:

(48) MATCH(CP, ℓ) (after Selkirk [2011](#))

The left and right edges of a CP in the input syntactic representation must correspond to the left and right edges of an intonational phrase in the output phonological representation.

(49) $\{\text{DEFOC}, \iota\text{:H}\} \gg \text{MATCH}(\text{CP}, \iota)$

(50) Rephrasing triggered by headless ι

$[\text{CP}_1 \text{ ZP YP}] [\text{CP}_2 \text{ ZP}_{\text{Defoc}} \text{YP}]$	DEFOC	$\iota\text{:H}$	MATCH(CP, ι)
a. $((\text{ZP})_\phi \text{ (YP)}_\phi)_\iota ((\text{ZP})_\phi)_\iota$	*!		
b. $((\text{ZP})_\phi \text{ (YP)}_\phi)_\iota ((\text{ZP})_\phi)_\iota$		*!	
 c. $((\text{ZP})_\phi \text{ ((YP)}_\phi \text{ (ZP)}_\phi)_\phi)_\iota$			**

(51) $[\text{CP}_1 [\text{DP} \text{ Ming}] [\text{VP} \text{ will go US}] \text{ SFP}] [\text{CP}_2 [\text{DP} \text{ Ming }]]$. (Cantonese)

$\iota(\phi(\quad)_\phi \underline{\phi}(\phi(\quad)_\phi \phi(\quad)_\phi) \underline{\phi})_\iota$

Concluding remarks

(52) Takeaway

- a. In Cantonese and Mandarin, there is a **syntax-prosody mismatch** in dislocation copying, a variant of right dislocation: 2 clauses, but only 1 intonational phrase
- b. The mismatch is due to **defocus**
→ illegitimate **headless ι** → triggers rephrasing
- c. An underappreciated aspect: the **lack** of focus and syntax-prosody mapping

A typology of right dislocation?

Difference in phrasing:

- French right dislocation allows two boundary tones and thus have **two intonational phrases** (Delais-Roussarie et al. 2004)
- Bantu languages: DC chunks in general phrased **separately** (Downing 2011)

Difference in focus possibilities:

- German RD (and afterthought) also resists focus, and may be regarded as defocus (Frey & Truckenbrodt 2015)
- Yet, Japanese (Yamashita 2011, Takita 2011), Korean (Ko 2015, Abe 2019) and Mongolian (Lee 2022a) right dislocation allow **focus**
 - Any prosodic phrasing difference between right dislocation with and without focus?

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Thank you!

Appendix

More on defocus (Sect. 2)

#2 Wh-question-answer pairs

Second, right-dislocated chunks also cannot be *wh*-words, or answers to a *wh*-constituent question (Lee:2017; Cheung 2009; Lee and Yip 2020 for RD), both of which trigger alternatives (following Rooth 1992; Beck 2006). The judgment for DC is slight better than RD (under certain conditions), but a contrast with canonical sentences remain.

- (53) Wh-words (Cantonese)
- a. *Camjat _ lai-zo ne1 bingo_F? (*RD)
yesterday come-PFV SFP who
Lit.: ‘came yesterday, who?.’ (Int.: ‘Who came yesterday?’)
- b. ??Camjat bingo lai-zo ne1 bingo_F? (??DC)
yesterday who come-PFV SFP who
Lit.: ‘Who came yesterday, who?.’ (Int.: ‘Who came yesterday?’)
- c. Camjat bingo_F lai-zo ne1? (canonical)
yesterday who come-PFV SFP
‘Who came yesterday?’

In Mandarin, both RD and DC are unacceptable when the right-dislocated chunks are *wh*-words as in (54), as well as answers to *wh*-questions as in (55).

(54) Wh-words (Mandarin)

*Zuotian { _/ shei } lai-le a shei? (*RD/*DC)

yesterday who come-PFV SFP who

Lit.: '(Who) came yesterday, who?' (Int.: 'Who came yesterday?')

