Right dislocation, defocus, and variations in syntax-prosody mapping

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1 Introduction

Two goals

- ***Defocus***: Examine the role of focus, particularly the ***lack*** of focus, in syntax-prosody mapping.
- ***Variations***: Demonstrate that languages vary in the ***syntax-prosody mapping*** of right dislocation constructions.

Right dislocation (RD) in Cantonese and Mandarin

In RD, elements may right-dislocate to the end of the sentence, following SFPs, like in Japanese.

(1) $\overbrace{[\ \ldots\ (\mathrm{XP}_i)\ \ldots\ \mathrm{SFP}\ ]}^{\textit{main chunk}}\ \overbrace{\mathrm{XP}_i}^{\textit{RD chunk}}$ (SFP=sentence-final particle)

RD elements either leave a gap (gapped RD) or an overt correlate in the main chunk (gapless RD).

(2) Gapped RD

a. [_ heoi-zo Meigwok laa3] **Aaming**. [C(antonese)]

b. [_ qu-le Meiguo le] **Xiaoming**. [M(andarin)]

go-PFV US SFP Ming

'Ming went to the US.'

(3) Gapless RD

a. [**Aaming** heoi-zo Meigwok laa3] **Aaming**! [C]

b. [**Xiaoming** qu-le Meiguo le] **Xiaoming**! [M]

Ming go-PFV US SFP Ming

'Ming went to the US!'

Four years ago at Phex-10, Yip (2020) argues for ...

(4) Syntax-prosody isomorphism

a. Syntactic claim: RD in Chinese is monoclausal ← Yip was **wrong**!

b. Prosodic claim: RD in Chinese consists of one intonational phrase ← It is still correct.

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Syntax-prosody Mapping of Right-Dislocations in Cantonese and Mandarin

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ABSTRACT. This paper argues for the one-to-one syntax-prosody mapping of CP and C^0 with novel evidence from right-dislocations (RDs) in Cantonese and Mandarin. From acoustic experimental results, RDs have one intonational phrase (*ι*-phrase), which is compatible with the well-received monoclausal analysis for Chinese RDs: one CP is mapped to one *ι*-phrase. Afterthoughts with "copied" intonations in Cantonese are proved to be an instance of mapping two CPs to two *ι*-phrases. Besides, variations in having boundary tones, "copied" intonations and the SP requirement of RDs are predicted to be correlated under the current proposal.*

Keywords: syntax-prosody mapping, right-dislocations, intonational phrases, boundary tones, afterthoughts

Today, we argue instead for ...

(5) **#1** Syntax-prosody mismatch

a. Syntactic claim: RD in Chinese is ***biclausal***

b. Prosodic claim: RD in Chinese consists of ***one intonational phrase***

c. Interface claim: the mismatch is triggered by ***defocus*** (precisely, its inability to serve as a prosodic head)

(6) **#2** Variations in syntax-prosody mapping

a. Languages differ in whether the RD chunks are integrated with the main chunks:
   (i) ***Must*** be integrated (Cantonese/Mandarin);
   (ii) ***May*** be integrated (Japanese);
   (iii) ***Not*** integrated (French/Catalan);

b. The variations are due to a syntactic parameter and a prosodic parameter:
   (i) *Syntactic*: Whether ***focus projection*** is allowed in RD;
   (ii) *Prosodic*: Whether defocus can be a ***prosodic head***.

- **Road map**

§2: Defocus

§3: Syntax: biclausal

§4: Prosody: mono-ι

§5: Proposal

§6: Variations in mapping

§7: Conclusion

§8: Appendix: experimental results

2 Defocus in right-dislocated structures

In the following, we will argue that:

Defocus: The RD chunks in Chinese project a DeFocP and resist focus interpretation.

The right-dislocated chunk is defocused

We follow Rooth (1992) and Krifka (2008) and conceive of "focus" as triggering alternatives in focus semantics. Examples include contrastive focus, *wh*-question-answer pairs, focus particles with their associates, etc.

(7) Focus triggers a set of alternatives.

- We distinguish focus from discourse-new elements (so-called information "focus") (see Kratzer and Selkirk 2020 for differences between the two notions).

#1 Contrastive focus with stress

Both gapped and gapless RD resist contrastive stress in RD chunks (Cheung 2015; Lee 2017, 2023).

(8) 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.'
(gapped 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.'
(gapless RD, Cheung 2015:261)

#2 *Wh*-question-answer pairs

RD chunks also cannot be *wh*-words, or answers to a *wh*-constituent question (Cheung 2009; Chiang 2017; Lee 2017, 2020, 2023), both of which trigger alternatives (following Rooth 1992; Beck 2006).

