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Deictic path elements in Cantonese directional motion constructions

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UNIVERSITY OF
TORONTO

Deictic path in Cantonese

(1) a. 張三 嚟 咗 CLA 研討會。

  zoeng¹ saam¹ (lai⁴) zo² CLA jin⁴tou²wui².
  Cheung Sam come PFV CLA conference
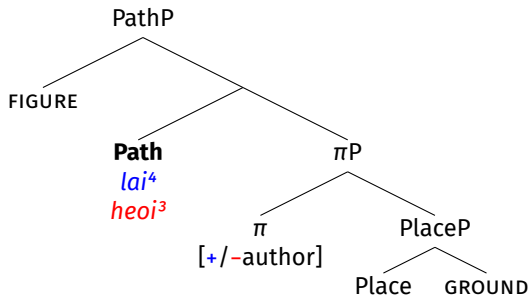 'Sam Cheung came to the CLA conference.'

 b. 李四 去 咗圖書館。

  lei⁵ sei³ (heoi³) zo² tou⁴syu¹gun².
  Lee Sze go PFV library
  'Sze Lee went to the library.'

Main proposal

```
                    PathP
              ╱            ╲
        FIGURE              ╲
                      ╱          ╲
                  Path           πP
                  lai⁴      ╱        ╲
                  heoi³    π          PlaceP
                      [+/–author]   ╱      ╲
                                Place   GROUND
```

Deictic path elements are special realizations of the prepositional head **Path** (Jackendoff 1983, Svenonius 2010) when its complement is the person projection **πP** (Harbour 2016).

Roadmap

Deictic path

- Denotes direction with respect to the location of the speaker
- At least semantically, Deixis can be viewed as a special combination of Path (e.g., TO, FROM) and Ground (Talmy 2000, Matsumoto & Kawachi 2020)

Deictic path

- In many languages, Deixis seems to occupy a morphosyntactic slot distinct from Non-deictic Path elements (Lamarre 2008, Matsumoto & Kawachi 2020)

(2) German (Indo-European)
(adapted from Lamarre 2008: 71)

a. ***her**-aus-tragen*
hither-out-carry

'carry out toward speaker'

b. ***hin**-aus-werfen*
thither-out-throw

'throw out away from speaker'

(3) Jakaltek (Mayan)
(adapted from Lamarre 2008: 71)

a. *ten-il-**tij***
hold-out-hither

'pull out toward speaker'

b. *ten-ik-**toj***
hold-in-thither

'push into away from speaker'

Deictic path in Cantonese

嚟 *lai⁴/lei⁴*	去 *heoi³*
'come, hither'	'go, thither'
venitive	andative
towards speaker location	towards ¬(speaker location)

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Directional elements

Deictic	**Non-deictic**	**Return**
嚟 *lai⁴* 'come' 去 *heoi³* 'go'	出 *ceot¹* 'exit' 入 *jap⁶* 'enter' 上 *soeng⁵* 'ascend' 落 *lok⁶* 'descend' 埋 *maai⁴* 'approach' 過 *gwo³* 'pass'	返 *faan¹* 'return'

(Cheung 2007, Yiu 2013)

Both can be standalone predicates

(4) a. 阿明嚟咗圖書館。   [Deictic]

      aa³-ming⁴ *lai⁴* *zo²* *tou⁴syu¹gun².*
      ah-Ming come PFV library

      'Ming come to the library.'

   b. 阿明入咗圖書館。   [Non-deictic]

      aa³-ming⁴ *jap⁶* *zo²* *tou⁴syu¹gun².*
      ah-Ming enter PFV library

      'Ming entered the library.'

(Yiu 2013)

Both can take locative arguments

(5)   a.   阿明嚟咗圖書館。   [Deictic]

       aa³-ming⁴   *lai⁴*   *zo²*   ***tou⁴syu¹gun²***.
       ah-Ming   come   PFV   library
       'Ming come to the library.'

   b.   阿明入咗圖書館。   [Non-deictic]

       aa³-ming⁴   *jap⁶*   *zo²*   ***tou⁴syu¹gun²***.
       ah-Ming   enter   PFV   library
       'Ming entered the library.'