(55) Answers to *wh*-questions (Mandarin)

a. Q: Zuotian shei lai-le a?

yesterday who come-PFV SFP

'Who came yesterday?'

b. *A: Zuotian { _/ Lisi } lai-le a Lisi. (*RD/*DC)

yesterday Lisi come-PFV SFP Lisi

Lit.: '(Lisi) came yesterday, Lisi.'

The conditions for focus to occur in Cantonese DC

Recall that while focus is banned in right-dislocated chunks of RD, some judgment is improved in DC. Indeed, the literature also reported some acceptable cases in Cantonese, where DC chunks may accommodate focus, such as the *wh*-word in (56a) and the ‘only’ focus in (56b).

(56) Exceptional focus in DC chunks

(Lai 2019, ex. 21-22)

- a. [bingo sengjat gong daaiwaa aa3] bingo? (wh)
who always tell lie SFP who
‘Who always lies?’
- b. [Zinghai Mingzai lai-zo zaa3] zinghai Mingzai. (‘only’ focus)
only Ming come-PFV SFP only Ming
‘Only Ming came.’

However, these cases are highly constrained, and are only acceptable if:

- (57) a. The focus in the DC chunk is *unstressed*, and;
b. The focus in the main chunk is *stressed*, and'
c. The string of the DC chunk is identical to the focus in the main chunk (i.e. perfect copying).

If the *wh*-word and the 'only' focus are stressed, the sentences become unacceptable again.

(58) Exceptional focus in DC chunks (Lai 2019, ex. 21-22)

- a. *[bingo sengjat gong daaiwaa aa3] BINGO? (wh)
who always tell lie SFP who
'Who always lies?'
- b. *[Zinghai Mingzai lai-zo zaa3] zinghai MINGZAI. ('only' focus)
only Ming come-PFV SFP only Ming
'Only Ming came.'

More on syntax (Sect. 3)

In Chinese languages, the general consensus for the analysis of RD is that they are **monoclausal** with (leftward) movement (**Packard:1986**; **Lee:2017**; Cheung 2009; Chiang 2017, *i.a.*). For explicitness, we assume with **Lee:2017** that RD involves two steps of movement: (i) defocus movement; (ii) remnant movement.

(59) The monoclausal analysis of RD

a. $[_{CP} SFP [_{DefocusP} RD \text{ chunk } [_{TP} \dots \text{ } \text{ } \dots]]]$



A horizontal arrow points from the empty space in the TP complement ($[_{TP} \dots \text{ } \text{ } \dots]$) to the RD position within the $DefocusP$ projection ($[_{DefocusP} RD \text{ chunk } \dots]$).

b. $[_{CP} \text{ main chunk } [_{C'} SFP [_{DefocusP} RD \text{ chunk } [_{TP} \dots \text{ } \text{ } \dots]]]]$



A horizontal arrow points from the empty space in the TP complement ($[_{TP} \dots \text{ } \text{ } \dots]$) to the SFP position within the C' projection ($[_{C'} SFP \dots]$).

Against right adjunction

An alternative analysis for DC (and for RD as well) is right adjunction, in a manner like afterthoughts.

(60) Right adjunction (to be rejected)

[_{CP} [_{CP} main chunk SFP] [_{adjunct} **RD/DC chunk**]

This alternative, however, is challenged by strong evidence for movement of the RD/DC chunk. The RD/DC chunk must originate from some clausal structure.

(61) Evidence for movement in RD/DC

- a. **Island effects** (Cheung 2009, Cheung 2015, Lee 2017, Lai 2019)
- b. Reconstruction effects (RD: Cheung 2009, Lee 2017)
- c. ‘Only’ focus association test (RD: Cheung 2009)
- d. *Wh*-the-hell test (RD: Cheung 2009)
- e. Polarity item licensing (RD: Cheung 2009)
- f. Correlation between RD/DC chunks and contrastive focus in main chunks (Lee 2021)

Take island effects to illustrate. In the DC variants, including imperfect copying, the DC chunk cannot originate in an island.

