

The 20th Workshop on Cantonese (WOC-20)

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How to identify intonations on sentence-final particles?

Ka-Fai YIP, Him Nok LEE

The Chinese University of Hong Kong

Tones on SFPs as intonations

- ▶ Cheung (1972): ge2 = ge3 + rising intonation
- ▶ Law (1990), Leung (1992/2005), Sybesma & Li (2007), Ding (2013),...
- ▶ Pragmatic/ semantic generalization (some with syntactic proposals)

- ▶ Any diagnostics?
- ▶ Phonetic: Wu (2009), Zhang & Tang (2016), Lau (2019), Lee (2019)
 - ▶ Comparison with intonations occurring on non-SFPs

- ▶ How about phonological?

ge2 as a paradigmatic case

- ▶ *ge3* may combine with different intonations (Law 1990, Leung 1992/2005, Zhang & Tang 2016, Iida 2017, 2018)
- ▶ Zhang & Tang (2016):
- ▶ *ge3* + [L+M+F] = *ge2* declarative
 - ▶ 明仔係幾聰明 *ge²*，不過懶啊 (Leung 2005:56)
 - ▶ Probably HL% (Ki 2019)

Today's focus

- ▶ *ge3* + R (rising intonation) = *ge2* interrogative (*rising ge2*)
 - ▶ 點解你哋個個唔恭喜阿偉生日快樂 *ge³*? (Leung 2005:68)
 - ▶ We regard R as LH% (Lau 2019)

Goals

- ▶ Two-fold:
- ▶ Empirically:
- ▶ To show that *rising ge2* is **not homogeneous**. Finer classification with respect to intonations is needed.
- ▶ Theoretically:
- ▶ To argue that identification of *intonations on SFPs* should be conducted on a basis of identical properties with *intonations on non-SFPs*.
- ▶ To provide a new perspective : **phonological constraints**

Roadmap

- ▶ #1 *Rising ge2*: a potential challenge
 - ▶ Pragmatic heterogeneity
 - ▶ Syntactic heterogeneity

- ▶ #2 Phonetic properties

- ▶ #3 Phonological constraints



Introduction
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#1 Non-uniformity
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#2 Phonetic properties
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#3 phonological
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RISING GE2: A POTENTIAL CHALLENGE

Three *rising ge2*

- ▶ Leung (1992/2005): three **gé**
- ▶ 1. Asking for reasons
 - ▶ 點解你哋個個唔恭喜阿偉生日快樂 **gé₃** ? (Leung 2005:68)
- ▶ 2. Blaming
 - ▶ 又會噤耐都有 **gé₁**。 (Leung 2005:67)
- ▶ 3. Defending
 - ▶ 你自己整 **gé₂**，佢都冇行過埋去。 (Leung 2005:67)
- ▶ Different pragmatic functions

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- ▶ Different syntactic properties

 - ▶ Reason ge2: interrogative
 - ▶ 點解貓會咁耐ge? “why”

 - ▶ Blaming ge2: interrogative
 - ▶ 做乜鬼野會噉ge2?! “how on earth”

 - ▶ Defending ge2: **declarative!**
 - ▶ *點解/ *做乜鬼野佢自己擺嚟衰ge2!

- ▶ Unexpected in Zhang & Tang (2016)!
 - ▶ Rising $ge_2 = ge_3 + LH\%$ (R) *morpheme of question intonation*
- ▶ BUT...
- ▶ LH% can only ask for information, but not blame nor defend
 - ▶ #做乜鬼野又會噤耐LH%?
 - ▶ #邊關我事啫，佢自己擺嚟LH%?
- ▶ LH% occurs in interrogative clauses, but not declarative ones
 - ▶ 佢去邊度LH%?
 - ▶ 佢去LH%?



PHONETIC PROPERTIES

Starting with some intuition...

- ▶ Asking questions: can be prolonged
 - ▶ 點解係咁ge2~ ?

- ▶ Blaming & Defending: shorter, cannot be prolonged
 - ▶ *佢咁耐都有ge2~ ? !
 - ▶ *邊關我事啫，佢自己做ge2~ !

