

# Variation in Cantonese acceptability judgements due to language contact

*An investigation of word order preferences  
in the resultative construction*

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# Heritage languages as scenarios of language contact

- Heritage language speakers: speakers of a non-dominant, non-official language
- Outcomes of language contact frequently found in the heritage language context (Aalberse et al. 2019):
  - Cross-linguistic transfer
    - Lexical borrowing
    - Grammatical convergence
  - Attrition
  - Language shift
  - Codeswitching
  - Dialect levelling

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  - Dialect levelling

**Case study:**  
Word order in resultatives

# Change in word order in language contact situations

- Word order is **susceptible to change** in various language contact situations (Heine 2008; Polinsky 2018)
- Much work in heritage linguistics focuses on **shared structures**: shift in distribution towards variants in common between two languages (Aalberse et al. 2019), although this doesn't always happen (Lohndal 2021)
- Little work on phenomena with **no shared word order options** between the languages in contact

# Resultative constructions

- Resultative construction:  $V + X(P) \rightarrow$  complex event where **result state X(P)** comes about through the **means of V** (Williams 2008; Beavers 2012)

- English: **Means Object Result**  
Sam **hit** the iron **flat**.

- Cantonese: **Means Result Object**  
張 三 揽 扁 呃 塊 鐵  
zoeng<sup>1</sup> saam<sup>1</sup> dap<sup>6</sup> bin<sup>2</sup> zo<sup>2</sup> faai<sup>3</sup> tit<sup>3</sup>  
Cheung Sam hit flat PFV CLF iron

Resultatives are a site of  
**grammatical difference**  
between Cantonese and English

# Resultatives in language contact

- Means Object Result order due to cross-linguistic transfer has been argued for in other varieties of Chinese
- Nanning Cantonese (Kwok 2010):  
佢 打 佢 老豆 隻 花瓶 糟 晒  
kyu<sup>5</sup> daa<sup>2</sup> kyu<sup>5</sup> lu<sup>5</sup>dau<sup>6</sup> zek<sup>3</sup> faa<sup>1</sup>-ping<sup>4</sup> laan<sup>6</sup> slaai<sup>3</sup>.  
3SG hit 3SG father CLF flower-bottle broken PFV  
'S/he broke her/his father's vase.'
- Standard Zhuang (Wei & Qin 2006):  
De dub aen-vanj ywngz lo.  
3SG hit CLF-bowl broken SFP  
'S/he shattered the bowl.'



Map generated with  
<https://www.mapchart.net/china.html>

# “Separability” of disyllabic verbal constructions: Overgeneralization?

- a. Verb-verb compound: 影印咗 / 影咗印 *sep = 3.5*  
jing<sup>2</sup>-jan<sup>3</sup>-**zo<sup>2</sup>** / jing<sup>2</sup>-**zo<sup>2</sup>**-jan<sup>3</sup>  
photograph-print-PFV / photograph-PFV-print  
'to have photocopied'
- b. Modifier-verb compound: 自首咗 / 自咗首 *sep = 3.7*  
zi<sup>6</sup>-sau<sup>2</sup>-**zo<sup>2</sup>** / zi<sup>6</sup>-**zo<sup>2</sup>**-sau<sup>2</sup>  
self-inform-PFV / self-PFV-inform  
'to have turned oneself in'
- c. Verbalized noun: 生日咗 / 生咗日  
saang<sup>1</sup>-jat<sup>6</sup>-**zo<sup>2</sup>** / saang<sup>1</sup>-**zo<sup>2</sup>**-jat<sup>6</sup>  
birth-day-PFV / birth-PFV-day  
'to have had one's birthday'
- d. Monomorphemic: 肥佬咗 / 肥咗佬 *sep = 3.7*  
fei<sup>4</sup>lou<sup>2</sup>-**zo<sup>2</sup>** / fei<sup>4</sup><**zo<sup>2</sup>**>lou<sup>2</sup>  
fail-PFV / fail<PFV>  
'to have failed'