(62) Complex NP island

(Cantonese)

- a. *Non-island baseline* (modified from Cheung 2015:234)

Aaming zangging lyunlok-gwo ge go di gongze gaa, **Aaming**.

Ming already contact-EXP MOD that CL.PL speaker SFP Ming

‘Ming contacted all the speakers.’

- b. *Perfect copying* (modified from Cheung 2015:234)

*Ngo sik-saai [DP [CP **Aaming** zangging lyunlok-gwo] ge go di gongze]

I know-all Ming already contact-EXP MOD that CL.PL speaker

gaa, **Aaming**.

SFP Ming

Int.: ‘I know all the speakers that Ming contacted.’

- c. *Imperfect copying*

*Ngo sik-saai [DP [CP **keoi_j** zangging lyunlok-gwo] ge go di gongze]

I know-all SFP already contact-EXP MOD that CL.PL speaker

gaa, **Aaming_j**.

SFP Ming

Int.: ‘I know all the speakers that Ming contacted.’

More on prosody (Sect. 4)

Boundary tones in afterthoughts

Notice that imperfect copying with a proper name in the DC chunk can be alternatively parsed as afterthought, and become acceptable.

- (63) a. *Imperfect copying (pronoun)*

*[Mingzai_j wui heoi Meig**wok** LH%]? keoi_j
Ming will go US 3SG

Int: 'Will Ming go to the US?'

- b. *Imperfect copying (proper name)*

(??)[Keoi_j wui heoi Meig**wok** LH%]? Mingzai_j
3SG will go US Ming

Int: 'Will Ming go to the US?'

(Only acceptable in a context where the referent of the pronoun is not clear.)

- c. *Partial copying*

*[Mingzai heoi Meig**wok** LH%]? Mingzai wui
Ming go US Ming will

Int: 'Will Ming go to the US?'

Cyclic application of tone 3 sandhi

When the RD/DC chunk contains two tone 3 syllables, cyclic tone sandhi is not possible (Yuyang Liu p.c.).

- (64) a. $[\text{main chunk} \dots \sigma^{T3>T2}] [\text{RD chunk } \sigma^{T3} \sigma]$
 b. $*[\text{main chunk} \dots \sigma^{T3>T2}] [\text{RD chunk } \sigma^{T3>T2} \sigma^{T3}]$

(65) Cyclic application of tone 3 sandhi is not available in RD/DC

- a. $*(*\text{Lǎoshǔ}) \text{ xǐhuān } \text{hē} \quad \textbf{jiǔ}^{[215>35]} \quad [\textbf{Lǎo}^{[215>35]} \textbf{shǔ}^{[215]}]$
 Mouse like drink wine Mouse
 Lit.: ‘(Mice) like drinking wine, mice.’
- b. $(\text{Lǎoshǔ}) \text{ xǐhuān } \text{hē} \quad \textbf{jiǔ}^{[215]} \# [\textbf{Lǎo}^{[215>35]} \textbf{shǔ}^{[215]}]$
 Mouse like drink wine Mouse
 Lit.: ‘(Mice) likes drinking wine, mice.’

In right-branching structures, similar contrast is found.

(66) Cyclic application of tone 3 sandhi is not available in right-branching structures

a. Cyclic application

*[**mǔ**^{215>35} [**lǎo**^{215>35}hǔ³⁵]] (cf. OK[**mǔ**³⁵ [**lǎo**^{215>35}hǔ³⁵]])

female tiger

Lit.: 'female tiger' (metaph.: 'aggressive woman')