- ▶ Different pitch in different ge2



Methods

- ▶ Participants
- ▶ Materials
- ▶ Procedures
- ▶ Acoustic measurements

Participants

- ▶ 10 native speakers of Cantonese
- ▶ 5 male, 5 female
- ▶ Students studying at CUHK
- ▶ Age: 19-24
- ▶ No history of hearing problems or language disorders

Materials

- ▶ 6 conditions
 - ▶ 5-syllable long
1. Possessive ge3 (PossD)
 2. Possessive ge3 + LH% (PossQ)
 3. Blaming ge2 (SFPB)
 4. Assertion ge3 (SFPD)
 5. Defending ge2 (SFPF)
 6. Questions for reason ge2 (SFPQ)

Materials

▶ 1. Possessive ge3 (PossD) X3 lexical sets

▶ 我知啊，雪菜宋智嘅。

Ngo5 zi1 aa3, syut3zoi3 sung3zi3 ge3.

“I know, the pickled cabbage belongs to Sung-zi.”

▶ 2. Possessive ge3 + LH% (PossQ) X3 lexical sets

▶ 我想問呢，雪菜宋智嘅？

Ngo5 soeng2 man6 le1, syut3zoi3 sung3zi3 ge3?

“May I ask: does the pickled cabbage belong to Sung-zi?”

Materials

▶ 3. Blaming ge2 (SFPB) X3 lexical sets

▶ 頂你呀，票數作廢嘅？！

Ding2 nei5 aa4, piu3sou3 zok3fai3 ge2?!

“Damn, the votes do not count?!”

▶ 4. Assertion ge3 (SFPD) X3 lexical sets

▶ 我同你講，票數作廢嘅。

Ngo5 tung4 nei5 gong2, piu3sou3 zok3fai3 ge3.

“Let me tell you: the votes do not count.”



Materials

▶ 5. Defending ge2 (SFPF) X3 lexical sets

▶ 乜野啊，怪獸拆秣嘅！關我鬼事！

Mat1je5 aa3, gwaai3sau3 caak3lam3 ge2! Gwaan1 ngo5 gwai2 si6!

“What? The monster tore it down! None of my business!”

▶ 4. Assertion ge3 (SFPD) X3 lexical sets

▶ 我同你講，怪獸拆秣嘅。

Ngo5 tung4 nei5 gong2, piu3sou3 zok3fai3 ge3.

“Let me tell you: the monster tore it down.”

Materials

- ▶ 6. Reason ge2 (SFPQ) X3 lexical sets

- ▶ 點解啊？抗戰痛快嘅？

Dim2gaai2 aa3? Kong3zin3 tung3faai3 ge2? is

“Why? Why are the wars of resistance enjoyable?”

- ▶ 4. Assertion ge3 (SFPD) X3 lexical sets

- ▶ 我同你講，抗戰痛快嘅。

Ngo5 tung4 nei5 gong2, kong3zin3 tung3faai3 ge3.

“Let me tell you: wars of resistance are enjoyable.”



