

The Cantonese dative constructions: implications for processing - Antonio Cheung

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Background on Cantonese

(1a) Basic word order SVO: ngo5 ze3 cin2 1Sg borrow money 'I borrow money.'	(1b) Prenominal relative clauses [RC N_{NP}]: [ngo5 ze3 ge3 _] cin2 1Sg borrow PRT money 'The money (that) I borrowed'	(2) Canonical dative: Double Object Construction (DOC) [V T(heme) R(ecipient)]: ngo5 [_{VP} bei2 cin2 nei5] 1Sg give money 2Sg 'I give you money.'	(3) BA construction in Cantonese (BA word in Cantonese: zoeng1) [zoeng1 Theme VP]: ngo5 [zoeng1 cin2 [_{VP} bei2 nei5]] 1Sg [BA money [give 2Sg]] 'I give you money.'
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Center-embedding with SVO and ReIN

(4a) 個細路仔[畀咗[佢借緊嗰本得意嘅書]][個先生]

[go3 sai3lou6zai2] bei2.zo2 [keoi5 ze3.gan6 go2 bun2 dak1ji3 ge3 syu1] [go3 sin1saang1]

[CL child] **give.PFV** [3Sg borrow.PRG Det CL funny Prt **book**] [CL **teacher**]

"The child has given the teacher the funny book that he is borrowing"

(cf. 'The boy [who the girl [that Peter knows] lives next to] is tall.' Long processing domain for S node (underlined))

Typological survey (Dryer, 2005)

Languages	ReIN	NReI
OV	109	96
VO	5	370

VO + ReIN causes **center-embedding** and is avoided by languages

→ center-embedding is difficult to process (e.g. Hawkins, 2004; Gibson, 2000)

→ **Challenge to psycholinguistics:** if languages are optimized for processing, why do these languages preserve this configuration? → Cantonese is good testing ground

Alternative constructions attested in Cheung (2004, 2005)

(4b) [go3 sai3lou6zai2] bei2.zo2 [keoi5 ze3.gan6 go2 bun2 dak1ji3 ge3 syu1] bei2 [go3 sin1saang1]
 [CL child] give.PFV [3Sg borrow.PRG Det CL funny Prt **book**] give [CL **teacher**]

(4c) [go3 sai3lou6zai2] zoeng1 [keoi5 ze3.gan6 go2 bun2 dak1ji3 ge3 syu1] bei2.zo2 [go3 sin1saang1]
 [CL child] BA [3Sg borrow.PRG Det CL funny Prt **book**] give.PFV [CL **teacher**]

Both: "The child has given the teacher the funny book that he is borrowing"

BA-construction in Cantonese ('Disposal construction')(see example 4c) Semantic limitations: abstract/concrete motion only, definite theme NP, etc. Syntactic limitations: main verb cannot be simple predicate (has to be e.g. modified with suffix) Low frequency in Cantonese. → Poor performance predicted for the processing (comprehension and production) of the BA construction	Minimize Domains (Hawkins, 2004) Head nouns closer to V in the BA construction should facilitate processing See verb and head nouns (in bold) and underlined <u>lexical domain</u> for the main verb. Maximize On-line Processing (Hawkins, 2004) BA word assigns Theme to the NP early. → Better performance predicted for the processing of the BA construction
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Experiment (Dual task: Self-paced moving-window reading and elicited imitation)

Participants: 18 Cantonese native speakers

Variables: construction (DOC and BA); Theme complexity (unmodified Theme, Adj-modified Theme, RC-modified Theme)