b. One application

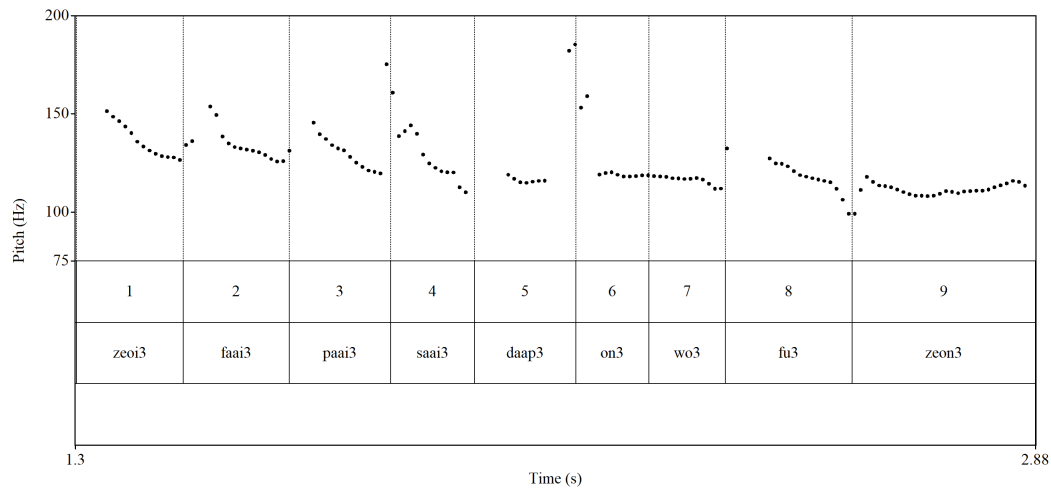
[**mǔ**^{215>35} [lǎo²¹⁵yīng⁵⁵]]

female eagle

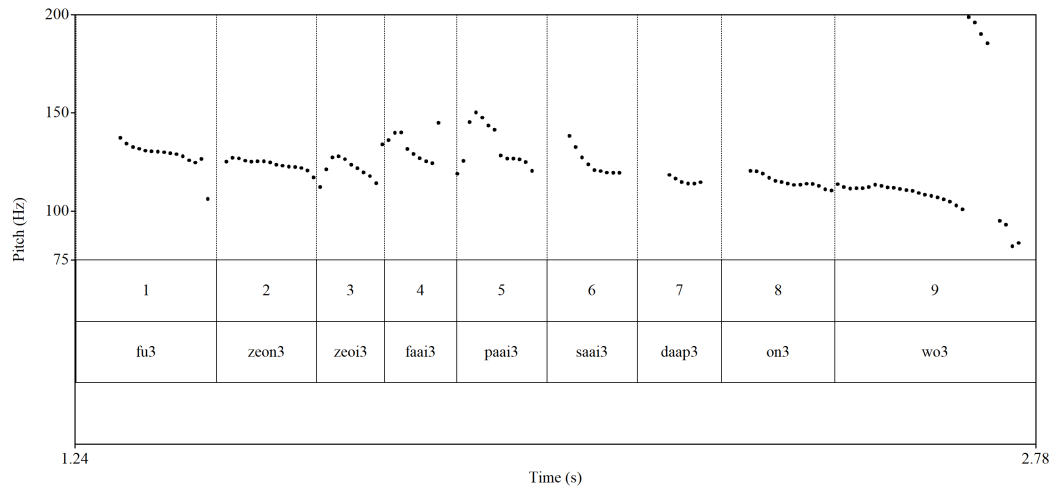
'female eagle'

Cantonese RD & MonoCl

(67) RD: right dislocation ($\sigma_8\text{-}\sigma_9\text{=RD chunk}$) (RD_C_RD_h_T3_C14)

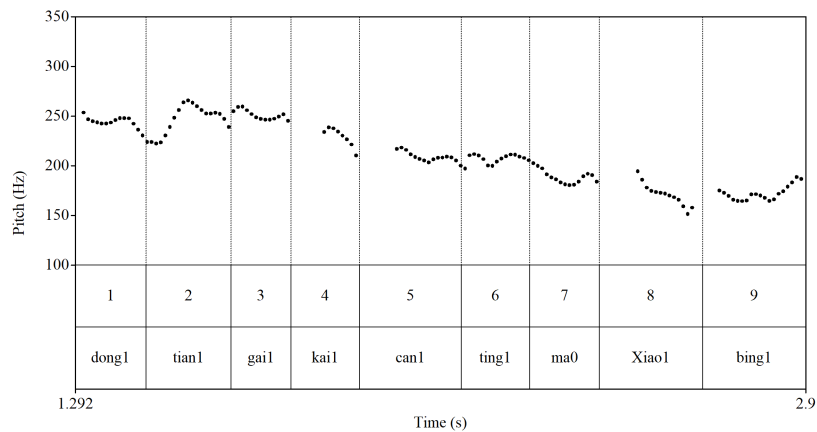


(68) MonoCl: canonical mono-clausal structure (RD_C_MonoCl_h_T3_C14)