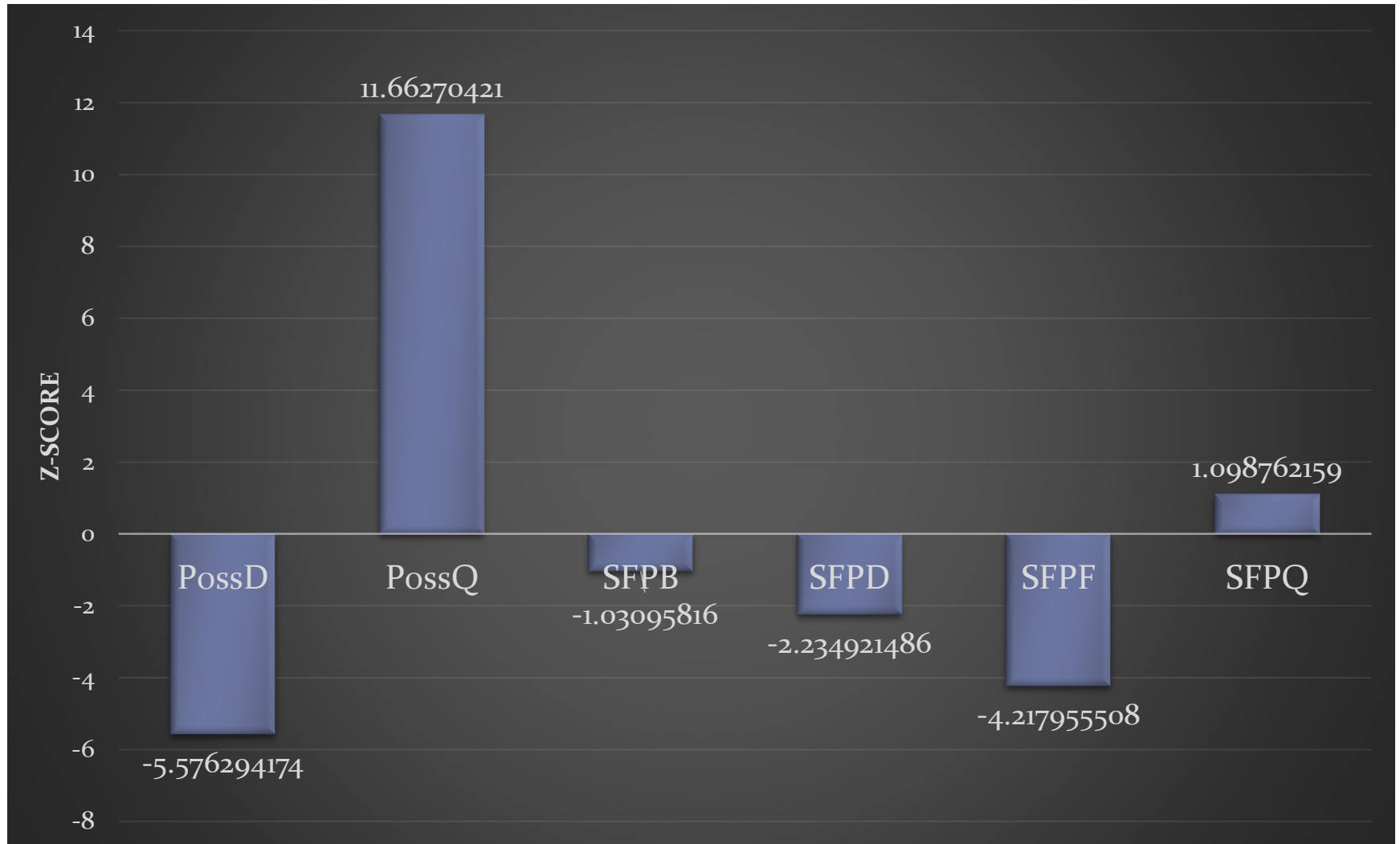
Procedures

- ▶ 3 times for each stimulus
 - ▶ With context
 - ▶ Random in order
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- ▶ 10 subjects x 6 uses x 3 lexical sets x 3 repetitions
= 540 utterances

