Q-Particles and Islands in Sinhala Wh-, Alternative and Polar Questions

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1. INTRODUCTION

■ The Q(uestion)-particle *də* in (matrix) simple questions in Sinhala:[1]

- Wh-questions (WhQs): *də* mandatorily attaches to the wh-phrase

(1) Chitra monəwa **də** gatte — WhQ
Chitra what **də** bought.E
`What did Chitra buy?' [Slade 2011: (2) p. 19]

- Alternative questions (AltQs): *də* mandatorily attaches to each of the contrasting disjuncts

(2) oyaa maalu.**də** mas.**də** kanne? — AltQ
you fish.**də** meat.**də** eat.E
`Did you eat meat↑ or fish↓?' [Weerasooriya 2019: (36) p. 12]

- Polar questions (PolQs): *də* can attach to a specific XP (narrow focus) or be placed at the end of the clause (broad focus):

(3) Chitra ee potə **də** kieuwe? — PolQ-narrow
Chitra that book **də** read.E
`Was it that book that Chitra read?' [Kishimoto 2005: (21a) p. 11]

(4) Chitra ee potə kieuwa **də**? — PolQ-broad
Chitra that book read.A **də**
`Did Chitra read that book?' [Kishimoto 2005: (21b) p. 11]

[1] The particle *də* is also used in declaratives with indefinites and with (exclusive) disjunction. For a recent analysis, see Weerasooriya (2019).

■ The Q-particle *də* in <u>questions containing islands</u> in Sinhala :
(Gair 1983, Cable 2010, Slade 2011, a.o.)

- Wh-questions (WhQs): *də* cannot occur inside the island; it attaches instead at the edge of the island (Cable 2010, Slade 2011):

(5) * Chitra [[[Ranjit [monəwa] **də** gatta] kiənə] katəkataawə] æhuwe?
Chitra [[[[Ranjit [what] **də** bought.A] that] rumour] heard.E
`What$_i$ did Chitra hear the rumor that Ranjit bought t_i?' [Slade 2011: (9) p. 21]

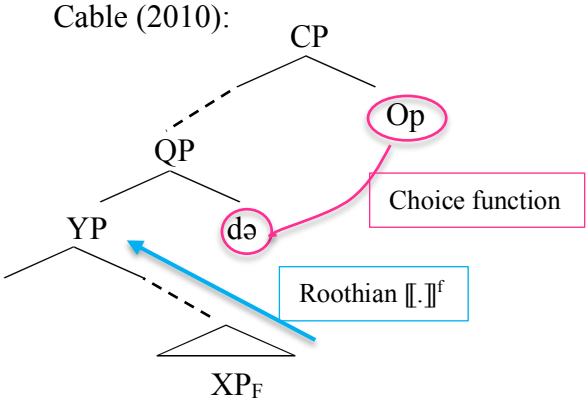
(6) ✓Chitra [[[Ranjit [monəwa] gatta] kiənə] katəkataawə] **də** æhuwe?
Chitra [[[[Ranjit [what] bought.A] that] rumour] **də** heard.E
`What$_i$ did Chitra hear the rumor that Ranjit bought t_i?' [Slade 2011: (10) p. 21]

- Alternative questions (AltQs): ----
- Polar questions (PolQs): ----

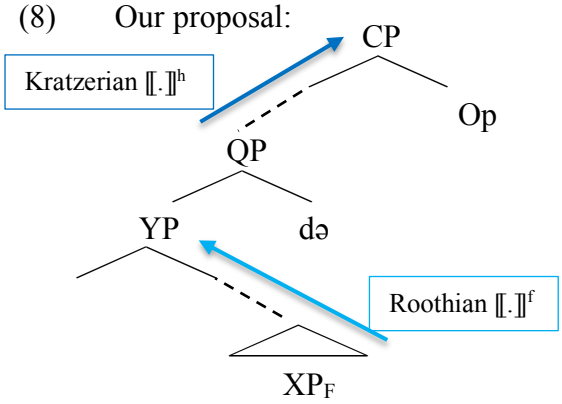
■ The GOAL of this talk is two-fold:
- To fill the empirical gap and present novel data on the Q-particle *də* in AltQs and PolQs containing islands, and
- To develop a –so far tentative!– unified analysis of the meaning of *də* in all three question types that accounts for its distribution in the island cases

■ Idea in a nutshell:
- The semantic contribution of the Q-particle *də* –heading QP– is to mediate between the two "legs" of a semantic dependency (Hagstrom 1998, Cable 2010, Slade 2011).
- Previously: focus $[\![.]\!]^f$ (Rooth 1992) + binding via a choice function variable
- Proposal here: focus $[\![.]\!]^f$ (Rooth 1992) + focus $[\![.]\!]^h$ (Kratzer 1991, Beck 2006)