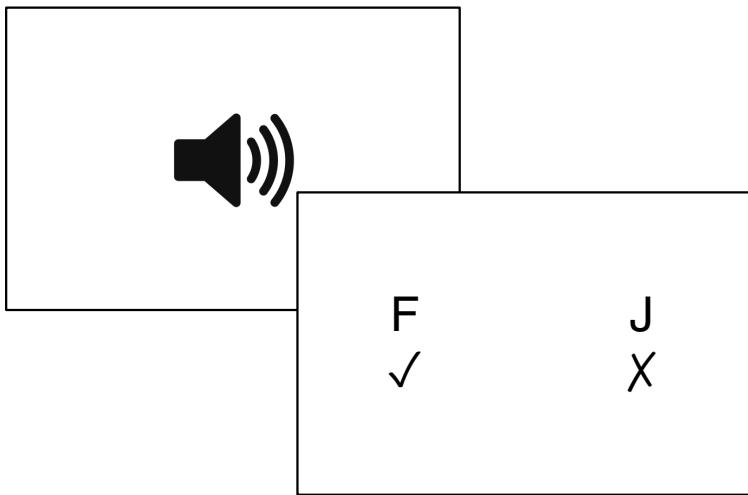
Resultatives: 搞扁咗 / 搞咗扁 *sep = 2.4*  
dap<sup>6</sup>-bin<sup>2</sup>-**zo<sup>2</sup>** / dap<sup>6</sup>-**zo<sup>2</sup>**-bin<sup>2</sup>  
hit-flat-PFV / hit-PFV-flat  
'to have hit (something) flat'

(Chan & Cheung 2020; Chan et al. 2022)

# Hypotheses & Predictions

- Hypothesis #1: Heritage speakers / non-dominant bilinguals show **cross-linguistic transfer**
  - Prediction: Heritage speakers / non-dominant bilinguals show higher acceptability for the English-influenced order **Means Object Result**
- Hypothesis #2: Heritage speakers / non-dominant bilinguals show **overgeneralization**
  - Prediction: Heritage speakers / non-dominant bilinguals show higher acceptability for the morphological variant **Means zo<sup>2</sup> Result**

# Experiment



## Bilingual Language Profile (BLP) 雙語語言檔案

- I. Biographical info 個人資料
- II. Language history 語言背景
- III. Language use 語言使用
- IV. Language proficiency 語言程度

(Birdsong et al. 2012)

# Experimental conditions and stimuli

- Within-subjects design
- 16 target items (4 per condition) + 60 fillers = 76 items
- Sample set: ‘Wan **relaxedly pushed** the door **open**’
  - 🔊 • Canonical variant: **Adverbial Means Result zo<sup>2</sup> Object**  
阿雲**好輕鬆噏****撳**開**咗**度門
  - 🔊 • English-influenced variant: **Adverbial Means zo<sup>2</sup> Object Result**  
阿雲**好輕鬆噏****撳**咗**度門**開
  - 🔊 • Morphological variant: **Adverbial Means zo<sup>2</sup> Result Object**  
阿雲**好輕鬆噏****撳**咗**開**度門
  - 🔊 • Ungrammatical variant: **Means zo<sup>2</sup> Object Adverbial Result**  
阿雲**撳**咗**度門****好輕鬆噏**開

# Participants

- Heritage speakers (N = 33)
  - Born and raised in Canada (or immigrated to Canada by the age of 10)
- Homeland speakers (N = 29)
  - Born and spent most of their life in Hong Kong
- Unclassified speakers (N = 15)
  - Due to inadequacies in earlier versions of the demographic questionnaire
- Most participants are expected to be Cantonese-English bilinguals