(9) *Wh*-words (Mandarin)

*Zuotian {_/ **shei**} lai-le a **shei**?
yesterday who come-PFV SFP who
Lit.: '(Who) came yesterday, who?.' (Int.: 'Who came yesterday?')

(10) 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**.
yesterday Lisi come-PFV SFP Lisi
Lit.: '(Lisi) came yesterday, Lisi.'

#3 Focus particles with associates

RD chunks cannot accommodate focus particles with their associates, like exclusive focus 'only' (Lee 2020, 2023).

(11) 'Only' focus [C]

??[{ _/ **zinghai** **ngo**$_{F}$} maai-zo ni-bun syu zaa3] **zinghai** **ngo**$_{F}$.

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

Int.: 'Only I bought this book.' (Lee 2023, ex.18)

A defocus projection

We follow Lee (2017, 2020) and posit a ***defocus*** projection (DeFocP) in RD.

(13) a. ***Defocus*** (also called *anti-focus*) refers to the systematic resistance to focus interpretation by certain elements.

b. It is manifested syntactically as a functional projection DeFocP that triggers movement of [-Foc] elements in RD chunks in Chinese.

- Comparable to (all of which ***resist*** focus interpretation):

(14) 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)

e. Also the "no-pause-type" RD in Japanese! (Takano 2014)

- Note the language **variations**: RD in Japanese (pause considered), Korean, and Mongolian ***allows*** focus (see references in Lee 2023)! This will play an important role when we proceed to variations in prosodic phrasing.

***Not* givenness!**

The notion of defocus is different from givenness. When the sentence receives a broad focus (e.g., the whole proposition is the answer to a question), the materials in RD chunks may accommodate new information (i.e., "my mum"):

(15) a. Q: Why were you so mad yesterday?

b. A: [{ _ / ngo Aamaa} dalaan-zo ngo zik zip lo1] **ngo Aamaa**. (GRD/DC) [C]
1SG Mum break-PFV 1SG CL plate SFP 1SG Mum

c. A: [{ _ / wo Mama} dapo-le wo-de diezi a] **wo Mama**. (GRD/DC) [M]
1SG Mum break-PFV 1SG-DE plate SFP 1SG Mum
(b-c): '(My mum) broke my plate, my mum.'

- See also Cat (2007) for a similar point on French RD.

3 Syntax: RD is biclausal

In the following, we will argue that:

RD underlyingly has ***two*** CPs (i.e., a **biclausal** structure)

Where the second clause involves movement and deletion, following the proposals by Cheung (2015), Tang (2015, 2018), Chan (2016), Y. Chen (2016), and Yip (2024).

(*contra.* monoclasual proposals like Cheung 2009; Lee 2017, 2021; Lai 2019; Yip 2020)

(16) *main chunk* [$_{\text{CP1}}$ ... {e_i / XP_i} ... SFP] *RD chunk* [$_{\text{CP2}}$ [$_{\text{DeFocP}}$ XP_i [... ~~t_{XP}~~ ...]]]

(e = empty category, gray = non-pronunciation)

A typological consideration

(17) Correlation between gapped argumental RD and null arguments (subject/object)

a. Languages that ***disallow*** null arguments also ***disallow*** argumental gaps in RD (e.g., Germanic languages like Dutch/German, Ott and de Vries 2016)

b. Languages that ***allow*** null arguments also ***allow*** argumental gaps in RD (e.g., Chinese, Japanese, Korean; see Tanaka 2001; Park and Kim 2009; Yip 2024)

- This correlation is captured by the availability of ***empty categories*** in the first clause under a ***biclausal*** approach.
- Otherwise surprising, under a *monoclasual* approach.

Gapped RD is biclausal

First, modals may dislocate to the right in both languages:

(20) Modals can be right-dislocated with a gap

Keoi	{_/	wui}	heoi	Meigwok	gaa3	**wui**.	[C]
Ta	{_/	hui}	qu	Meiguo	a	**hui**.	[M]
3SG		will	go	US	SFP	will	

Lit.: 'S/he (will) go to the US, will.' (i.e., 'S/he will go to the US.')

However, negated modals cannot undergo RD and leave a gap. The negated modals must be also present in the main chunk.

(21) Negation cannot be right-dislocated with a gap

a. *Keoi {_/ wui} heoi Meigwok gaa3 **m-wui**. [C]
*Ta {_/ hui} qu Meiguo a **bu-hui**. [M]
3SG will go US SFP not-will
Lit.: 'S/he go to the US, won't.'

b. Keoi **m-wui** heoi Meigwok gaa3 **m-wui**. [C]
Ta **bu-hui** qu Meiguo a **bu-hui**. [M]
3SG not-will go US SFP not-will
Lit.: 'S/he won't go to the US, won't.'