(7) Cable (2010):



(8) Our proposal:



■ Roadmap:
- §2 Previous analyses
- §3 Novel data
- §4 Proposal
- §5 Conclusions and outlook

2. PREVIOUS ANALYSES

2.1. Cable (2010) on WhQs

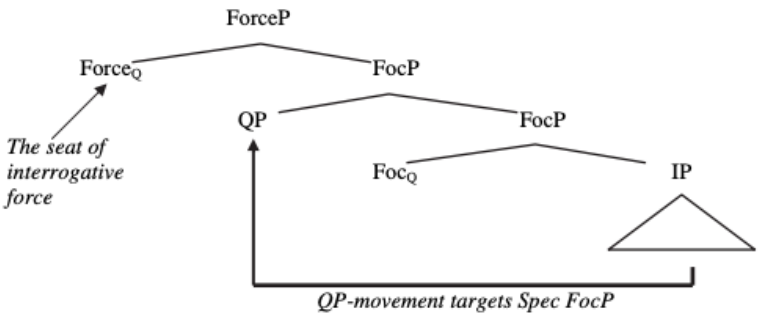
■ Back to the data on WhQ with islands:

(9) * Chitra [Ranjit monəwa **də** gatta kiənə katəkataawə] æhuwe? (=5)
Chitra [Ranjit what **də** bought.A that rumour] heard.E
'What$_i$ did Chitra hear the rumor that Ranjit bought t$_i$?' [Slade2011: (9) p. 21]

(10) ✓Chitra [Ranjit monəwa gatta kiənə katəkataawə] **də** æhuwe? (=6)
Chitra [Ranjit what bought.A that rumour] **də** heard.E
'What$_i$ did Chitra hear the rumor that Ranjit bought t$_i$?' [Slade2011: (10) p. 21]

■ Syntax:
- Seemingly wh-movement is not movement of the WhP per se but of the QP *[[…wh…] də]*. The movement of QP is triggered by the need to check a syntactic feature in the left periphery of WhQs: (11).
- In simple WhQs, QP is typically located immediately above the WhP; but, due to s-selection constraints, it sometimes contains more material: e.g. *[WhP P]-də* in (12).
- In WhQs with islands, the QP projected by *də* has to include the entire island, since no syntactic dependency –including movement– can hold across an island: (9)-(10).

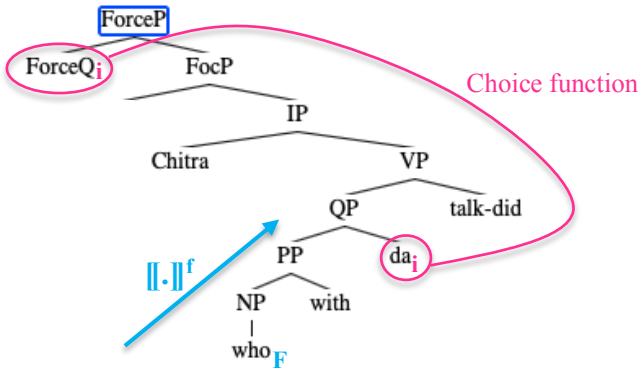
(11) [Cable 2010:78]



(12) a. ✓Chitra [kauru ekka] **də** kata kale?
Chitra who with **də** talk did
'Who did Chitra talk with?'
b. * Chitra [kauru **də** ekka] kata kale?
Chitra who **də** with talk did

■ Semantics (regardless of whether there is an island or not):
- F(ocus)-marking **XP$_F$** gives rise to a set of alternatives: $[\![.]\!]^f$ (Rooth 1992) . Interrogative wh-words are inherently F-marked (and have no ordinary value $[\![.]\!]^o$) (in the spirit of Beck 2006).
- The Q-particle ***də*** bears an index i ranging over choice functions. The corresponding choice function **f** takes the Roothian $[\![.]\!]^f$ of its syntactic sister and selects an element of that set.
- The operator **ForceQ** binds the choice function **f** introduced by the index of *də*.