(Yiu 2013)

Both can appear after a manner verb

(6)   a.   阿明 行 咗 去 圖書館。   [Deictic]

         aa³-ming⁴ (*haang⁴*) *zo²* (*heoi³*) *tou⁴syu¹gun²*.

         ah-Ming   walk   PFV   go   library

         'Ming went to the library by walking.'

   b.   阿明 走 咗 出 圖書館。   [Non-deictic]

         aa³-ming⁴ (*zau²*) *zo²* (*ceot¹*) *tou⁴syu¹gun²*.

         ah-Ming   run   PFV   exit   library

         'Ming ran out of the library.'

(Yiu 2013)

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Relative position of Deictic and Non-deictic elements

Co-occurrence of Non-deictic and Deictic elements

Manner < Non-deictic < Deictic

(7) 阿明上咗去(山頂)。

   aa³-ming⁴ *soeng⁵* *zo²* *heoi³* (*saan¹*   *deng²*).
   ah-Ming   ascend PFV go   mountain top
   'Ming went up (to the top of the mountain).'

(8) 阿明行咗上去(山頂)。

   aa³-ming⁴ *haang⁴* *zo²* *soeng⁵* *heoi³* (*saan¹*   *deng²*).
   ah-Ming   walk   PFV ascend go   mountain top
   'Ming walked up there (to the top of the mountain).'

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Relative position of Deictic and Non-deictic elements

Aspectual markers

Aspectual markers attach after the first element in a sequence.

(9) a.   阿明 行 (咗) 上 (* 咗) 去 (* 咗)。

          aa³-ming⁴ (*haang⁴*) (*zo²*) (*soeng⁵*) (**zo²*) (*heoi³*) (**zo²*).
          ah-Ming   walk   PFV   ascend   PFV   go   PFV
          'Ming went up by walking.'

     b.   阿明 上 (咗) 去 (* 咗)。

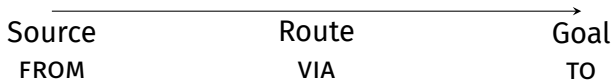   *aa³-ming⁴* (*soeng⁵*) (*zo²*) (*heoi³*) (**zo²*).
          ah-Ming   ascend   PFV   go   PFV
          'Ming went up.'

Introduction   Background   Similarities   **Distinct features**   Analysis   Conclusion   Refs & thanks
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Locative arguments

Optionality of locative arguments

(10) a.   阿明去咗 (**山頂**)。   [Deictic, optional]

         aa³-ming⁴ (*heoi³*) *zo²* (***saan¹-deng²***).
         ah-Ming   go   PFV   mountain-top
         'Ming went (to the top of the mountain).'

      b.   阿明上咗ˀ(**山頂**)。   [Non-deictic, obligatory]

         aa³-ming⁴ (*soeng⁵*) *zo²* ˀ(***saan¹-deng²***).
         ah-Ming   ascend   PFV   mountain-top
         'Ming ascended to the top of the mountain.'

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Locative arguments

Three possible interpretations

Source ——————————— Route ——————————→ Goal
FROM   VIA   TO

(Jackendoff 1983, Yiu 2013)

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Locative arguments

All three interpretations possible

(11) a. 我出咗房。 [source]

ngo⁵ ceot¹ zo² fong².
1SG exit PFV room
'I exited from the room.'

b. 我出咗後門。 [route]

ngo⁵ ceot¹ zo² hau⁶-mun².
1SG exit PFV back-door
'I exited through the back door.'

c. 我出咗後院。 [goal]

ngo⁵ ceot¹ zo² hau⁶-jyun².
1SG exit PFV back-yard
'I exited to the backyard.'

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Locative arguments

Two interpretations only

(12) a. 我入咗**前便**。 [#source]

ngo⁵ jap⁶ zo² cin⁴-bin⁶.
1SG enter PFV front-side
'I entered to the front.' / #'I entered from the front.'

b. 我入咗前門。 [route]

ngo⁵ jap⁶ zo² cin⁴-mun².
1SG enter PFV front-door
'I entered through the front door.'

c. 我入咗房。 [goal]

ngo⁵ jap⁶ zo² fong².
1SG enter PFV room
'I entered the room.'