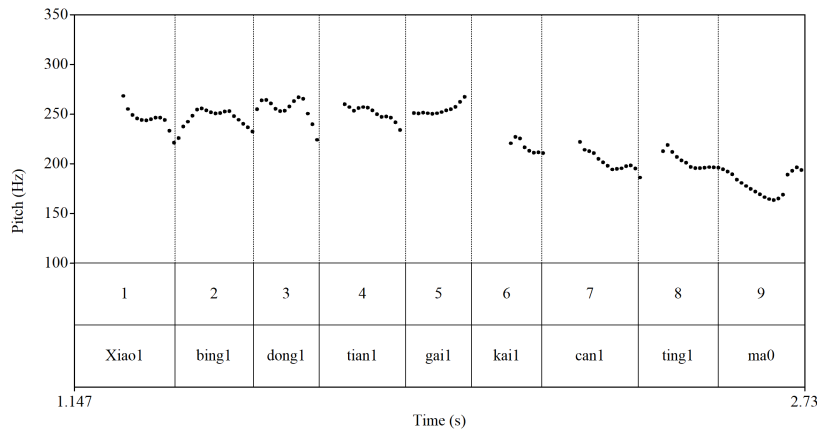


Mandarin RD & MonoCl

(69) RD: right dislocation ($\sigma_8\text{-}\sigma_9\text{=RD chunk}$) (RD_M_RD_c-T1_M01)

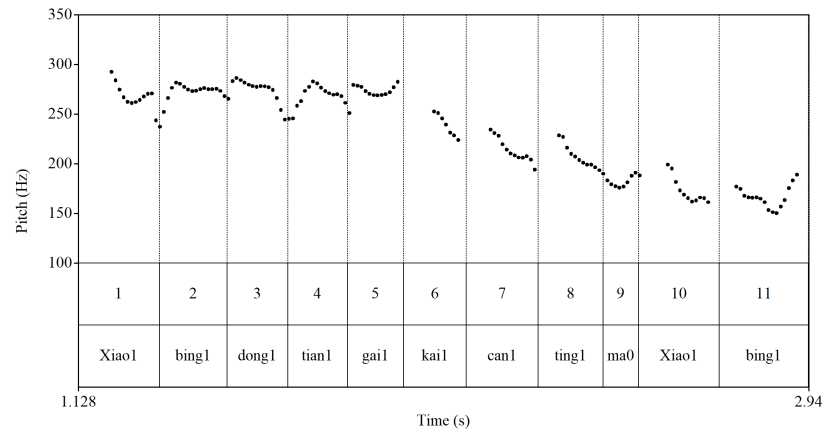


(70) MonoCl: canonical mono-clausal structure (RD_M_MonoCl_c-T1_M01)