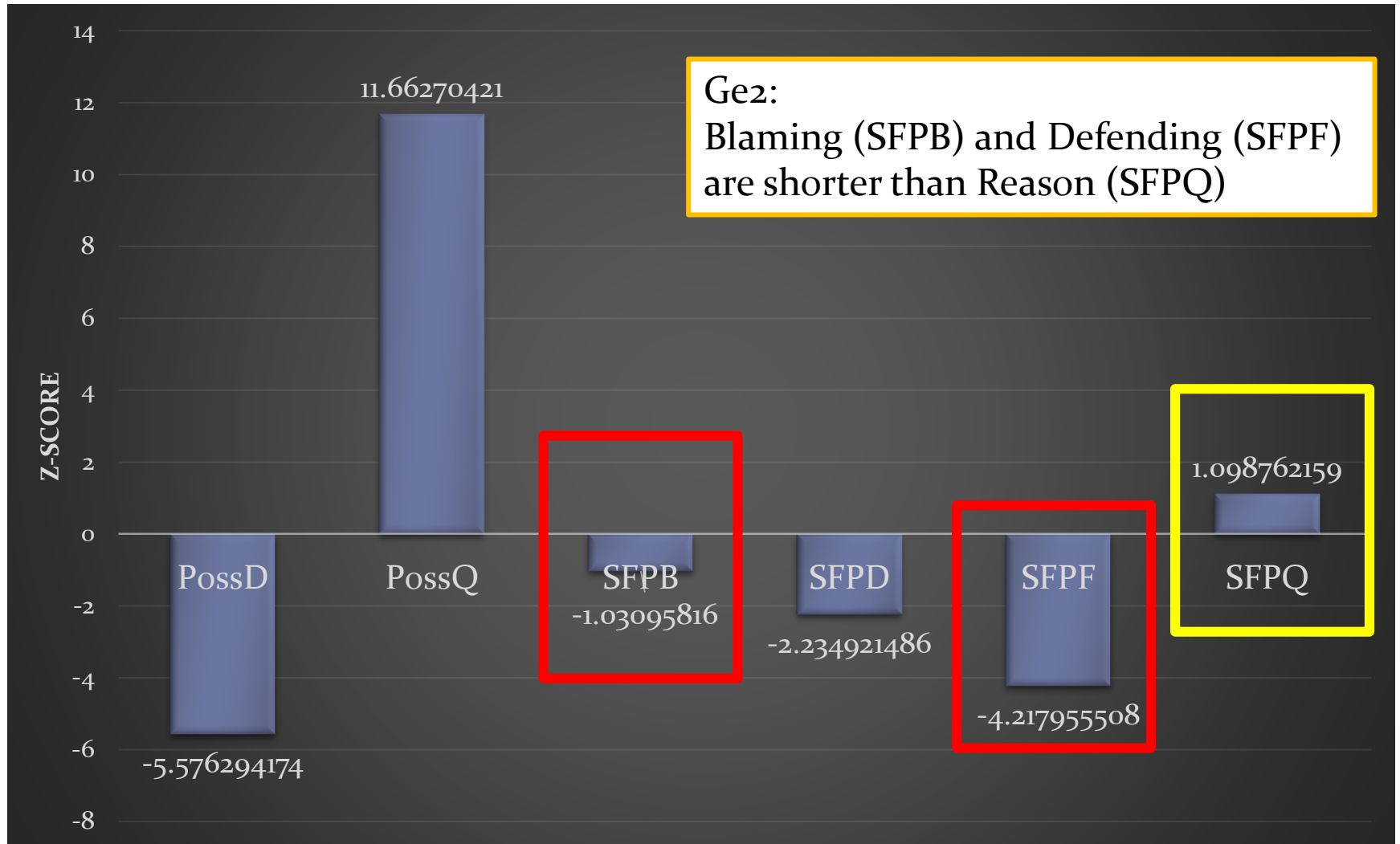
Result

- ▶ Duration
- ▶ Fundamental frequency (F0)