This is expected from a biclausal approach: p & ¬p results in a contradiction.

(22) #[$_{CP1}$ S/he **will** go to the US.] [$_{CP2}$ S/he **won't** go to the US.]

For comprehensive arguments, see Yip (2024).

Manuscript available on Lingbuzz: https://lingbuzz.net/lingbuzz/007912

4 Prosody: RD forms one intonational phrase

In the following, we argue for:

(23) The prosodic phrasing of RD (only ι shown):
Two clauses, one intonational phrase (ι) (shaded=mismatched boundaries)
$[_{CP1}$ main chunk $[_{C'}$ SFP $]$ $]$ $[_{CP2}$ $[_{DefocusP}$ RD chunk $]$ $]$
($)_\iota$

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

Three pieces of evidence:

(24) a. Phonological: boundary tone placement in Cantonese

b. Phonological: tone sandhi in Mandarin

c. Phonetic: acoustic experiments in Cantonese and Mandarin

← See the appendix in §8, also Yip (2020)

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, and Beckman 2005; Xu and Mok 2011; Zhang 2014).

(25) (Mingzai wui heoi Mei**gwok**)$_{\iota}$**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. *Gapped RD*

[_ wui heoi Mei**gwok** {***LH%**/ **aa4**}]? keoi

will go US SFP 3SG

'Will s/he go to the US?'

b. *Gapless RD*

[Keoi wui heoi Mei**gwok** {***LH%**/ **aa4**}]? keoi

3SG will go US SFP 3SG

'Will s/he go to the US?'

Cantonese offers *negative* evidence from boundary tones:

➜ showing **absence** of *right* ι boundaries before the RD chunk

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

(27) $[_{CP1}$ main chunk $[_{C'}$ SFP $]$ $]$ $[_{CP2}$ $[_{DefocusP}$ RD chunk $]$ $]$

$\iota_1($ ~~$)\iota_I$~~ ~~$\iota_2($~~ $)\iota_2$

↑

✘ 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, 1997; M. Y. 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( )ϕ_1 ϕ_2( )ϕ_2

yesterday that-box Soju miss-PFV one-bottle

'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( )ι_1 ι_2( )ι_2

Old Wang say want today leave but didn't leave succeed

'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 chunk by applying T3 sandhi. If there exists an ι boundary, we expect T3 sandhi to be impossible.

T3 sandhi is **allowed** in gapped and gapless RD.

(31) Tone 3 sandhi in Mandarin RD and DC

a. *Gapped RD*

_ xǐhuān hē **jiǔ**[21>35] **Lǎo**[21]wáng

like drink wine Laowang

Lit.: 'likes drinking wine, Laowang.'

b. *Gapless RD*

Lǎowáng xǐhuān hē **jiǔ**[21>35] **Lǎo**[21]wáng

Laowang like drink wine Laowang

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

Mandarin offers *positive* evidence from tone 3 sandhi:

➜ showing **absence** of both *left* and *right* ι boundaries before the RD chunk

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

(32) $[_{CP1}$ main chunk $[_{C'}$ SFP $]$ $]$ $[_{CP2}$ $[_{DefocusP}$ RD chunk $]$ $]$

$\iota_1($ ~~$)\iota_1$~~ ~~$\iota_2($~~ $)\iota_2$

↑ ↑

✔ T3 sandhi

A syntax-prosody mismatch

(33) RD in Chinese: two CPs, yet one ι.

$[_{CP1}$ main chunk $[_{C'}$ SFP $]$ $]$ $[_{CP2}$ $[_{DefocusP}$ RD chunk $]$ $]$

$\iota($ $)\iota$

5 Proposal: Defocus rephrasing

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

(34) Defocus elements ➜ No prominence ➜ Headless ι ➜ Rephrasing

Separating the role of ***defocus*** from that of ***focus*** in prosody.

Two views on the prosodic role of focus

(35) **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.

(36) focus $\rightarrow$ prominence $\rightarrow$ prosodic head $\rightarrow$ aligned with edges $\rightarrow$ rephrasing

(37) **No-rephrasing** view: focus $\neq$ 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.

(38) focus $\rightarrow$ pitch register $\not\rightarrow$ rephrasing

Focus in Cantonese and Mandarin does not trigger prosodic rephrasing.

- **Cantonese**: No post-focal reduction (Wu and Xu 2010) ➜ no rephrasing by *presence* of focus
- **Mandarin**: e.g. phrasing effects on F0 peak and duration are retained in post-focal fields (Zhang, Wagner, and Clayards 2021; Yuan 2022)
  (i.e., no boundary deletion; cf. Ishihara 2016 who argues that focus in Japanese does not trigger boundary insertion as it does not block downstepping)

➜ The mismatch in RD cannot be attributed to the potential focus carried by the main chunk.