# Analysis

- Linear mixed-effects models

Dependent variable

Yes = 1, No = 0

Heritage

Homeland

- Acceptability ~ Condition \* Group or Dominance

Canonical

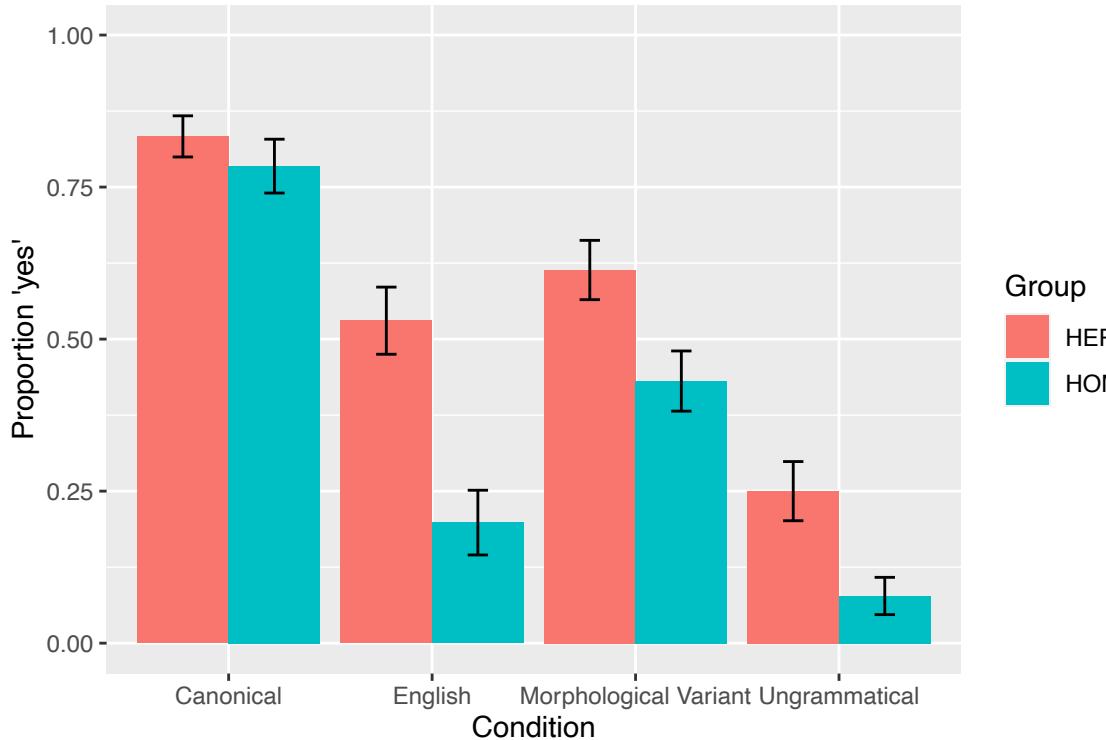
[-218, +218]

English-influenced  
Morphological variant  
Ungrammatical

+ (1|Participant) + (1|Stimulus)