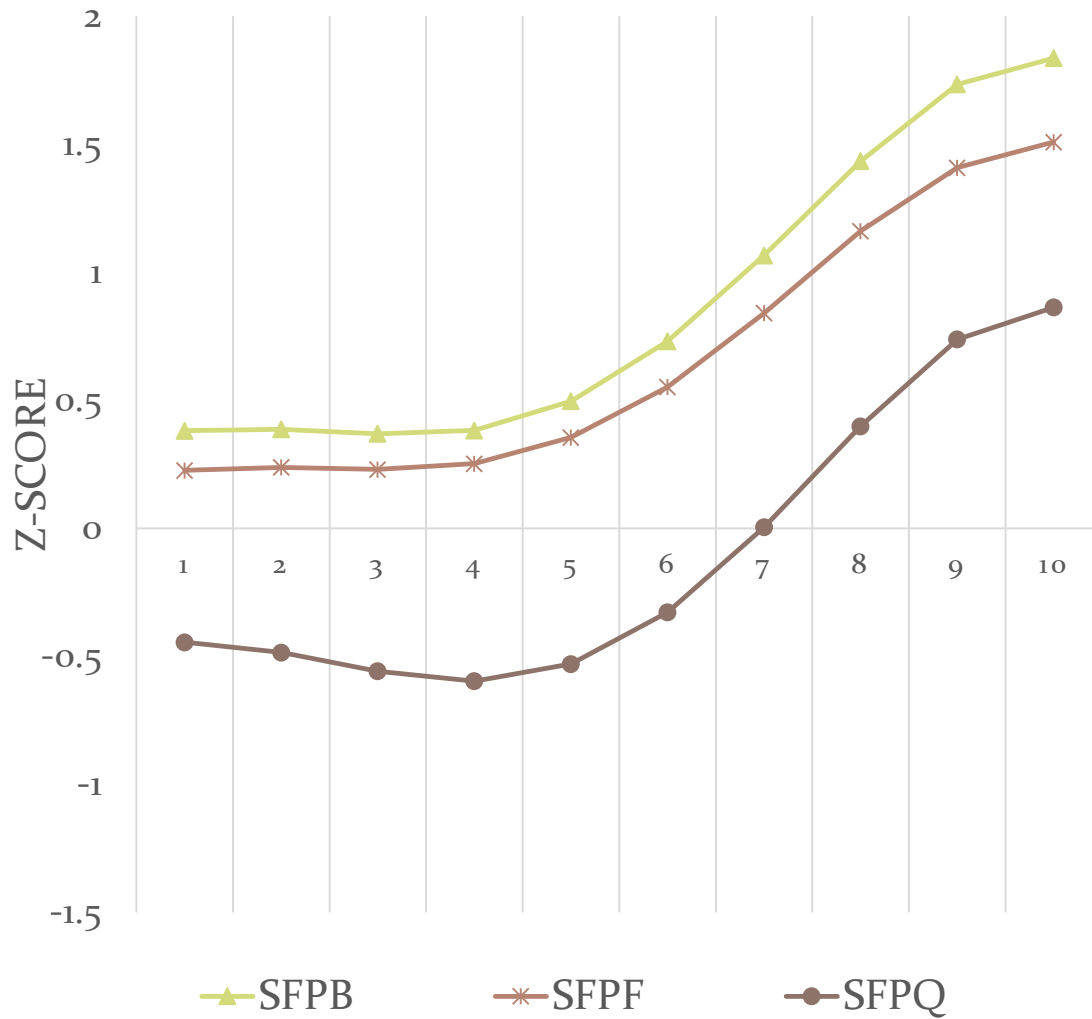
Duration



Duration



Fundamental frequency (Fo)



ge2:

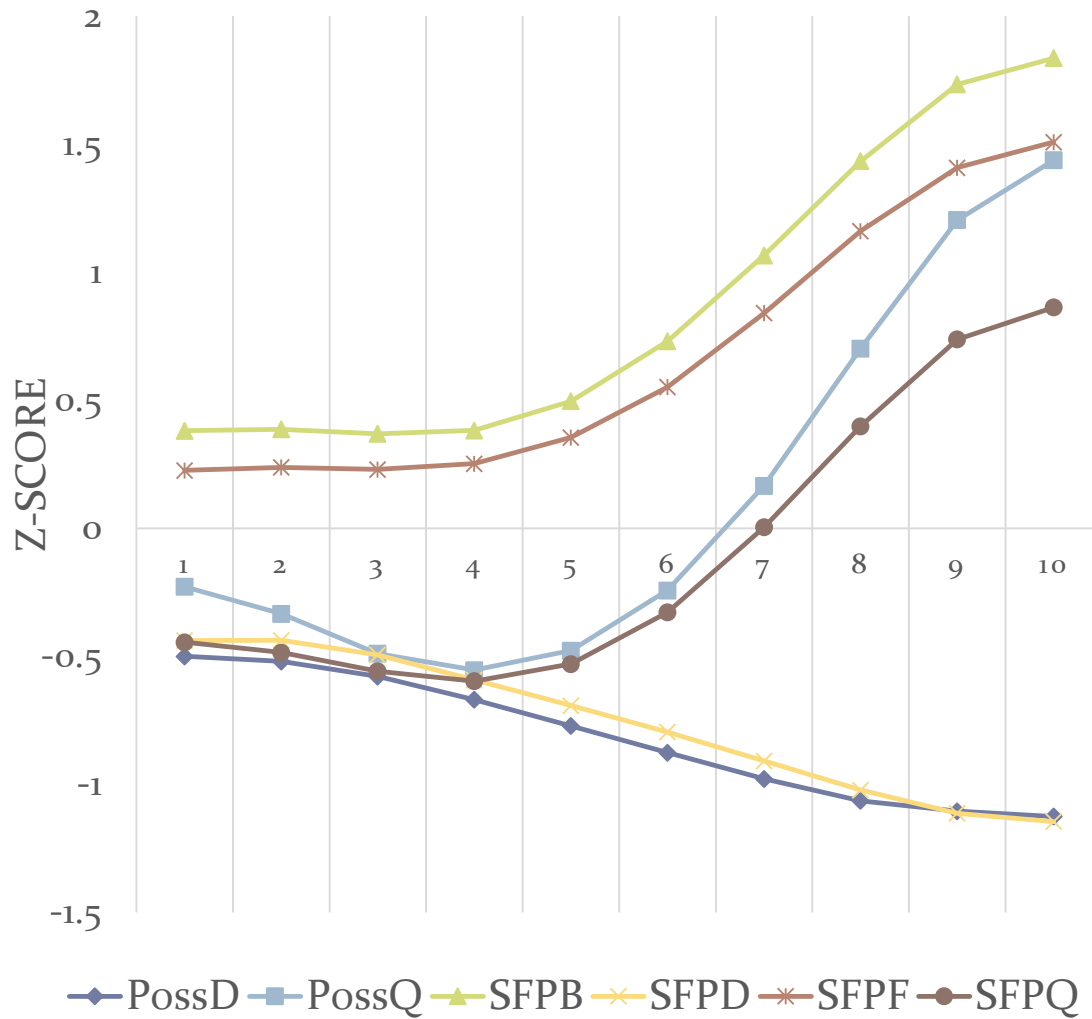
Blaming (SFPB) and Defending (SFPF):