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Locative arguments

Goal only

(13) a. 我嚟咗**學校**。   [#source]

       ngo⁵ *lai⁴* *zo²* **hok⁶haau⁶**.
       1SG come PFV school

       'I came to school.' / #'I came from school.'

   b. 我嚟咗**樓梯**。   [#route]

       ngo⁵ *lai⁴* *zo²* **lau⁴tai¹**.
       1SG come PFV stairs

       'I came to the stairs.' / #'I came along the stairs.'

   c. 我嚟咗**圖書館**。   [goal]

       ngo⁵ *lai⁴* *zo²* **tou⁴syu¹gun²**.
       1SG come PFV library

       'I came to the library.'

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Locative arguments

Possible interpretations for each directional element

Directional elements	Goal	Route	Source
出 *ceot¹* 'exit', 上 *soeng⁵* 'ascend', 落 *lok⁶* 'descend'	✓	✓	✓
入 *jap⁶* 'enter', 過 *gwo³* 'pass'	✓	✓	
埋 *maai⁴* 'approach',	✓		
嚟 *lai⁴* 'come', 去 *heoi³* 'go'	✓		

Preposition stranding

- Crosslinguistically, locative objects are often introduced by adpositions (Svenonius 2007)
- Prepositional stranding is generally banned in Cantonese (Lam 2013): unavailability of stranding points to adpositionhood

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Stranding

Stranding a single directional element

(14)   a.   我去/入過嗰間房。

        *ngo⁵ **heoi³**/**jap⁶** gwo³ go² gaan¹ fong².*
        1SG go/enter   EXP that CLF   room
        'I have gone to/entered that room before.'

   b.   [我去/入過 __ᵢ] 嘅 [嗰間房]ᵢ 好大。

        [*ngo⁵ **heoi³**/**jap⁶** gwo³ __ᵢ] ge³ [go² gaan¹ fong²]ᵢ hou² daai⁶.*
        1SG go/enter   EXP   GE that CLF   room very big
        'That room that I have gone to/entered before is very big.'

Introduction ⬤⬤⬤   Background ⬤⬤⬤⬤   Similarities ⬤⬤⬤   **Distinct features** ⬤⬤⬤⬤⬤⬤⬤⬤⬤⬤⬤⬤   Analysis ⬤⬤⬤⬤⬤⬤⬤⬤⬤⬤   Conclusion ⬤   Refs & thanks ⬤⬤⬤

Stranding

Stranding the last of a sequence of elements

(15)   a.   我行過去/入嗰間房。

       ngo⁵ *haang⁴* *gwo³* *heoi³*/*jap⁶* *go²* *gaan¹* *fong².*
       1SG   walk   EXP   go/enter   that CLF   room
       'I have gone to that room by walking before. / I have walked into that room before.'

   b.   [我行過去/*入___ᵢ] 嘅 [嗰間房]ᵢ 好大。

       [*ngo⁵* *haang⁴* *gwo³* *heoi³*/*jap⁶* ___ᵢ] *ge³* [*go²* *gaan¹* *fong²*]ᵢ *hou²*
       1SG   walk   EXP   go/enter   GE   that CLF   room   very
         daai⁶.
         big
       Intended: 'That room that I have gone to by walking / walked into before is very big.'

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Summary

Summary of data

Directional	**Stranding**		**Transitivity**	**Interpretation**	**Aspectual marking**	
elements	Single	Final			Initial	Non-initial
Deictic	✓	✓	Optional	Goal only	✓	*
Non-deictic	✓	*	Obligatory	Root-dependent	✓	*

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Summary

Summary of data

Directional elements	Stranding		Transitivity	Interpretation	Aspectual marking	
	Single	Final			Initial	Non-initial
Deictic	✓	✓	Optional	Goal only	✓	*
Non-deictic	✓	*	Obligatory	Root-dependent	✓	*

Generalization #1

Single stranding and initial aspectual marking pattern together ⟶ V

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Summary of data

Directional elements	Stranding		Transitivity	Interpretation	Aspectual marking	
	Single	Final			Initial	Non-initial
Deictic	✓	✓	Optional	Goal only	✓	*
Non-deictic	✓	*	Obligatory	Root-dependent	✓	*

