Two types of temporal adverbial clauses in Cantonese
Ka-Fai Yip
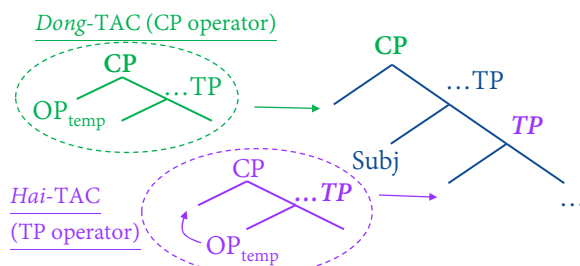### *Yale University*
✉ *kafai.yip@yale.edu*

Yale

Background

- **The typology of adverbial clauses**
  - Central adverbial clauses (CACs)
    E.g. temporal *when, while*
  - Peripheral adverbial clauses (PACs)
    E.g. concessive *while*
- **Internal-external correlation**
  - Haegeman (2010):
    Int.: ± Operator movement
    Ext.: ± Subordination
  - Endo & Haegeman (2019):
    Int.: Uniform OP mvt. with diff. launching sites
    Ext.: Attachment sites match with OP sites
- **Two types of TACs in Cantonese**
  - *Hai* 'at, when'
  - *Dong* 'when, while'
  - Temporal adverbial clauses (TACs) only
  - **Differ** in both internal & external syntax

Proposal

- **TACs are not uniformly derived by operator movement**
  - Only *hai*-TACs involve **OP movement**, but not *dong*-TACs
- **Operator merge site determines internal and external syntax**
  - *Internal*: Merge at TP → move to CP   vs.   Merge at CP → stay *in-situ*
  - *External*: **Structural matching effects**
  - Merge at TP
    → The whole TAC attaches to TP
  - Merge at CP
    → The whole TAC attaches to CP

- **Implications**
  - **Finer typology** of adverbial clauses
  - The significance of **operator site**
  - Operator merge site determines the external syntax through **labeling**?

External syntax

- *Hai*-TACs
  - Attach to TP
  - Allow a **post-subject** position
  - Allow reconstruction for binding by matrix subjects (handout)

(6) *Aaming* [*hai* [*Aafan fan-gan   gaau*] *gozan*] *lai   wan keoi*
     Ming   at Fan   sleep-PROG nap   that.time come find 3SG
     'Ming came find Fan when she was sleeping.'

- *Dong*-TACs
  - Attach to CP
  - Must occur at a **pre-subject** position
  - Disallow reconstruction for binding by matrix subj. (handout)

(7) **Aaming* [*dong* [*Aafan fan-gan   gaau*] *gozan*]   *lai   wan keoi*
     Ming   while Fan   sleep-PROG nap   that.time come find 3SG
     'Ming came find Fan while she was sleeping.'

Internal syntax

High-low ambiguity (also attested in English *when*-clause, *cf.* Geis 1970, Larson 1987)

- *Hai*-TACs
  - allow **long-distance** low reading
  - The low reading will be blocked by islands (handout)

(1) *Hai* [CP **OP**temp [TP *Maangaajan* t_{high} *jyujin* [CP **saigaai** t_{low} **wui waimit**]] *gozan*,   *ngo zung saangngaungau.*
     at   Maya.ppl.   foretell   world   will destroy   that.time 1SG still alive
     i. #'I'm still alive at the time when Maya people made the apocalyptic prophecy.'   (high reading)
     ii. 'I'm still alive at the time when Maya people predicted to be the end of the world.'   (low reading)

- *Dong*-TACs
  - disallow long-distance low reading → temporal operator directly merges to the **highest CP**

(2) #*Dong* [CP **OP**temp [TP *Maangaajan jyujin* [CP **saigaai wui waimit**]] *gozan*,   *ngo zung saangngaungau.*
      while   Maya.ppl.   foretell   world   will destroy   that.time 1SG still alive
     #'I'm still alive at the time when Maya people made the apocalyptic prophecy.'   (only high reading)

- **A note on English *while*-clause**
  - No low reading (Larson 1990:174), as opposed to *when*-clause → no OP movement? (*contra.* Haegeman 2010)

(3) I didn't see Mary in New York [PP while [CP1 she said [CP2 she was there]]]

Minimality effects (Rizzi 2001, 2004)

- Feature-based Relativized Minimality (RM)
- Operator movement will be disrupted by quantificational (Qu) elements

$$X \; ... \; Z \; ... \; Y$$
$$[Qu] \; ... \; [Qu] \; ... \; [Qu]$$

- *Hai*-TACs
  - **Disruption** by high Qu-elements (>TP)
    e.g. cleft focus, epistemic modal, etc.
  - Low reading blocked by low Qu-elements
    e.g. negation, deontic modal, etc.

*Hai [CP **OP**temp [C ... Z[+Qu] [TP ... *t* ...]]]

- *Dong*-TACs
  - *In-situ* operator → no movement
  - **No disruption** by Qu-elements
  - Existence of OPtemp: **Temporal agreement** with converbal *haa*, which also shows RM (handout)

Dong [CP **OP**temp [C ... Z[+Qu] [TP ...]]]

(4) *Camjat   {*hai/ dong }* [hai-Aaming   *fangaau*] *gozan*,   *lousi   zau faatnau.*
     yesterday at while   be-Ming   sleep   that.time   teacher then become.mad
     'The teacher became mad {*when*/*while*} it was MING (but not someone else) that fell asleep.'

(5) *Hai* [CP **OP**temp [TP *Maangaajan* t_{high} $hoji^{Deo}$ *jyujin* [CP **saigaai** t_{low} **wui waimit**]] *gozan*
     at   Maya.ppl.   can   foretell   world   will destroy   that.time
     'At the time when Maya ppl. could make the apocalyptic prophecy.'   (only high reading)

Selected references ● Endo, Yoshido, and Liliane Haegeman. 2019. Adverbial clauses and adverbial concord. *Glossa* 4(1): 48.1-32. ● Haegeman, Liliane. 2010. The internal syntax of adverbial clauses. *Lingua* 120:628-648. ● Larson, Richard, 1987. 'Missing prepositions' and the analysis of English free relative clauses. *Linguistic Inquiry* 18, 239–266.● Rizzi, Luigi. 2004. Locality and left periphery. In Adriana Belletti, ed., *Structures and Beyond*, 223-251. Oxford: Oxford University Press.