- Higher Fo
- Generally rising pattern

Reason (SFPQ):

- Lower Fo
- Fall-rise pattern

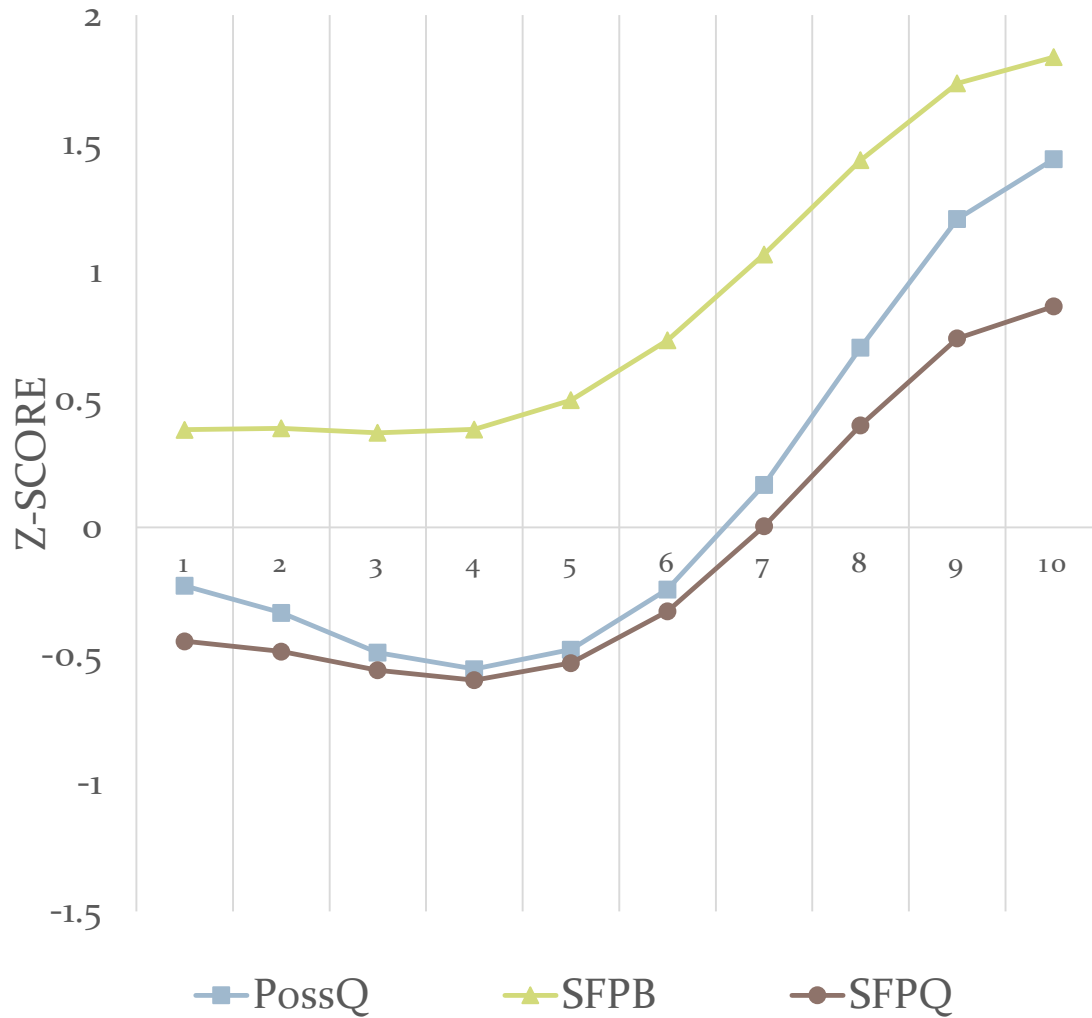
Fundamental frequency (Fo)