Generalization #1

Single stranding and initial aspectual marking pattern together ⟶ V

Generalization #2

Can take locative arguments, *non-initial aspectual marking ⟶ P

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Summary

Summary of data

Directional elements	Stranding Single	Final	Transitivity	Interpretation	Aspectual marking Initial	Non-initial
Deictic	✓	✓	Optional	Goal only	✓	*
Non-deictic	✓	*	Obligatory	Root-dependent	✓	*

Generalization #1

Single stranding and initial aspectual marking pattern together ⟶ V

Generalization #2

Can take locative arguments, *non-initial aspectual marking ⟶ P

Generalization #3

Final stranding and transitivity pattern together ⟶ Deictic inherently has locative

Proposed analysis
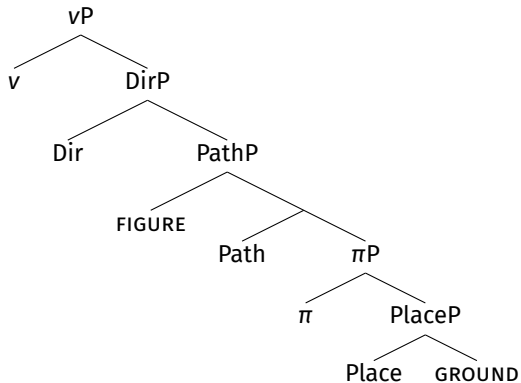
(building on Svenonius 2010, Harbour 2016)

Path introduces locative argument
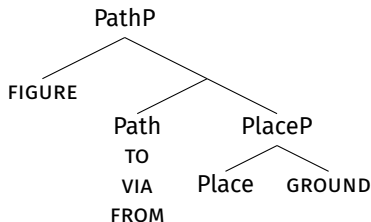
- Path head requires a locative complement (typically PlaceP)
- Path can be valued as TO (goal), VIA (route), or FROM (source) (Jackendoff 1983), determines the interpretation of the locative
- Path heads usually have phonologically null exponents

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Deictic element as special realizations of Path

