

# Wh-doublets in Cantonese, and their encoding of evidentiality and plurality

Tommy Tsz-Ming Lee and Hok-Yuen Wong

City University of Hong Kong;  
The Hong Kong Polytechnic University

**The 4<sup>th</sup> International Conference on Formal Approaches to Meaning  
in Chinese (ICFAMC-4)**

December 18-19, 2025  
Chinese University of Hong Kong

# Table of contents

## ① Introduction

## ② *Wh*-doublets

## ③ Evidentiality

## ④ Plurality

## ⑤ Derivation

## ⑥ Conclusions

# Introduction

- Cantonese *wh*-expressions can be reduplicated in different forms.

## ① Bare *wh*-doublts:

[<sub>XP</sub> *wh-wh*] (category-preserving)

- (1) 阿明話 [ 佢喺自助餐食咗 乜野乜野 ] 。

SG/PL

Aaming waa [keoi hai zizocaa sik-zo matje matje]

Aaming say he at buffet ate what what

(lit.): 'Aaming said he ate **what what** at the buffet.'

# Introduction

## ② Non-bare, nominal *wh*-doublts:

[<sub>Nominal</sub> *wh*+ $\alpha$  *wh*+ $\alpha$ ] (where  $\alpha$  = nominal elements)

- (2) 阿明話 [ 佢喺自助餐食咗 乜野蛋糕乜野蛋糕 ] 。 PL only

Aaming waa [keoi hai zizocaa sik-zo matje daangou matje daangou]

Aaming say he at buffet ate what cake what cake

(lit.): 'Aaming said he ate **what cake what cake** at the buffet.'

# Introduction

## ③ Non-bare, clausal *wh*-doublets:

[<sub>Clause</sub> *wh*+ $\alpha$  *wh*+ $\alpha$ ] (where  $\alpha$  = verbal elements)

- (3) 阿明話 [ 佢喺自助餐 食咗乜嘢食咗乜嘢 ] 。

PL only

Aaming waa [keoi hai zizocaan sik-zo matje sik-zo matje]

Aaming say he at buffet ate what ate what

(lit.): 'Aaming said he **ate what ate what** at the buffet.'

## More examples

### • Bare *wh*-doubles

- (4) a. 邊間機構捐錢唔捐錢，捐幾多都要比較。  
       邊個邊個 有無出post哀悼又要批評。 *who who*
- b. 就算我有自己嘅習慣用法，我都淨係會話，  
       我因為某某原因，所以會 點樣點樣 寫。 *how how*
- c. 最近身邊好多朋友吹爆「蒸爐」，  
       話佢 點解點解 好、 邊度邊度 靚。 *why why, where where*

### • Non-bare *wh*-doubles

- (5) a. 我夠識講呢個人 邊度唔好邊度唔好。 *what bad what bad*
- b. 我經常教fd 點樣做點樣做，但到自己又做唔出。 *how do how do*
- c. 越攪越唔掂，個人又成日好蚊佢 點解噉點解噉。 *why so why so*

# Introduction

Key properties of Cantonese *wh*-doublets:

- **Productivity:**

They share similar productivity, in that they can apply to any *wh*-expressions.

- **Wh-indefinites:**

All of them involve an existential interpretation of *wh*-expressions.

- **Evidentiality:**

They all convey an evidential component, different from the more studied existential *wh*-singlet cases (Li 1992; Lin 1998).

- **Plurality** (of clausal *wh*-doublets):

An important distinction between bare *wh*-doublets from non-bare *wh*-doublets lies in plurality. The latter is obligatorily plural in number.

# Introduction

- A comparison among different existential *wh*-expressions is given below.

Non-Q- <i>wh</i>	<b><i>Wh</i>-singlets</b>	<b>Bare doublets</b>	<b>Non-bare doublets</b>
Form	<i>wh</i>	<i>wh-wh</i>	<i>wh</i> + $\alpha$ <i>wh</i> + $\alpha$
Meaning	number-neutral	number-neutral	plural only
Presupposition	No $\exists$ -entailment	Access to source	Access to source

- In this talk, we focus on the encoding of evidentiality, and plurality.
- We start with a typological overview.