Possessive Q (PossQ)
 =Reason (SFPQ)
 → Might be a genuine LH%

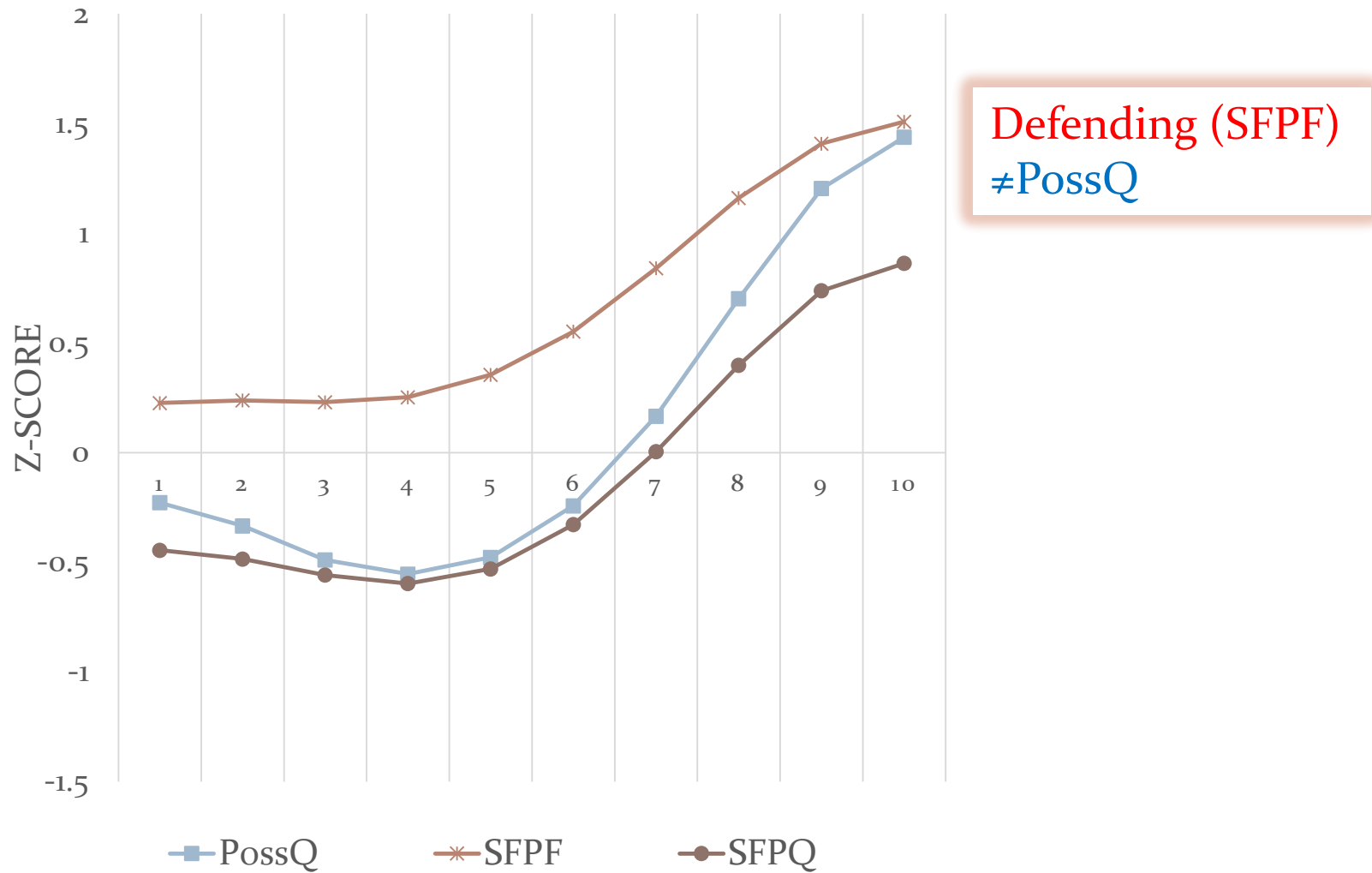


Fundamental frequency (Fo)