Defocus rephrasing

We propose that the mismatch arises from the interaction between three OT constraints.

(i) Defocus must ***not*** receive *head* prominence, formulated in (39) as DEFOCUS. Df refers to the element with the [-Foc] syntactic feature.

(39) DEFOC(US) (Head prominence-based)
Let Df be a defocus element and PDf be the highest prosodic constituent in the output corresponding to Df. Assign a violation mark if PDf is a prosodic head and a daughter of a higher prosodic category or a higher projection of the same category as PDf.

- A mirror constraint to Truckenbrodt (1995)'s FOCUS or Féry (2013)'s ALIGN-FOCUS.
- Different from deaccenting discourse-given phrases (e.g., Féry 2013's Destress-Given or Kratzer and Selkirk 2020's DephraseGiven).

(ii) Every ι must be headed (Selkirk 1996; Elordieta and Selkirk 2018; see Feng 2019 for Chinese).

(40) IntonationalPhrase:Head (ι:HEAD)
An intonational phrase must have at least one daughter constituent designated as its head.

(iii) Constraints on syntax-prosody mapping on the clausal/ι level.

(41) MATCH(CP,ι) (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.

We propose that DEFOC(US) and ι:HEAD are ranked higher than MATCH(CP,ι) in Chinese:

(42) **defocus** triggers rephrasing

{ι:H,DEFOC} » {MATCH(CP,ι)} » {AL-FOC}

focus does *not* trigger rephrasing

(43) Rephrasing triggered by headless ι

$[_{CP1}$ ZP YP$]_i$ $[_{CP2}$ $[_{DeFocP}$ $ZP_{Df\,k}$ $]$ ~~YP~~$]_j$	ι:H	DEFOC	MATCH(CP,ι)
a. ($(ZP)_\phi$ $\underline{(YP)_\phi}$)$_{\iota i}$ ($(ZP)_{\phi k}$)$_{\iota j}$	*!		
b. ($(ZP)_\phi$ $\underline{(YP)_\phi}$)$_{\iota i}$ ($\underline{(ZP)_{\phi k}}$)$_{\iota j}$		*!	
☞ c. ($(ZP)_\phi$ $\underline{\mathbf{(YP)}_\phi\ (ZP)_{\phi k}}_{\phi.max}$)$_\iota$			**

(where ι's prosodic head is underlined, and ϕ_{max}'s prosodic head is **bolded**)

Note: we also need ALIGN(ι,RIGHT,HEAD(ι),RIGHT) be ranked higher than MATCH(CP,ι). See Feng (2019) for the right-headedness of ι in Chinese.

6 Variations in syntax-prosody mapping

The proposed DEFOCUS REPHRASING view predicts a factorial typology of RD, varying in two parameters: one on DeFocP, another one on the ranking of DEFOC (setting *ι*:H aside):

(44) a. A *syntactic* parameter: whether DeFocP is obligatory or optional in right dislocation

b. A *phonological* parameter: whether DEFOCUS is ranked higher or lower than MATCH(CP,*ι*)

Japanese

Focus is allowed in Japanese RD (Yamashita 2011; Takita 2011; Abe 2019; Lee 2023).

(45) 'Only' focus (subject/nominative) (Japanese)

tanaka-ni hon-o age-ta yo watashi-**dake**-ga.
tanaka-DAT book-ACC give-PST SFP 1SG-ONLY-NOM
Lit.: 'Gave Tanaka the book/books, only I.'

(46) 'Even' focus (indirect object/dative) (Japanese)

watashi-ga hon-o age-ta yo tanaka-ni-**mo**.
1SG-NOM book-ACC give-PST SFP 1SG-DAT-EVEN
Lit.: 'I gave the book/books, even to Tanaka.'

- Shows Case connectivity - thus cannot be afterthoughts (*cf.* Ott and de Vries 2016).
- Argued to be biclausal (Abe 1999, 2019; Tanaka 2001; Yamashita 2011)

Nakagawa, Asao, and Nagaya (2008) on *information* focus in RD: RD chunks with new information tend to be ***dis****integrated* from the main chunks.

Our ***preliminary*** exploration on the prosodic phrasing w.r.t. alternative-based focus:

(47) a. No pause with defocus in RD-chunks (Japanese)

tanaka-ni hon-o age-ta yo watashi-wa.

Tanaka-DAT book-ACC give-PST SFP 1SG-TOP

Lit.: 'Gave Tanaka the book/books, I.'

b. Pause (//) preferred with focus in RD-chunks

tanaka-ni hon-o age-ta yo // watashi-**dake**-ga.

tanaka-DAT book-ACC give-PST SFP 1SG-ONLY-NOM

Lit.: 'Gave Tanaka the book/books, only I.'