# Table of contents

- ① Introduction
- ② **Wh-doublets**
- ③ Evidentiality
- ④ Plurality
- ⑤ Derivation
- ⑥ Conclusions

# Wh-doubles

## (Bare) *wh*-singlets

- interpreted interrogatively or non-interrogatively (or both)
- number-neutral

### (6) Wh-singlets

a. Who came?

(John./ John and Mary.)

*wh*-interrogatives in English

b. 好像 誰 來了。

Haoxiang shei lai-le

seems who come-PFV

‘(It) seems that someone came.’

→ (Yes. John came./ John and Mary came.)

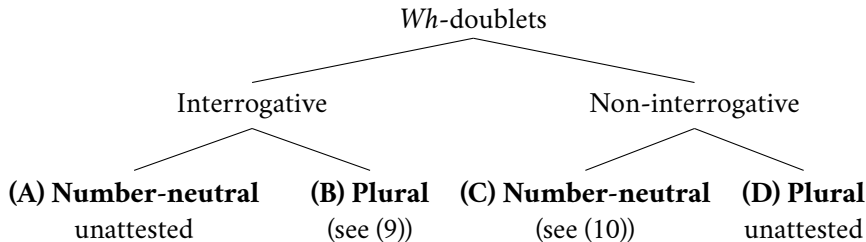
*wh*-indefinites in Mandarin

# Wh-doubles

## Wh-doubles

- **Wh-doubles** exhibit a similar interrogative vs. non-interrogative split.
- They are not always number neutral.

### (7) Types of *wh*-doubles across languages



# Wh-doublets

- Example: Korean *wh*-doublets

## (8) Wh-doublets in Korean (Chung 1999, p.282-283)

### a. *wh*-interrogatives

nwukwu-nwukwu o-ess-ni?

who-who come-Pst-Q

‘Who<sub>plural</sub> came?’

### b. *wh*-indefinites

yeysnal-ey sokumcangswu-ka eti-eti -lul ka-ess-nuntey

long;time;ago salt;seller-Nom where-where-Acc go-Pst-when

*Singular*: ‘A long time ago, a salt seller went to a place, ...’

*Plural*: %‘A long time ago, a salt seller went to some (several) places, ...’

# Wh-doublets

- Type (B): interrogative, plural *wh*-doublets

## (9) Type B: Wh-doublets as plural interrogatives

- Korean** (Kim 1999; Chung 1999)
- Yaeyaman** (Davis 2016)
- Japanese (Kansai dialect)** (Kudo:2021)
- Khalkha Mongolia (Jang & Lim 2024)
- Guinean Maninka (Vydrin & Diane:2016)
- Okinawan (**Tamamoto:2021**)
- Tagalog (**Hong:2016**)
- Tibetan-Burmese (Rinzinwangmo 1987, Zhang 2016)
- Turkish (Lim & Jang 2024)

- Type (C): non-interrogative, number-neutral *wh*-doublets

(10) a. **Mandarin** (Yu:1964;  
Hua:2001; Xu:2010;  
DongSong:2011; Luo:2013)

b. **Korean** (Chung 1999)

c. **Japanese** (Kudo:2021; Sudo  
2008, 2013)

d. **Ainu** (Refsing:1986)

e. **Altai** (Bylinina:2010)

f. **Bagandi** (Hercus:1982)

g. **Burmese** (JennyHnin:2016)

h. **Da'a** (Barr:1988)

i. **Hindi/Urdu** (Haspelmath

1997)

j. **Hungarian** (Haspelmath 1997)

k. **Ila** (Haspelmath 1997)

l. **Khasi** (Moravcsik:1978)

m. **Kristang** (Baxter:1988)

n. **Latin** (Haspelmath 1997)

o. **Moksha Mordva**  
(Feoktistov:1966)

p. **Russian** (Apresjan 2024)

q. **Saisiyat** (Tsai 2008)

r. **Slovak Romani** (Racova  
&Samko 2015)