Blaming (SFPB)
≠ PossQ

Fundamental frequency (Fo)



Interim summary

- ▶ The **3 pragmatic functions** (blaming, defending and question) of the same SFP ge2 displayed **different phonetic realization** (including **duration** and **F0 contours**)
- ▶ Some of which might genuinely be a LH% (i.e. SFPQ=PossQ), others might probably be not (i.e. blaming & defending)
- ▶ Phonetic properties seemingly correlate with pragmatic functions



PHONOLOGICAL CONSTRAINTS

Boundary tones

- ▶ Cantonese intonations are boundary tones
- ▶ E.g. H%, L%, LH%, HL% ...
 - ▶ Wong, Chan & Beckman (2005), B. Xu & Mok (2011), Han, Wang & Shi (2011), Han (2013), Zhang (2014), Lau (2019), Ki (2019)...
- ▶ Realized at the final syllable of an intonational phrase
 - ▶ 佢唔嚟 ?
(LH%)



- ▶ Crucially, boundary tones CANNOT occur in the middle of intonational phrases
- ▶ Right-dislocation (RD) has one intonational phrase (Yip 2020)
 - ▶ 唔嚟咩佢?
()
- ▶ Boundary tones CANNOT occur in right-dislocation:
 - ▶ * 唔嚟 佢?
(LH%)



Phonological constraints for *ge2*

- ▶ If the reason *ge2* (SFPQ) DOES bear a genuine LH% = a boundary tone
 - we expect it to NOT occur in RD.

- ▶ If the blaming & defending *ge2* (SFPB & SFPF) DO NOT bear LH% or any boundary tone
 - we expect they to occur in RD

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- ▶ Reason *ge2* (*prolonged*) cannot occur in RD:
 - ▶ ??點解會嚟ge2佢?
 - ▶ Shortened version is fine for some speakers.
 - ▶ Shortening may give rise to blaming reading.

 - ▶ Blaming *ge2* can occur in RD:
 - ▶ 又會咁耐都有ge2佢?

 - ▶ Defending *ge2* can occur in RD:
 - ▶ 邊關我事啫，自己做ge2佢！

Interim summary

- ▶ Reason *ge2*
- ▶ **cannot** occur at **non-boundaries** of intonational phrases
→ **bears LH%**
- ▶ Blaming *ge2*
- ▶ Defending *ge2*
- ▶ **can** occur at **non-boundaries** of intonational phrases
→ **DO NOT** bear LH% nor any boundary tone

CONCLUDING REMARKS

Summary

Rising ge2	Duration	Contour	Middle of national phrase
Reason ge2	Longer	Fall-rise	* (prolonged)
Blaming ge2	Shorter	Rise	OK
Defending ge2	Shorter	Rise	OK

LH%!



Take-home message:

ge2 differs in intonation: one **has LH%**,
another two **has NO boundary tone**

Right-dislocation as a diagnostic

- ▶ Zhang & Tang (2016):
- ▶ ge3 + [L+M+F] = ge2 declarative

- ▶ HL% (Ki 2019)
 - ▶ (Q: 佢聽日返唔返學?) A: 佢聽日返學(HL%)~~~
 - ▶ *聽日返學~~~佢 (cf. 聽日梗係返學啦佢)
(HL%)

- ▶ ge2 declarative:
 - ▶ *原來聽日返學ge2~~~佢 (cf. 原來聽日返學㗎佢)
(HL%)

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Thank you!
Comments are most welcome!

Correspondence:

Ka-Fai Yip

The Chinese University of Hong Kong
*kafaiyip@cuhk.edu.hk/
mingyipkf@gmail.com*

Him Nok Lee

The Chinese University of Hong Kong
jonathanleehn@yahoo.com