- Confirmed with 6 native speakers of Japanese.

Ishihara (2011, 2016) argues that focus does not trigger rephrasing in Japanese, since focus does not block downstepping (i.e., no boundary insertion). The variable phrasing in RD should then be attributed to ***defocus***.

(48) RD in Japanese

a. *Syntactic projection*: either DeFocP ([-Foc]) or FocP ([+Foc])
(≠ Cantonese/Mandarin)

b. *Prosodic constraint ranking*: {ι:H,DEFOC} » {MATCH(CP,ι)} » {AL-FOC}
(= Cantonese/Mandarin)

- It would be interesting to see how ***downstepping*** works in RD. (our next step!)

French/Catalan

- Like Cantonese/Mandarin, alternative-based focus is ***banned*** in RD in French (Lambrecht 1981: *'only', *'also', *'even', etc.) and Catalan (Vallduvi 1995).
- Argued to be ***biclausal*** (Fernández-Sánchez 2017).
- Interestingly, their RD chunks **form their own** ι (French: Delais-Roussarie, Doetjes, and Sleeman 2004, also Ladd 1996:121; Catalan: Feldhausen 2010 for branching RD)

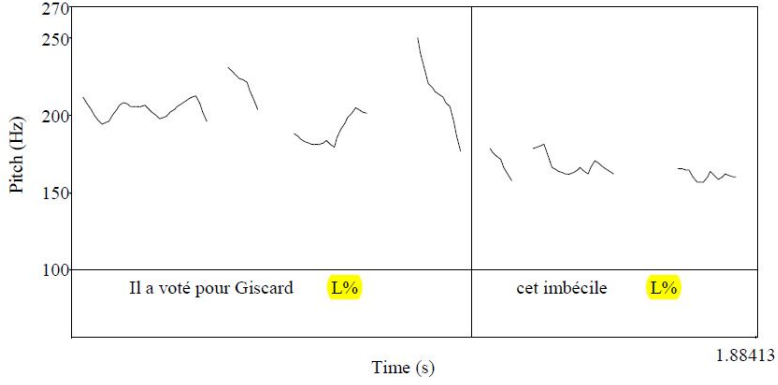
  Note on Catalan: ϕ for non-branching RD, but the main chunk crucially is still its own ι

In French, the boundary tone on the main chunk is “copied” to the RD chunk (including L% and H%).

(49) French RD consists of two ι (Delais-Roussarie, Doetjes, and Sleeman 2004:520,523)

(J’ai vu mon frère hier.) Ili a voté pour Giscard, cet imbecilei.

‘(I have seen my brother yesterday.) He has voted for G., that idiot’



Assuming a higher ranking of MATCH(CP,ι) over DEFOC captures the syntax-prosody isomorphism in French/Catalan (setting aside ι:H):

(50) RD in French/Catalan

a. *Syntactic projection*: only DeFocP ([-Foc])
(= Cantonese/Mandarin; ≠ Japanese)

b. *Prosodic constraint ranking*: {ι:H} » {MATCH(CP,ι)} » DEFOC
(≠ Cantonese/Mandarin and Japanese)

7 Conclusion

(51) Takeaway I

a. In Cantonese and Mandarin, there is a **syntax-prosody mismatch** in 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

(52) Takeaway II

a. This defocus rephrasing view predicts a factorial typology of right dislocation in terms of prosodic phrasing:

b.

	Obligatory DeFocP in RD	**Optional DeFocP in RD**
DEFOC » MATCH(CP,ι)	Cantonese, Mandarin	Japanese
MATCH(CP,ι) » DEFOC	French, Catalan	?

Thank you!

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8 Appendix

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:

(53) [$_{CP1}$ main chunk [$_{C'}$ SFP]] [$_{CP2}$ [$_{DefocusP}$ RD chunk]]

ι( )? ?( )ι

↑ ↑ ↑

final lengthening? pause? pitch reset?

Design

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	*MonoCl*: $S_{\sigma\sigma}$ $Adv_{\sigma\sigma}$ $V_{\sigma\sigma}$ $O_{\sigma\sigma}$ SFPσ	*BiCl*: $S_{\sigma\sigma}$ $Adv_{\sigma\sigma}$ $V_{\sigma\sigma}$ $O_{\sigma\sigma}$ SFP_{σ}, $S_{\sigma\sigma}$ Adv V O SFP
Right-dislocated	*RD*: $Adv_{\sigma\sigma}$ $V_{\sigma\sigma}$ $O_{\sigma\sigma}$ SFP_{σ} $S_{\sigma\sigma}$	*DC*: $S_{\sigma\sigma}$ $Adv_{\sigma\sigma}$ $V_{\sigma\sigma}$ $O_{\sigma\sigma}$ SFP_{σ} $S_{\sigma\sigma}$