# Wh-doubles

By studying Cantonese *wh*-doubles,

- we uncover the so far unattested Type (D).
  - Clausal *wh*-doubles: non-interrogative + plural
- Also, Cantonese *wh*-doubles are best characterized by their encoding of evidentiality.
  - the meaning non-interrogative *wh*-doubles are not uniform across languages,
  - ranging from specific indefinites, non-specific indefinites, free choice items, universal quantifiers, free relatives, metalinguistic quantifiers, concessive-adversative expressions, and so on.

# Table of contents

① Introduction

② *Wh*-doublets

③ **Evidentiality**

④ Plurality

⑤ Derivation

⑥ Conclusions



# Evidentiality

- We break down the evidential component in *wh*-doublets in two parts.
- We argue that they encode both
  - 1 Speakers' knowledge
  - 2 Speakers' access to the source of information
- We argue that the evidential component is realized as a presupposition associated with *wh*-doublets.

# Evidentiality: Speakers' knowledge

- We delimit the subtle meaning of *wh*-doublets by contrasting them with *jat* 'one' indefinites and *mau* 'certain' indefinites.
- Scopal specificity

## (11) Wide scope indefinites ( $\exists > \forall$ )

- Jat* 'one': 阿明話尋日每個遊客都買咗 一種水果，  
個種水果係台灣特有既。
- Mau* 'certain': 阿明話尋日每個遊客都買咗 某一種水果，  
個種水果係台灣特有既。
- Wh*-doublets: 阿明話尋日每個遊客都買咗 乜野乜野水果，  
個種水果係台灣特有既。

→ *Aaming said every tourist bought some fruit, which is signature in Taiwan.*

# Evidentiality: Speakers' knowledge

- Referential intentions/ epistemic specificity

## (12) #Non-specific reading

- Jat*: 阿明話想買 一種水果 黎整蛋糕，但未諗到係咩。
- Mau*: #阿明話想買 某一種水果 黎整蛋糕，但未諗到係咩。
- Bare*: #阿明話想買 乜野乜野水果 黎整蛋糕，但未諗到係咩。
- Clausal*: #阿明話想 買乜野買乜野黎 整蛋糕，但未諗到係咩。

→ *Aaming said he wants to buy some fruit to make a cake, but he hasn't decided which one yet.*

# Evidentiality: Speakers' knowledge

- Speakers' knowledge/ The lack of the ignorance component

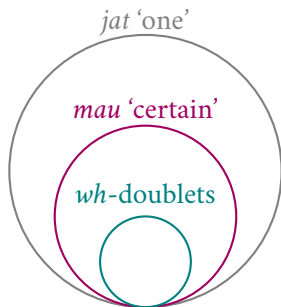
## (13) Speakers' knowledge

- Jat*: 阿明話佢尋日揸咗 一樣野 , 但我唔知係乜。
- Mau*: 阿明話佢尋日揸咗 某一樣野 , 但我唔知係乜。
- Bare*: #阿明話佢尋日揸咗 乜野乜野 , 但我唔知係乜。
- Clausal*: #阿明話佢尋日 揸咗乜野揸咗乜野 , 但我唔知係乜。

→ *Aaming said he threw away something yesterday, but I don't know what.*

# Evidentiality: Speakers' knowledge

- Summary: The relation between *jat*-indefinites, *mau*-indefinites, and *wh*-doublts in terms of specificity



All are scopally specific

Only *mau*-indefinites and *wh*-doublts must be epistemically specific

Only *wh*-doublts requires speakers' knowledge

(14)

# Evidentiality: Access to source of information

- It has been reported that wh-doublents, or expressions serving similar functions, generally appear in **quotative contexts**.