- Pecularities of Deictic elements:
    - Locative arguments always interpreted as goals of motion → special exponents of the Path head то
    - Locative arguments optional → complement of Path is person projection πP (Harbour 2016)

```
                        PathP
                       /     \
                      /       \
                 FIGURE        \
                               /\
                              /  \
                             /    \
                           Path    πP
                           то      /\
                       (= lai⁴/heoi³) /  \
                              /    \
                             π    PlaceP
                        [+/-author]  /\
                                    /  \
                                Place  GROUND
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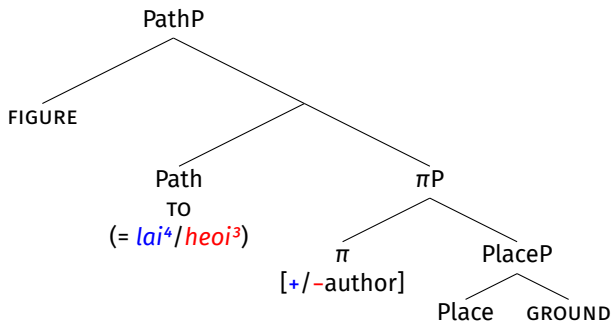
Deictic element as special realizations of Path

- πP defines a region in space defined wrt the speaker through [±author] feature

(16) a. то ↔ 嚟 *lai⁴* 'come' / [$_{PathP}$ — [$_{πP}$ $π_{[+author]}$ ...]]

    b. то ↔ 去 *heoi³* 'go' / [$_{PathP}$ — [$_{πP}$ $π_{[-author]}$ ...]]

    c. то ↔ ∅ (elsewhere condition)

- πP may optionally take PlaceP as a complement; when it does, $π$ acts as a function that restricts the region specified by PlaceP wrt the speaker

Dir as the adjunction site for directional roots
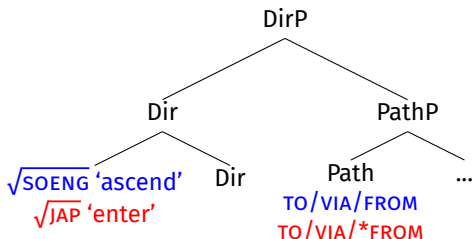
- Dir requires a PathP complement
- It acts as function that picks out a particular set of paths (Svenonius 2010, Troberg 2019)
- Dir is the site of adjunction of Non-deictic roots
- Non-deictic roots introduce selectional restrictions that give rise to the range of possible interpretations of locative arguments associated with Non-deictic elements

Accounting for transitivity

- Dir (which houses Non-deictic roots) and Path are both categorizing heads for P: require complement containing locative argument (Svenonius 2007) and disallow stranding (Lam 2013)