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

Note: RD=gapped RD; DC=gapless RD

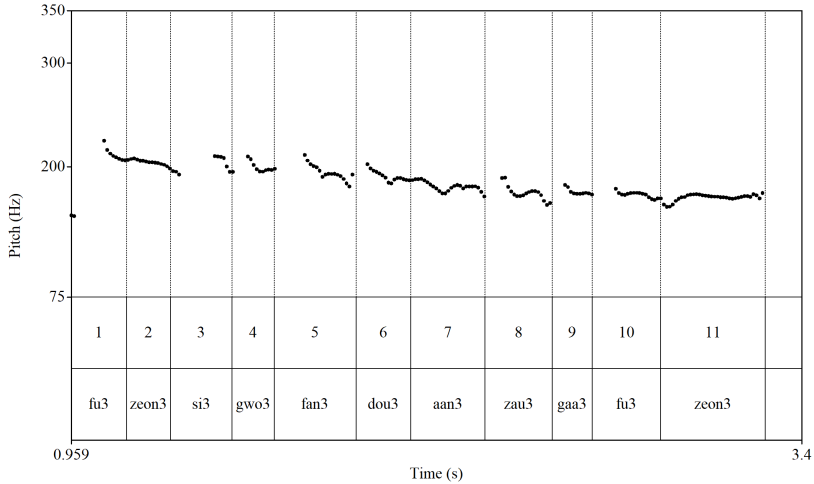
Procedure:

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 was visually shown once at a time on a screen with an appropriate context, and subjects were required to read aloud the sentence. The set of 18 sentences in a block was repeated three times in a randomized fashion. The sentences produced were recorded at Dept of Ling, Yale University. In total, 4 conditions x 12 lexical sets x 3 repetitions x 13 subjects x 2 languages = 3744 token sentences were obtained.

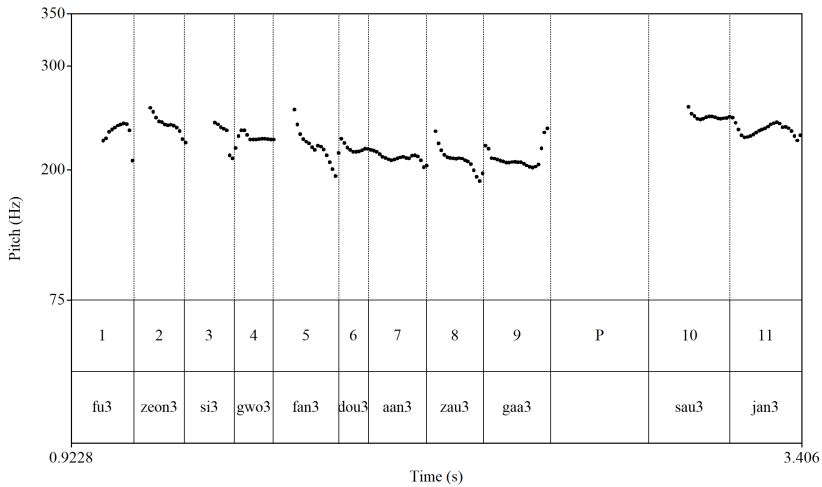
Results

Cantonese

(54) DC: dislocation copying (σ_{10}-σ_{11}=CP2) (RD_C_DC_h_T3_C14)



(55) BiCl: canonical bi-clausal structure (σ_{10}-σ_{11}=CP2) (RD_C_BiCl_h_T3_C14)