Random effects

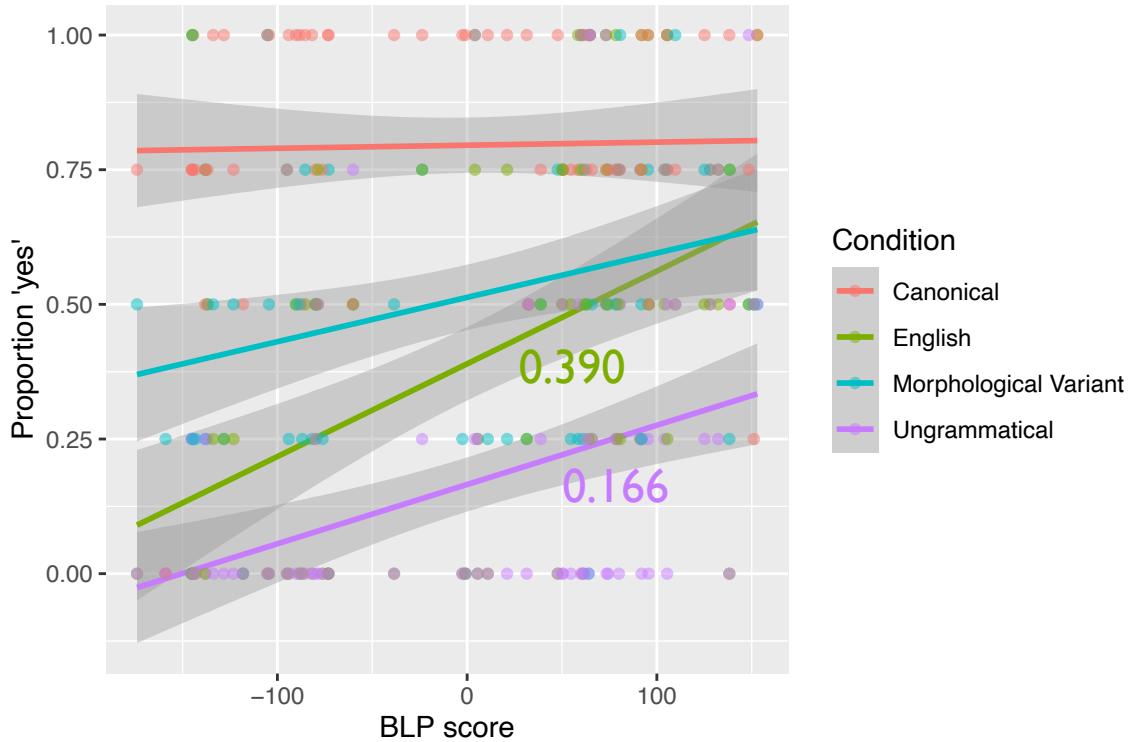
# Results: Group



Significant effects:

- Main effect of **Group**  
→ Heritage > Homeland
- Main effect of **Condition**
- Interaction effect of **Group : English-influenced** → for this word order, Group effect is greater than the main Group effect

# Results: Bilingual Language Profile (BLP) dominance score



## Significant effects:

- Main effect of **BLP** → higher English dominance = higher acceptability
- Main effect of **Condition** (morph. and ungramm.)
- Interaction effect of **BLP : English-influenced** and **BLP : ungrammatical** → for these word orders, BLP effect is greater than the main BLP effect

# Discussion: Hypothesis #1

- Hypothesis #1: Heritage speakers / non-dominant bilinguals show **cross-linguistic transfer**
  - Prediction **borne out**: Heritage speakers / non-dominant bilinguals show higher acceptability for the **English-influenced order**
- Shared syntax hypothesis (Hartsuiker et al. 2004)
- Complex Adaptive System Principles (CASP) model (Filipović 2019): Language dominance mediates tension between two principles (**Maximise Common Ground vs. Maximise Efficiency in Communication**)

## Discussion: Hypothesis #2

- Hypothesis #2: Heritage speakers / non-dominant bilinguals show **overgeneralization**
  - Prediction **not observed**: Heritage speakers / non-dominant bilinguals **did not** show higher acceptability for the **morphological variant** compared to homeland speakers / dominant bilinguals
- Homeland speakers / dominant bilinguals have some degree of acceptability for **Means zo<sup>2</sup> Result** as well (cf. Chan & Cheung 2020) → further investigation needed on when this is allowed

# Discussion: Limitations and future work

- Careful look at individual participant responses
- Comparison to other construction types
- Conducting other types of studies (e.g., production, corpus, priming)
  - Resultatives are quite difficult to locate in an untagged corpus
  - Some 整 zing<sup>2</sup> causatives I found in the HLVC corpus (Nagy 2011):  
佢嚟走嚟走去又整爛咁嘢啦 (C2F22A)  
不過會有時整我笑 (C2F16B)