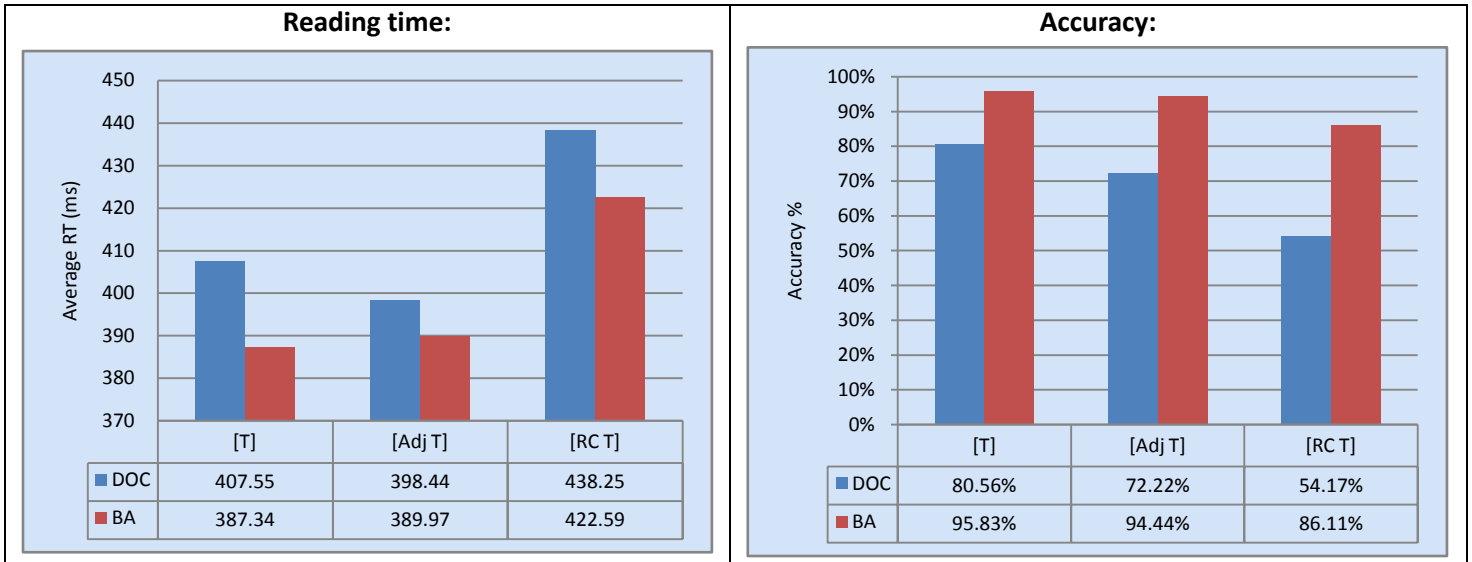
Dual task: Masked self-paced moving-window reading (**comprehension**) and elicited imitation (**production**)

In each trial the participant press a key to see the next word unmasked (window size: 1 word), after items there is a probe "Repeat" to elicit reproduction of the previously shown sentence. Probe and comprehension questions for fillers.

Sample set of items (all 6 conditions):

DOC [T]: [go3 sai3lou6zai2] bei2.zo2 [go2 bun2 syu1] [go3 sin1saang1] [CL child] give.PFV [Det CL book] [CL teacher]	(both "The kid has given that book to the teacher.")
BA [Adj T]: [go3 sai3lou6zai2] zoeng1 [go2 bun2 syu1 bei2.zo2] [go3 sin1saang1] [CL child] BA [Det CL book] give.PFV [CL teacher]	
DOC [Adj T]: [go3 sai3lou6zai2] bei2.zo2 [go2 bun2 dak1ji3 ge3 syu1] [go3 sin1saang1] [CL child] give.PFV [Det CL funny Prt book] [CL teacher]	(both "The kid has given that funny book to the teacher.")
BA [Adj T]: [go3 sai3lou6zai2] zoeng1 [go2 bun2 dak1ji3 ge3 syu1 bei2.zo2] [go3 sin1saang1] [CL child] BA [Det CL funny Prt book] give.PFV [CL teacher]	
DOC [RC T]: [go3 sai3lou6zai2] bei2.zo2 [keoi5 ze3.gan6 go2 bun2 dak1ji3 ge3 syu1] [go3 sin1saang1] [CL child] give.PFV [3Sg borrow.PRG Det CL funny Prt book] [CL teacher]	(both "The kid has given that funny book he is borrowing to the teacher.")
BA [RC T]: [go3 sai3lou6zai2] zoeng1 [keoi5 ze3.gan6 go2 bun2 dak1ji3 ge3 syu1 bei2.zo2] [go3 sin1saang1] [CL child] BA [3Sg borrow.PRG Det CL funny Prt book] give.PFV [CL teacher]	

Results



Effects of **weight** (comp $p=0.040$; prod $p<0.001$) and **construction** (comp $p=0.024$; prod $p<0.001$)

The **BA-construction** is found to be **read faster** in the masked self-paced reading task, and is **imitated more accurately** than the canonical construction in the elicited imitation task.

Summary

Alternative constructions facilitates processing and may be part of the reason Cantonese retains a typologically rare word-order configuration. Support for processing principles in Hawkins (2004)

Key references

Cheung, Antonio (2005). Syntactic alternatives: Investigating the effects of weight in Cantonese dative construction. Paper read at *The 10th International Conference on Yue Dialects*, CUHK, Hong Kong, 12 December.

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