## ① Inside a closed quotation (Sudo 2013)

(15) 「送乜野乜野畀邊個邊個」係雙賓語結構。 (Wong 2018, (61))

"sung matje matje bei bingo bingo" hai soengbanjyu gitkau  
 give what what to who who be double.object construction  
 (lit.): "Give *what what* to *who who*" is a double object construction.'

# Evidentiality: Access to source of information

- It has been reported that wh-doublents, or expressions serving similar functions, generally appear in **quotative contexts**.
- ② Under the scope of a verb of saying (Cieschinger and Ebert 2011; Koev 2017)

- (16) 阿明話 [ 佢嚟自助餐食咗乜野乜野 ] 。 (= (1))  
 Aaming waa [keoi hai zizocaan sik-zo matje matje ]  
 Aaming say he at buffet ate what what  
 (lit.): 'Aaming said he ate *what what* at the buffet.'

# Evidentiality: Access to source of information

- It has been reported that wh-doublents, or expressions serving similar functions, generally appear in **quotative contexts**.
- ③ With the presence of the hearsay particle *wo5* (Wong 2018)

- (17) 阿明喺自助餐食咗 乜野乜野 㗎 。 adapted from (1)
- Aaming hai zizocaa sik-zo matje matje wo5
- Aaming at buffet ate what what HEARSAY
- (lit.): 'I was told that Aaming ate *what what* at the buffet.'



# Evidentiality: Access to source of information

- Interestingly, **non-verbal quotative contexts** also license the use of wh-doublets.

## ① Written

(18) 報紙 寫住 尋日 邊個邊個 囚犯逃獄。 (Wong 2018, (85))

bouzi se-zyu kamjat bingo bingo caufaan

newspaper write-DUR yesterday which.CL which.CL prisoner

toujuk

escape.from.prison

(lit.): 'It is written in the newspaper that *which which* prisoner escaped from the prison.'

# Evidentiality: Access to source of information

- Interestingly, **non-verbal quotative contexts** also license the use of wh-doublts.

## ② Signing

(19) 手語老師 示範 隻手要 點樣點樣 郁先打到手語。

saujyu                  lousi          sifaan                  zek sau    jiu          dimjoeng dimjeong

sign.language teacher demonstrate CL    hand need how how

juk    sin    daa-dou-saujyu

move then sign-ACP

(lit.): 'The sign language teacher demonstrated *how how* move the hand to sign.'

# Evidentiality: Access to source of information

- Interestingly, **non-verbal quotative contexts** also license the use of wh-doublets.

## ③ Visual

- (20) 閉路電視 影住 個賊向 邊個邊個 方向逃跑。 (Wong 2018, (86))  
 bailoudinsi    jing-zyu            go    caak    hoeng    bingo bingo  
 CCTV            capture-DUR    CL    thief    towards    which.CL which.CL  
 fonghoeng    toupaaau  
 direction    run.away  
 (lit.): 'It has been captured by the CCTV that the thief runs away towards  
*which which* direction.'

## Evidentiality: Access to source of information

- While quotative contexts are at best preferred, there are cases where no quotation is involved (e.g. imaginary quotations on speaker mind).

(21) a. 減肥最重要唔係限制食乜野乜野。

gaamfei zeoi zungjiu mhai haanzai sik matje matje

diet most important not.be limit eat what what

(lit.): 'Dieting, most importantly, isn't limiting to eat *what what*.'

b. 生仔之前要注意乜野乜野，已經令好多人好大壓力。

saangzai zicin jiu zyuj matje matje, jiging ling

give.birth before need pay.attention what what already cause

hou do jan hou daai aatlik

many people very big stress

(lit.): 'The consideration of *what what* before giving birth has already stressed out many people.'

# Evidentiality: Access to source of information

- The resolution stems from the following suggestion.