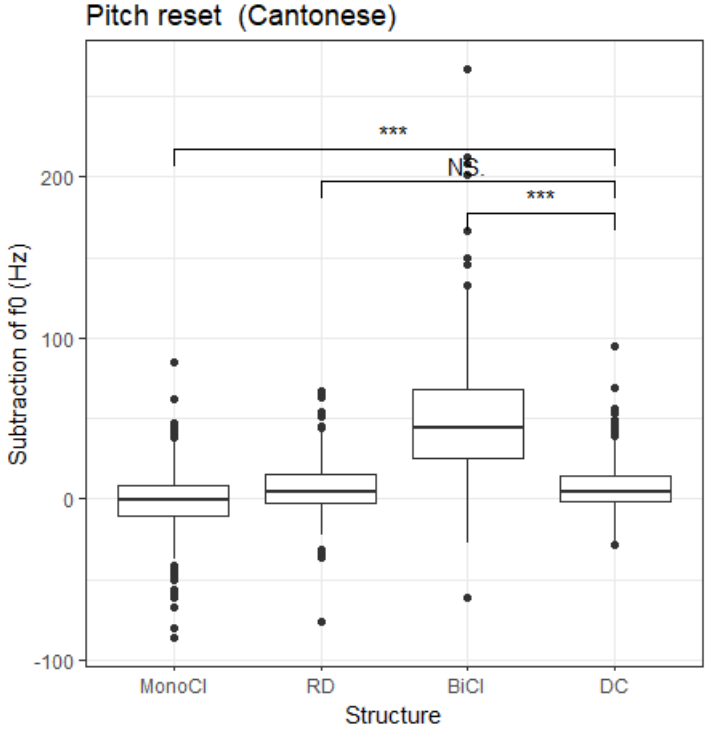
Pitch reset: Cantonese

(56) Model results

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

	ResetMax							
Predictors	*Estimates*	*std. Error*	*std. Beta*	*standardized std. Error*	*CI*	*standardized CI*	*Statistic*	*p*
(Intercept)	7.73	2.63	-0.25	0.09	2.57 – 12.90	-0.42 – -0.08	2.94	**0.003**
BiCl	40.59	1.39	1.35	0.05	37.86 – 43.33	1.26 – 1.44	29.11	**<0.001**
MonoCl	-9.68	1.40	-0.32	0.05	-12.41 – -6.94	-0.41 – -0.23	-6.93	**<0.001**
RD	-0.93	1.39	-0.03	0.05	-3.66 – 1.81	-0.12 – 0.06	-0.66	0.506
Random Effects								
σ^2	453.43							
$\tau_{00\ Participant}$	56.11	$N_{Participant}$	13					
$\tau_{00\ Set}$	19.84	N_{Set}	12					
$\tau_{00\ Trial}$	0.00	N_{Trial}	3					
Observations	1866	Marginal R^2 / Conditional R^2	0.456 / NA					

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

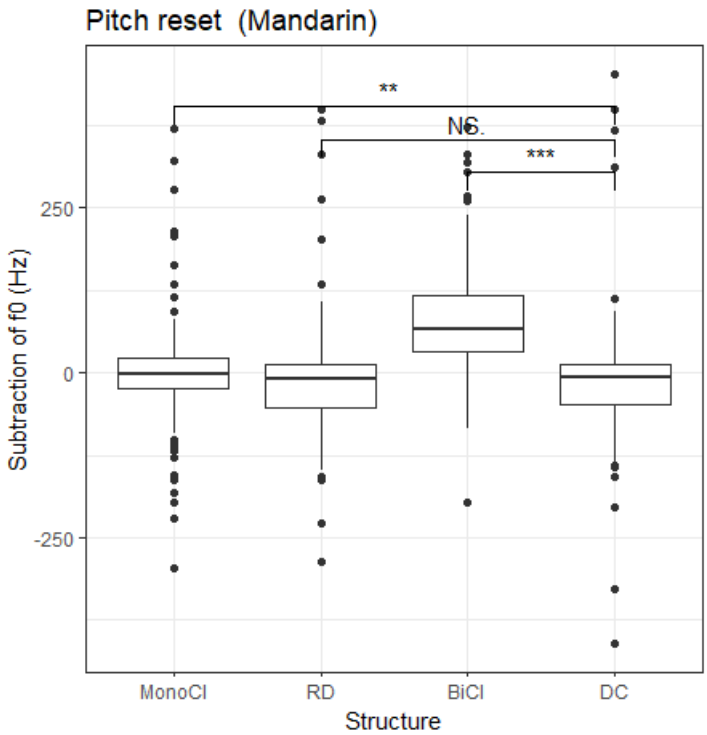


Pitch reset: Mandarin

(58) Model results

ResetMax								
Predictors	*Estimates*	*std. Error*	*std. Beta*	*standardized std. Error*	*CI*	*standardized CI*	*Statistic*	*p*
(Intercept)	-12.74	7.84	-0.34	0.10	-28.12 – 2.65	-0.55 – -0.14	-1.62	0.105
BiCl	89.57	4.50	1.17	0.06	80.74 – 98.40	1.06 – 1.29	19.89	**<0.001**
MonoCl	12.59	4.64	0.16	0.06	3.48 – 21.69	0.05 – 0.28	2.71	**0.007**
RD	-0.81	4.68	-0.01	0.06	-10.00 – 8.37	-0.13 – 0.11	-0.17	0.862
Random Effects								
σ^2	3677.34							
$\tau_{00\ Participant}$	66.24	$N_{Participant}$	13					
$\tau_{00\ Set}$	540.63	N_{Set}	12					
$\tau_{00\ Trial}$	0.00	N_{Trial}	3					
Observations	1444	Marginal R^2 / Conditional R^2	0.292 / NA					