- πP satisifes PathP's requirement, giving the façade of allowing locative omission and stranding

Manner

(17) a. 阿明行咗上去。

　　　aa³-ming⁴ *haang⁴* *zo²* *soeng⁵* *heoi³*.
　　　ah-Ming　walk　PFV　ascend　go
　　　'Ming went up by walking.'

　　b. 阿明上咗去。

　　　aa³-ming⁴ *soeng⁵* *zo²* *heoi³*.
　　　ah-Ming　ascend　PFV　go
　　　'Ming went up.'

Manner: adjunction to *v*
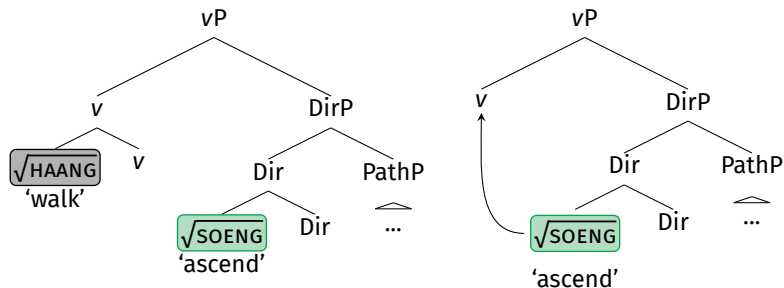
- Manner roots may adjoin to *v* to form the main verb of the clause
- No Manner root: head closest to *v* moves to *v* (Hale & Keyser 2002, Sybesma 2017), "recategorizing" the directional element into a verb → permitting stranding and taking aspectual marking
- Requirement of locative complement is kept, which accounts for the unnaturalness of omission of the locative argument

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Example

(18) 阿明⟨行⟩咗⟨上⟩⟨去⟩山頂。

aa³-ming⁴ *haang⁴* *zo²* *soeng⁵* *heoi³* *saan¹* *deng².*
ah-Ming walk PFV ascend go mountain top
'Ming walked up there to the top of the mountain.'

Derivation

(19)
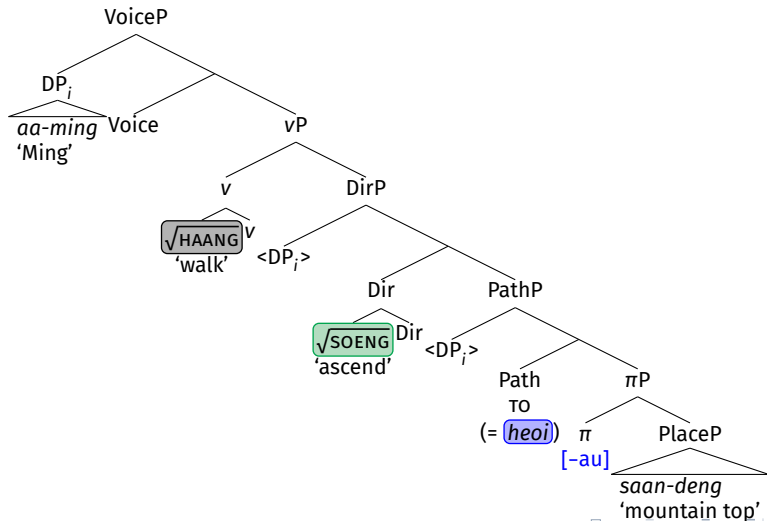
Conclusion

- Main proposal: Deixis = Vector + special Ground (Talmy 2000, Matsumoto & Kawachi 2020) is not only semantic, but also morphosyntactic in Cantonese.
- Non-deictic elements specify particular sets of vectors, allowing co-occurrence of Non-deictic and Deictic.
- Challenges existing views on directional elements in Cantonese (and other Chinese languages), which often treat them as inherently verbal and lexical (Matthews 2006, Paul 2022).
- Further work is needed to develop a typological account of deictic directionals.

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- and **you** for your attention!

Return

Maximally:

- Manner (of motion): 行 *haang⁴* 'walk', 走 *zau²* 'run', etc.
- Return
- Non-deictic
- Deictic

(20) 阿明行咗返上去(山頂)。

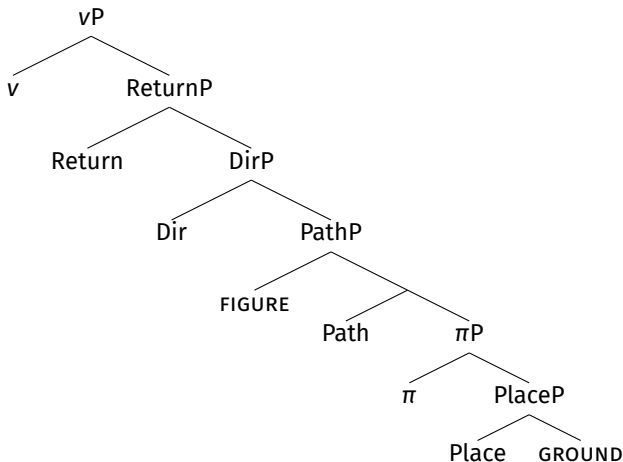   *aa³-ming⁴ haang⁴ zo² faan¹ soeng⁵ heoi³* (*saan¹ deng²*).
     ah-Ming walk PFV return ascend go   mountain top
     'Ming walked back up there (to the top of the mountain).'

Proposed analysis (with Return)

(21)