(22) Quotative implication of *wh*-doublings (Wong 2018, (93))

The use of a *wh*-doublet implies a quotative context such that the corresponding information has been received in another discourse **by any means**.

# Evidentiality: Access to source of information

- We reformulate this implication with an evidential character.

(23) A (non-at-issue) evidential component in *wh*-doublings

The use of a *wh*-doublet indicate a discourse context such that **the speaker has access to the source of information** of the referent denoted by the *wh*-expressions.

- We propose that this is realized as a presupposition in *wh*-doublings in Cantonese.

## Evidentiality: Access to source of information

- The infelicitous use of a *wh*-doublet in an out-of-the-blue context (e.g. under the scope of a story starter) supports its nature of evidentiality.

(24) a. # 有一日，阿明食咗乜野乜野。

# jaujatjat, Aaming sik-zo matje matje

one.day Aaming ate what what

(lit.): 'One day, Aaming ate *what what*.'

b. 有一日，阿明食咗某樣野。

jaujatjat, Aaming sik-zo mau joeng je

one.day Aaming ate certain kind thing

'One day, Aaming ate a certain kind of things.'

# Table of contents

- ① Introduction
- ② *Wh*-doublets
- ③ Evidentiality
- ④ Plurality**
- ⑤ Derivation
- ⑥ Conclusions



## Co-occurrence with frequency adverbs

- Given clausal *wh*-doublts usually co-occur with verbs of thinking/saying, they are most natural in contexts where there are multiple thinking/saying events, especially with the presence of frequency adverbs.

- (25) a. 阿明 成日 話佢 邊度買衫邊度買衫  
 Aaming singjat waa keoi bindou maai saam bindou maai saam  
 Aaming always say he where buy clothes where buy clothes  
 (int.): 'Aaming always said he buys clothes at some places.'
- b. 阿明 不斷 投訴 邊個嘈邊個嘈 "repeatedly"
- c. 阿明 喺嗰 讚 邊間餐廳好食邊間餐廳好食 "keep on"

# Obligatory plurality

- There is an obligatory plural reading on clausal *wh*-doublets.

## (26) Incompatibility with singular contexts - sole referent

- a. 新聞有提到男歌手金獎係邊個邊個 拎。 bare: sg  
(但我唔記得咗佢講邊個。)
- b. #新聞有提到男歌手金獎係邊個拎邊個拎。 clausal:#pl  
(但我唔記得咗佢講邊個。)  
→ *The news report has mentioned that the winner of the Best Singer Award goes to a certain person (, but I forgot who).*
- c. 阿明有提到嗰個同學姓乜野乜野。 bare: sg  
(但個姓太難讀我就唔重覆喇。)
- d. #阿明有提到嗰個同學 姓乜野姓乜野。 clausal:#pl  
(但個姓太難讀我就唔重覆喇。)

# Obligatory plurality

- There is an obligatory plural reading on clausal *wh*-doublets.

(27) Incompatibility with singular contexts - one-time event

- 阿明喺佢既遺言透露咗佢既親生父親係 幾時幾時 死。
- #阿明喺佢既遺言透露咗佢既親生父親係 幾時死幾時死。  
→ *In his last words, Aaming revealed that his biological father was dead at a certain time.*
- 份攻略講咗呢把劍只可以 點樣點樣 拎。
- #份攻略講咗呢把劍只可以 點樣拎點樣拎。

# Obligatory plurality

- There is an obligatory plural reading on clausal *wh*-doublents.

## (28) Incompatibility with singular contexts - degree

- 阿明話扭計骰最少要扭到 幾快幾快 先破到世界紀錄。
- #阿明話扭計骰最少要 扭到幾快扭到幾快 先破到世界紀錄。  
→ *Aaming said the Rubik's cube has to be solved at a certain speed the slowest in order to break the world record.*
- 頭先把間尺度到阿明 幾高幾高 ，證明佢講大話。
- #頭先把間尺 度到幾高度到幾高 ，證明佢講大話。

## Nature of plurality: Distributivity

- Clausal *wh*-doublts allow a distributive interpretation over plural subjects.