(59) Pitch reset

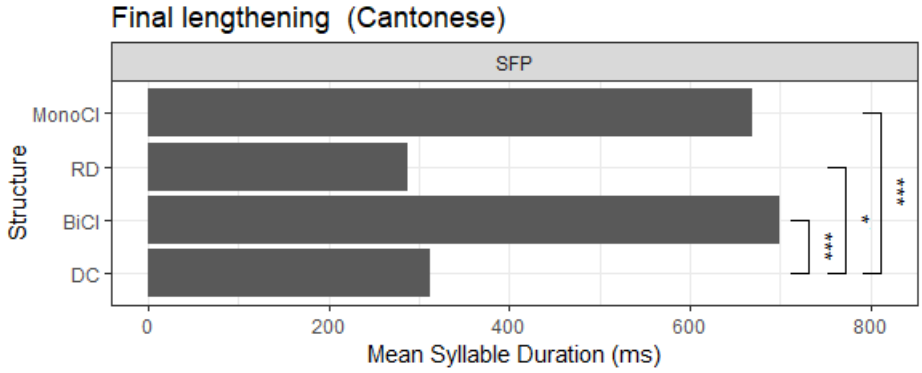


Final Lengthening: Cantonese

(60) Model results

ResetMax								
Predictors	*Estimates*	*std. Error*	*std. Beta*	*standardized std. Error*	*CI*	*standardized CI*	*Statistic*	*p*
(Intercept)	128.99	9.61	-0.75	0.11	110.15 – 147.83	-0.97 – -0.54	13.43	**<0.001**
BiCl	125.65	3.47	1.44	0.04	118.84 – 132.45	1.36 – 1.52	36.23	**<0.001**
MonoCl	129.42	3.47	1.48	0.04	122.61 – 136.23	1.40 – 1.56	37.27	**<0.001**
RD	8.03	3.47	0.09	0.04	1.23 – 14.82	0.01 – 0.17	2.32	**0.021**
Random Effects								
σ^2	2805.84	ICC	0.27					
$\tau_{00\ Participant}$	503.29	$N_{Participant}$	13					
$\tau_{00\ Set}$	529.08	N_{Set}	12					
$\tau_{00\ Trial}$	10.43	N_{Trial}	3					
Observations	1866	Marginal R^2 / Conditional R^2	0.498 / 0.634					

(61) Final Lengthening



Final Lengthening: Mandarin

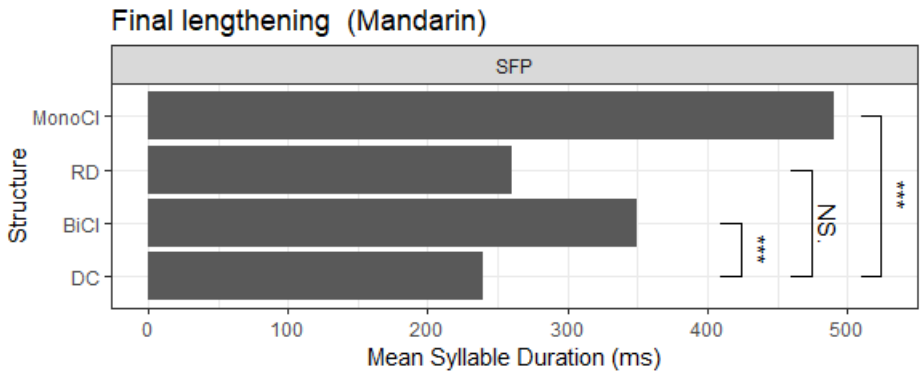
(62) Model results

					ResetMax			
Predictors	*Estimates*	*std. Error*	*std. Beta*	*standardized std. Error*	*CI*	*standardized CI*	*Statistic*	*p*
(Intercept)	86.72	14.08	-0.70	0.17	59.10 – 114.35	-1.03 – -0.36	6.16	**<0.001**
BiCl	109.56	3.42	1.31	0.04	102.85 – 116.27	1.23 – 1.39	32.03	**<0.001**
MonoCl	98.61	3.52	1.18	0.04	91.70 – 105.53	1.10 – 1.27	27.98	**<0.001**
RD	3.61	3.56	0.04	0.04	-3.37 – 10.59	-0.04 – 0.13	1.01	0.310

Random Effects

σ^2	2120.15	ICC	0.52
$\tau_{00\ Participant}$	250.29	$N_{Participant}$	13
$\tau_{00\ Set}$	2069.87	N_{Set}	12
$\tau_{00\ Trial}$	0.00	N_{Trial}	3
Observations	1444	Marginal R^2 / Conditional R^2	0.373 / 0.701

(63) Final Lengthening



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