```
              vP
             /  \
            v    ReturnP
                /    \
           Return    DirP
                    /    \
                  Dir    PathP
                        /    \
                   FIGURE    \
                           Path    πP
                                  /  \
                                 π    PlaceP
                                     /     \
                                 Place    GROUND
```

Return
○○

Interpretation
●○

Other types of DMCs
○○○○

Mandarin
○

Abbreviations

Interpretation depends on last element in a sequence

(22) a. 我**行**咗 (**返**)**上水**。   [source]

ngo⁵ **haang⁴** *zo²* (**faan¹**) **soeng⁵** ***seoi²***

1SG   walk   PFV   return   ascend   water

'I walked (back) up from the water.'

b. 我**走**緊 (**返**)**上斜路**。   [route]

ngo⁵ **zau²** *gan²* (**faan¹**) **soeng⁵** ***ce³-lou²***

1SG   run   PROG   return   ascend   steep-road

'I am running (back) up the ramp.'

c. 我**爬**咗 (**返**)**上山頂**。   [goal]

ngo⁵ **paa⁴** *zo²* (**faan¹**) **soeng⁵** ***saan¹-deng²***

1SG   climb   PFV   return   ascend   mountain-top

'I climbed (back) up to the top of the mountain.'

Interpretation can be ambiguous

(23) 我想揸出多倫多。

　　　ngo⁵ soeng² zaa¹ ceot¹ do¹leon⁴do¹
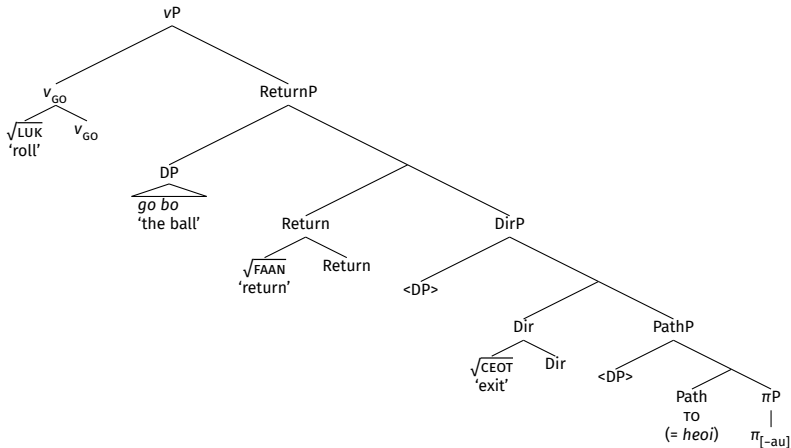　　　1SG　want　drive exit　Toronto
　　　'I want to drive out to Toronto.' (goal) / 'I want to drive out of Toronto.' (source)

Other types of DMCs

(24) a. 個波轆咗返出去 (球場)。 [non-agentive]

go³ bo¹ luk¹ zo² faan¹ ceot¹ heoi³ (kau⁴-coeng⁴).
CLF ball roll PFV return exit go ball-field

'The ball rolled back out [to a place distinct from the speaker's location] (to the soccer field).'

b. 阿明轆咗個波返出去 (球場)。 [agentive]

aa³-ming⁴ luk¹ zo² go³ bo¹ faan¹ ceot¹ heoi³ (kau⁴-coeng⁴).
ah-Ming roll PFV CLF ball return exit go ball-field

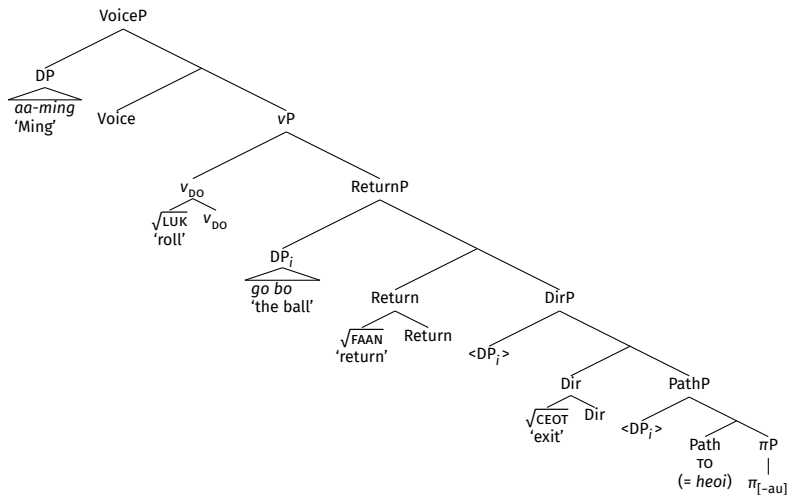'Ming rolled the ball back out [to a place distinct from the speaker's location] (to the soccer field).'

Non-agentive DMC

(25)

Agentive DMC

(26)

VoiceP

DP
aa-ming
'Ming'

Voice

vP

v_{DO}
$\sqrt{\text{LUK}}$ v_{DO}
'roll'

ReturnP

DP_i
go bo
'the ball'

Return

$\sqrt{\text{FAAN}}$ Return
'return'

DirP

$<DP_i>$

Dir

$\sqrt{\text{CEOT}}$ Dir
'exit'

PathP

$<DP_i>$

Path
TO
(= *heoi*)

πP
|
$\pi_{[-au]}$

Three types of DMCs

Property	Non-agentive	Self-agentive	Agentive
Flavour of *v*	v_{GO}	v_{GO}	v_{DO}
VoiceP present?	No	Yes	Yes
Position of figure	Spec below *v* → Spec,TP	Spec below *v* → Spec,VoiceP → Spec,TP	Spec below *v*
Position of agent	N/A	Same as figure	Spec,VoiceP → Spec,TP

Mandarin

- In Mandarin, deictic directional elements sometimes do not appear to be low (Hu 2022).

(27) a. 張三拿出了很多書**來**。 [Mandarin]

   *Zhāng Sān ná chū le hěn duō shū **lái**.*
   Zhang San take exit PFV very many book come
   'San Zhang took many books out.' (adapted from Hu 2022: 62)

   b. *張三攞出咗好多書嚟。 [Cantonese]

   *zoeng¹ saam¹ lo² ceot¹ zo² hou² do¹ syu¹ **lai⁴**.*
   Cheung Sam take exit PFV very many book come
   Intended: 'Sam Cheung took many books out.'

   c. 張三攞咗好多書出嚟。 [Cantonese]

   *zoeng¹ saam¹ lo² zo² hou² do¹ syu¹ ceot¹ **lai⁴**.*
   Cheung Sam take PFV very many book exit come
   'Sam Cheung took many books out.'

Abbreviations

1	first person	PFV	perfective
CLF	classifier	PROG	progressive
EXP	experiential	SG	singular
GE	nominal linker 嘅 *ge³*		