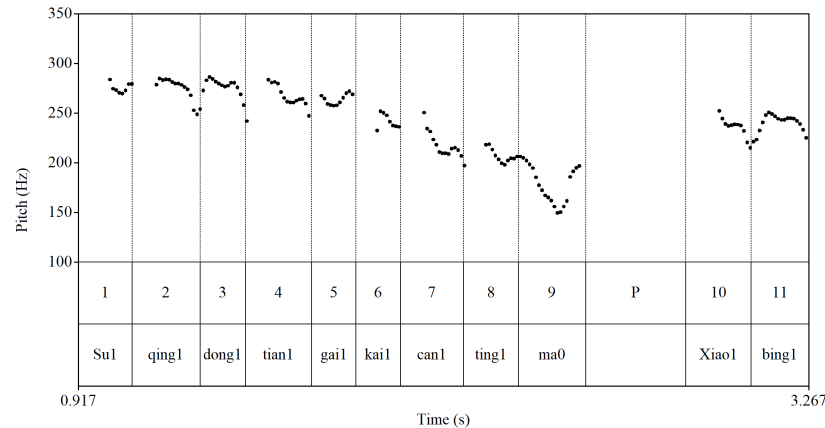


Mandarin

(71) DC: dislocation copying ($\sigma_{10}-\sigma_{11}=\text{CP2}$) (RD_M_DC_c_T1_M01)



(72) BiCl: canonical bi-clausal structure ($\sigma_{10}-\sigma_{11}=\text{CP2}$) (RD_M_BiCl_c_T1_M01)



More on proposal (Sect. 5)

Ruling out other candidates

- (73) a. $\text{MATCH}(\text{XP}, \phi)$ (after Selkirk 2011)

The left and right edges of a XP (non-clause and non-word) in the input syntactic representation must correspond to the left and right edges of an phonological phrase in the output phonological representation.

- b. $\text{MATCH}(\phi, \text{XP})$ (after Selkirk 2011)

The left and right edges of an phonological phrase in the input syntactic representation must correspond to the left and right edges of a XP (non-clause and non-word) in the output phonological representation.

- (74) NoRECUR (after Selkirk 1996)

Assign a violation mark if C^i dominates another C^i .

- (75) ϕ recursion


$[\text{CP}_1 \text{ ZP YP}] [\text{CP}_2 \text{ ZP}_{\text{Defoc}} \text{ YP}]$	DEFOC	ι :H	$\text{MATCH}(\text{CP}, \iota)$	$\text{MATCH}(\text{XP}, \phi)$	NORECUR
 a. $((\text{ZP})_{\phi} ((\text{YP})_{\phi} (\text{ZP})_{\phi})_{\phi})_{\iota}$			**		*
b. $((\text{ZP})_{\phi} (\text{YP})_{\phi} (\text{ZP})_{\phi})_{\iota}$	*!		**		
c. $((\text{ZP})_{\phi} (\text{YP})_{\phi} (\text{ZP})_{\phi})_{\iota}$		*!	**		
d. $((\text{ZP})_{\phi} (\text{YP ZP})_{\phi})_{\iota}$			**	*!*	

As supported by boundary tone placement in Cantonese (on right edges) and final lengthening.

(76) AL- ι -R

Assign a violation mark if the head of ι does not align with the right edge.

(77) Against middle-headed ι

$[_{CP1} ZP YP] [_{CP2} ZP_{Defoc} \text{YP}]$	DEFOC	$\iota:H$	AL- ι -R	M.(CP, ι)	M.(XP, ϕ)	NORECUR
 a. $((ZP)_{\phi} ((\text{YP})_{\phi} (\text{ZP})_{\phi})_{\phi})_{\iota}$				**		*
b. $((ZP)_{\phi} (\text{YP})_{\phi} (ZP)_{\phi})_{\iota}$			*!	**		

(78) Against ι recursion

$[\text{CP}_1 \text{ ZP YP}] [\text{CP}_2 \text{ ZP}_{\text{Defoc}} \text{YP}]$	NOUNPAR	DEFOC	ι :H	AL- ι -R	M.(CP, ι)	M.(XP, ϕ)	NORE.
☞ a. $((\text{ZP})_\phi \underline{((\text{YP})_\phi (\text{ZP})_\phi)_\phi})_\iota$					**		
b. $((\text{ZP})_\phi \underline{(\text{YP})_\phi})_\iota \underline{(\text{ZP})_\phi})_\iota$		*!			*		*
c. $((\text{ZP})_\phi \underline{(\text{YP})_\phi})_\iota (\text{ZP})_\phi)_\iota$			*!		*		*
d. $((\underline{(\text{ZP})_\phi} \underline{(\text{YP})_\phi})_\iota (\text{ZP})_\phi)_\iota$				*!	*		*