# References

- Aalberse, S., A. Backus & P. Muysken. 2019. *Heritage languages: A language contact approach*. John Benjamins.
- Beavers, J. 2012. Resultative constructions. In R. I. Binnick (ed.), *The Oxford handbook of tense and aspect*, 908–934. Oxford University Press.
- Birdsong, D., L.M. Gertken & M. Amengual. 2012. *Bilingual Language Profile: An easy-to-use instrument to assess bilingualism*. COERLL, University of Texas at Austin. <https://sites.la.utexas.edu/bilingual/>.
- Chan, S. S. L., & L. Y. L. Cheung. 2020. Morpho-syntax of non-VO separable compound verbs in Cantonese. *Studies in Chinese Linguistics* 41(2): 185–206.
- Chan, S. S. L., T. T. M. Lee & K. F. Yip. 2022. Discontinuous predicates as partial deletion in Cantonese. *University of Pennsylvania Working Papers in Linguistics* 28(1): 26–36.
- Filipović, L. 2019. *Bilingualism in action: Theory and practice*. Cambridge University Press.
- Hartsuiker, R. J., M. J. Pickering & E. Veltkamp. 2004. Is syntax separate or shared between languages?: Cross-linguistic syntactic priming in Spanish-English bilinguals. *Psychological Science* 15(6). 409–414.
- Heine, B. 2008. Contact-induced word order change without word order change. In P. Siemund & N. Kintana (eds.), *Language contact and contact languages*, 33–60. John Benjamins.
- Kwok, B.-C. 2010. Grammatical change in language contact: On the origin of the “verb + object + complement” construction in Nanning Yue. *Journal of Chinese Linguistics Monograph Series* 24: 201–216.
- Lee, H.-C. 2016. Hainan Min resultative structures. *Bulletin of Chinese Linguistics* 9: 67–82.
- Lohndal, T. 2021. Syntax of heritage languages. In S. Montrul & M. Polinsky (eds.), *The Cambridge handbook of heritage languages and linguistics*, 644–667. Cambridge University Press.
- Nagy, N. 2011. A multilingual corpus to explore variation in language contact situations. *Rassegna italiana di Linguistica Applicata* 43(1–2): 65–84.
- Polinsky, M. 2018. *Heritage languages and their speakers*. Cambridge University Press.
- Wei, J. Y. & X. H. Qin. 2006. 壮语通论 *Zhuàngyǔ tōnglùn* [Introduction to the Zhuang language]. China Minzu University Press.
- Williams, A. 2008. Word order in resultatives. In C. B. Chang & H. J. Haynie (eds.), *Proceedings of the 26th West Coast Conference on Formal Linguistics*, 507–515. Cascadilla Proceedings Project.

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多謝各位！

# Stimulus sets

阿雲好輕鬆噉~~撊~~開咗度門  
妹妹好細力噉篤醒咗隻貓  
阿輝好狠心噉~~扑~~死咗條蟲  
爸爸好小心噉磨滑咗嚟木  
阿華好大力噉踢扁咗個波  
哥哥好勞氣噉吹乾咗隻襪  
阿貴好快手噉扭實咗個蓋  
家姐好專心噉煎熟咗塊扒

阿瑤好激氣噉燙直咗條裙  
姑媽好鬼鼠噉門埋咗個窗  
阿風好用力噉猛緊咗條繩  
舅父好論盡噉着爛咗對鞋  
阿進好開心噉攤平咗張被  
威仔好求其噉鑿鬆咗啲冰  
阿穎好心急噉改短咗條褲  
細佬好大意噉雪硬咗嚟肉

# Stimuli

- Auditory stimuli (cf. Sedarous & Namboodiripad, 2020)
  - Many heritage speakers are not fully literate in Chinese characters
  - Judgements of written stimuli may be affected by the standard written language based on Mandarin
- Artificially synthesized with the online text-to-speech service Narakeet ([www.narakeet.com](http://www.narakeet.com))