- (29) a. 新聞有提到男歌手金銀銅獎係 邊個拎邊個拎。  
(我就唔逐一講喇。)

→ *The news report has mentioned that the winner, the first runner-up, and the second runner-up of the Best Singer Award go to certain people (, but I don't repeat them one by one).*

- b. 政府文件有紀錄歷屆六合彩係 邊個一注中邊個一注中。  
c. 阿明喺佢既遺言透露咗佢嘅親生父母 幾時死幾時死。  
(實際係幾時我就唔方便透露。)  
d. 份攻略講咗呢幾把劍只可以 點樣拎點樣拎。

- This property can be handled by the distributive operator proposed by Lasersohn (1998).

# Nature of plurality: Event plurality

- Crosslinguistically, an event plurality marker shows an effect of distributivity over various dimensions (e.g. time, space, and participants to the events) (Hofherr and Laca 2012).
- For Cantonese *wh*-doublers, the dimension of distributivity is contingent on the choice of the *wh*-expression.
  - e.g. 幾時 *geisi* - time, 邊度 *bindou* - location, 邊個 *bingo*/乜嘢 *matje* - participants

# Table of contents

① Introduction

② *Wh*-doublets

③ Evidentiality

④ Plurality

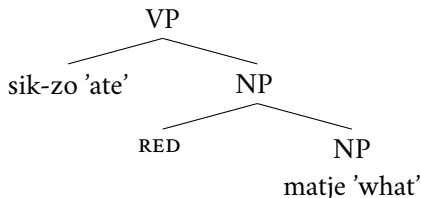
⑤ **Derivation**

⑥ Conclusions

# Derivation

- Bare *wh*-doublings, as in many languages, arguably involve a reduplication morpheme (i.e., RED) in the syntax.
- It applies to *wh*-expressions, resulting in doublings.
- An illustration (Lee and Wong 2018)

(30) Bare *wh*-doublings





# Derivation

- Given that bare and clausal doublers differ in plurality, we argue that they are derived differently, despite surface similarities.

## (31) **Bare *wh*-doublers:**

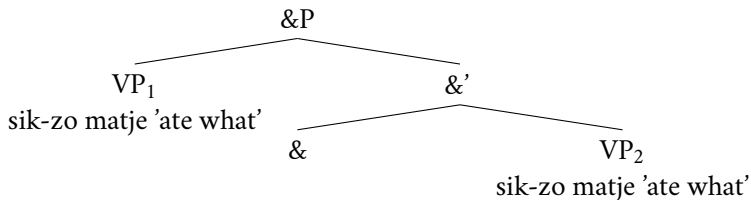
- A RED morpheme that is phonological dependent on the adjacent *wh*-expressions.
- It imposes no restriction/requirement on plurality.

## (32) **Non-bare *wh*-doublers:**

- A covert conjunction morpheme that conjoins two nominal clauses.
- It conveys plural readings by virtue of the general nature of conjunction.

# Derivation

(33) An illustration with clausal *wh*-doublets



- The plural reading comes from the two VPs denoting different events.
- Conjunction applies to constituents (hence \*Adv-V Adv-V O)

# A prediction

- Compared to a reduplication approach, a conjunction approach allows more flexibility of the two conjuncts.
- There are cases where the two conjuncts do not have identical forms.

(34) a. 阿明話佢想 食龍蝦食乜，但佢邊有錢。

Aaming waa heoi soeng sik lunghaa sik mat, daan keoi

Aaming say he want eat lobster eat what but he

bin jau cin

how.come have money

(int.): 'Aaming said he wants to *eat things like lobsters*, but how come he would have the money.'

b. 阿明話呢把劍可以 抽獎拎點樣拎，有心一定拎到。

- But they are still syntactically identical, and semantically coherent, following general conditions on conjunction.

