

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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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)** → 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 搵 扁 咗 塊 鐵
zoeng¹ saam¹ dap⁶ bin² zo² faai³ tit³
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 爛 晒
kyu⁵ daa² kyu⁵ lu⁵dau⁶ zek³ faa¹-ping⁴ laan⁶ slaai³.
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 $sep = 3.5$
jing²-jan³-zo² / jing²-zo²-jan³
photograph-print-PFV / photograph-PFV-print
‘to have photocopied’

b. Modifier-verb compound: 自首咗 / 自咗首 $sep = 3.7$
zi⁶-sau²-zo² / zi⁶-zo²-sau²
self-inform-PFV / self-PFV-inform
‘to have turned oneself in’

c. Verbalized noun: 生日咗 / 生咗日
saang¹-jat⁶-zo² / saang¹-zo²-jat⁶
birth-day-PFV / birth-PFV-day
‘to have had one’s birthday’

d. Monomorphemic: 肥佬咗 / 肥咗佬 $sep = 3.7$
fei⁴lou²-zo² / fei⁴<zo²>lou²
fail-PFV / fail<PFV>
‘to have failed’

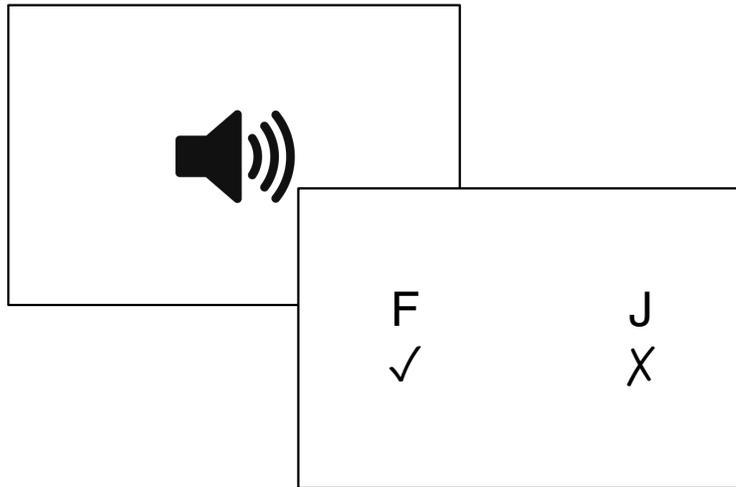
Resultatives: 搵扁咗 / 搵咗扁 $sep = 2.4$
dap⁶-bin²-zo² / dap⁶-zo²-bin²
hit-flat-PFV / hit-PFV-flat
‘to have hit (something) flat’

(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 zo² 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**² **Object**
阿雲**好輕鬆**噉**搵**開**咗**度門
-  English-influenced variant: **Adverbial** **Means** **zo**² **Object** **Result**
阿雲**好輕鬆**噉**搵**咗度門**開**
-  Morphological variant: **Adverbial** **Means** **zo**² **Result** **Object**
阿雲**好輕鬆**噉**搵**咗**開**度門
-  Ungrammatical variant: **Means** **zo**² **Object** **Adverbial** **Result**
阿雲**搵**咗度門**好輕鬆**噉**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