# Table of contents

- ① Introduction
- ② *Wh*-doublets
- ③ Evidentiality
- ④ Plurality
- ⑤ Derivation
- ⑥ Conclusions**

# Conclusions

Non-Q- <i>wh</i>	<i>Wh</i> -singlets	Bare doublets	Non-bare doublets
Form	<i>wh</i>	<i>wh-wh</i>	<i>wh+α wh+α</i>
Meaning	number-neutral	number-neutral	plural only
Presupposition	No $\exists$ -entailment	Access to source	Access to source

- An evidential component in all *wh*-doublets in Cantonese

(35) A (non-at-issue) evidential component in *wh*-doublets

The use of a *wh*-doublet indicate a discourse context such that **the speaker has access to the source of information** of the referent denoted by the *wh*-expressions.

# Conclusions

- Plurality in non-bare *wh*-doublets: a non-uniform derivation

## (36) Bare *wh*-doublets:

- a. A RED morpheme that is phonological dependent on the adjacent *wh*-expressions.
- b. It imposes no restriction/requirement on plurality.

## (37) Non-bare *wh*-doublets:

- a. A covert conjunction morpheme that conjoins two nominals clauses.
- b. It conveys plural readings by virtue of the general nature of conjunction.

- Link to slides: [www.tinyurl.com/LeeWong-whwh](http://www.tinyurl.com/LeeWong-whwh)

# References I

- Chung, Daeho. 1999. "On Wh-doublets in Korean." *Journal of the Linguistic Society of Korea* 25: 281–299.
- Cieschinger, Maria, and Cornelia Ebert. 2011. "Doubling Definite Determiners in German." *Linguistische Berichte (LB)*, no. 226: 171–198.
- Davis, Christopher Michael. 2016. "Plurality and distributivity in Yaeyaman wh-questions." *Semantics and Linguistic Theory* 25 (2003): 636.
- Haspelmath, Martin. 1997. *Indefinite Pronouns*. Oxford: Oxford University Press.
- Hofherr, Patricia Cabredo, and Brenda Laca. 2012. "Introduction." In *Verbal Plurality and Distributivity*, edited by Patricia Cabredo Hofherr and Brenda Laca, 1–24. Berlin: de Gruyter.

## References II

- Kim, Soowon. 1999. "Sloppy/Strict Identity, Empty Objects, and NP Ellipsis." *Journal of East Asian Linguistics* 8 (4): 255–284.
- Koev, Todor. 2017. "Quotational indefinites." *Natural Language and Linguistic Theory*, no. June: 367–396.
- Lasersohn, Peter. 1998. "Events in the Semantics of Collectivizing Adverbials." In *Events and Grammar*, edited by Susan Rothstein, 273–292. Dordrecht: Kluwer Academic Publishers.
- Lee, Tommy Tsz-Ming, and Hok-Yuen Wong. 2018. "Epistemic indefinites and reportative indefinites in Cantonese." In *Proceedings of the 32nd Pacific Asia Conference on Language, Information and Computation (PACLIC-32)*. Hong Kong: Association for Computational Linguistics.
- Li, Audrey Yen-Hui. 1992. "Indefinite *Wh* in Mandarin Chinese." *Journal of East Asian Linguistics* 1 (2): 12–155.



## References III

- Lin, Jo-Wang. 1998. "On Existential Polarity wh-phrases in Chinese." *Journal of East Asian Linguistics* 7 (3): 219–255.
- Sudo, Yasutada. 2008. "Japanese wh-doublents and metalinguistic variables." *Toron* 28:341–356.
- Sudo, Yasutada. 2013. *Metalinguistic Quantification: Evidence from Japanese Wh-doublents*. Manuscript, University College London.
- Wong, Hok-Yuen. 2018. *Wh-doublents in Cantonese*. MA thesis, The Chinese University of Hong Kong.