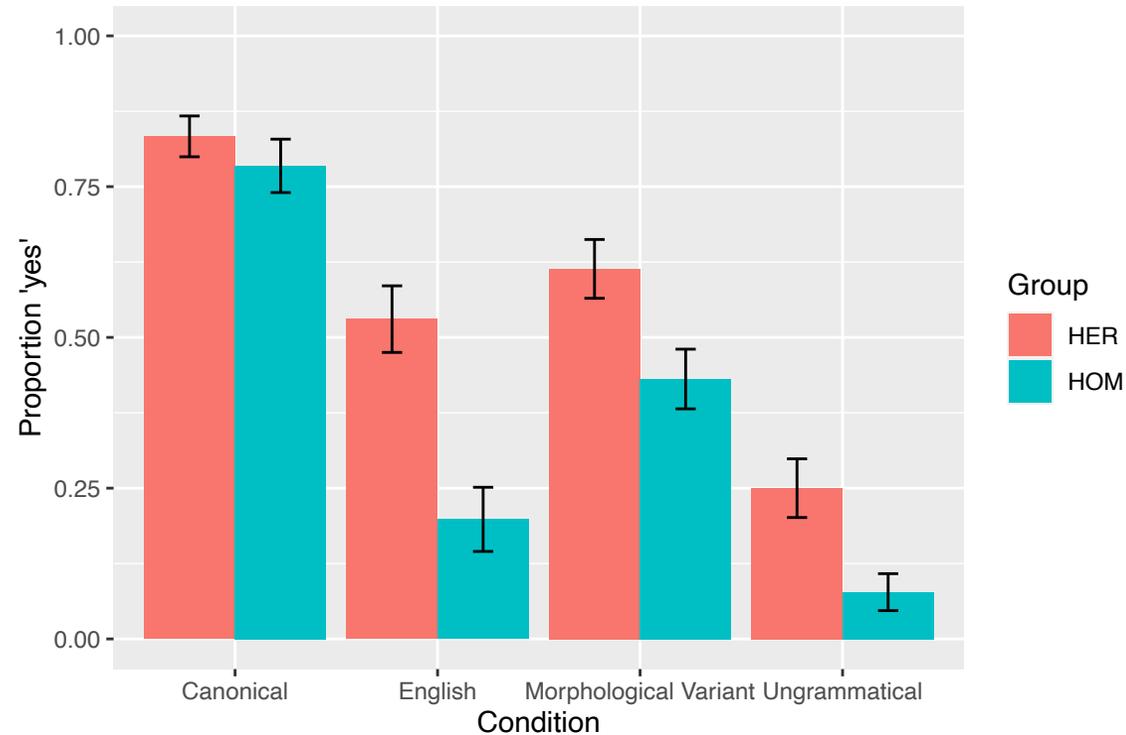
Analysis

- Linear mixed-effects models

Dependent variable
Yes = 1, No = 0

- Acceptability ~ Condition * Group or Dominance
Canonical
English-influenced
Morphological variant
Ungrammatical
Heritage
Homeland
[-218, +218]
+ (1|Participant) + (1|Stimulus)
Random effects

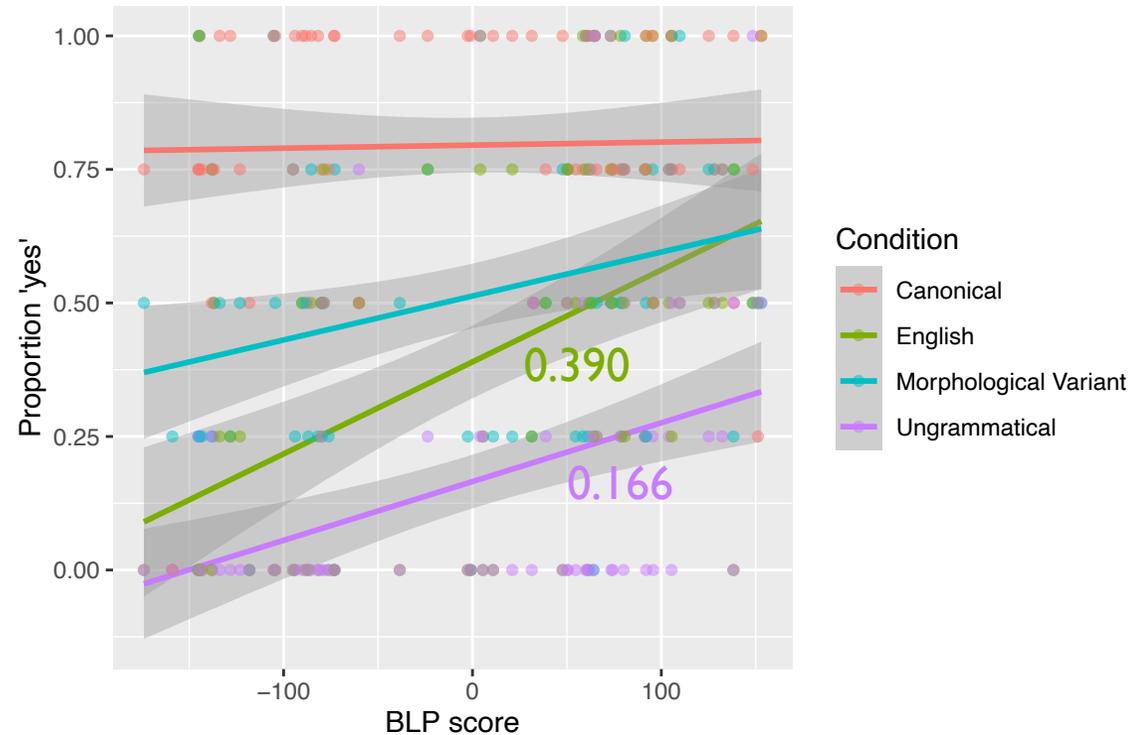
Results: Group



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 z_0^2 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*² causatives I found in the HLVC corpus (Nagy 2011):
佢哋走嚟走去又整爛啲嘢啦 (C2F22A)
不過會有時整我笑 (C2F16B)

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Stimulus sets

阿雲好輕鬆噉搵開咗度門
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
阿風好用力噉搵緊咗條繩
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)