(13)



(14) a. $[\![\text{who}_F]\!]^f$ = { 'Chitra', 'Guna', 'Alis', … }

b. $[\![\text{who}_F \text{ with}]\!]^f$ = { 'with Chitra', 'with Guna', 'with Alis', … }

c. $[\![[\text{who}_F \text{ with}] \text{də}_1]\!]$ = f ({'with Chitra', 'with Guna', 'with Alis', …})

d. [[Chitra [who$_F$ with] də$_1$ talk-did]]

= λw. TALK$_w$ (chitra, f({'with Chitra', 'with Guna', 'with Alis', …}))

e. [[Force$_{Q,1}$ Chitra [who$_F$ with] də$_1$ talk-did]]

= λp: ∃f [p = λw'. TALK$_{w'}$ (chitra, f({'with Chitra', 'with Guna', 'with Alis', …}))]

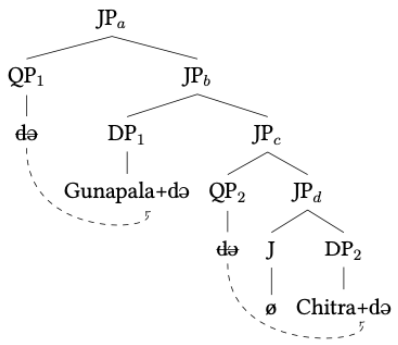
= { 'that Chitra talked with Chitra', "that Chitra talked with Guna', "that Chitra talked with Alis', … }

2.2. Slade's (2011) extension to AltQs and PolQs

- AltQs:
  - Challenge: Intuitively, in (15) we need to choose once from the set {gunapala, chitra}. Why then two occurrences of *də*?
  - Slade's (2011) attempt: (16)-(17)

(15) Gunəpalə **də** Chitra **də** gamətə giye?
Gunapala **də** Chitra **də** village.Dat go.Past.E
'Did Gunapala↑ or Chitra↓ go to the village?' [Slade2011: (49) p. 100]

(16) [Slade2011: p. 101]



(17) Junction Rule [simplified here to match the types in (15)]
$\lambda x_e.\ \lambda f_{<et,e>}.\ \lambda y_e.\ \{y\} \cup \{ f(\{\lambda z_e.z\}(x)) \}$

gunapala chitra
{chitra}
chitra
{chitra}
{gunapala, chitra}
⇩

PROBLEM 1 for the choice function view of *də*:
No rationale or deeper explanation justifying multiples occurrences of *də*.

- PolQs
  - Challenge: No intuitive link between *də* and interrogativity in PolQs. Intuitively, (18) does not ask to choose from the set of alternatives {ranjit, chitra, alis…} of the *də*-marked DP; rather, (18) asks to choose between 'yes' and 'no'.
  - Slade's (2011) idea: PolQs with narrow *də* are reduced to the corresponding AltQs (also with narrow *də*): (19)

(18) Ranjit$_F$ **də** aawe?
Ranjit$_F$ **də** come.Past.E
'Was it Ranjit who came?'

(19) [Ranjit$_F$ **də** came] ~~(or) [not Ranjit$_F$ **də** came]~~

3. NOVEL DATA ON THE Q-PARTICLE IN ALTQS AND POLQS WITH ISLANDS[2]

■ Recall again the data on WhQ with islands:

(20) Complex NP-island:

a. * Chitra [Ranjit monəwa **də** gatta kiənə katəkataawə] æhuwe? (=9)
Chitra [Ranjit what **də** bought.A that rumour] heard.E

b. ✓Chitra [Ranjit monəwa gatta kiənə katəkataawə] **də** æhuwe? (=10)
Chitra [Ranjit what bought.A that rumour] **də** heard.E
'What$_i$ did Chitra hear the rumor that Ranjit bought t$_i$?'

■ AltQs:

(21) Complex NP-island:

a. ???John [Chris **də** Ali **də** French katha karanawa kiyana kathawa] thahawuru kale?
John Chris **də** Ali **də** French speak do that rumour] confirm did.E

b. ✓ John [Chris French katha karanawa kiyana kathawa] **də** (nethnam)
John Chris French speak do that rumour **də** (if not)
[Ali French katha karanawa kiyana kathawaw] **də** thahawuru kale?
Ali French speak do that rumour **də** confirm did.E
'Did John confirm the rumor that Chris speaks French or that Ali speaks French?'

(22) Adjunct-island:

a. ???John [Chris **də** Ali **də** chitra.patiya balanna kalin] kema keewae
John Chris **də** Ali **də** film see before meal ate.E

b. ✓ John [Chris chitra.patiya balanna kalin] **də** (nethnam)
John Chris film see before **də** (if not)
[Ali chitra.patiya balanna kalin] **də** kema keewae
Ali film see before **də** meal ate.E
'Did John have dinner before Chris finished the film or before Ali finished the film?'

■ PolQs:

(23) Complex NP-island:

a. ✓ John [Chris **də** French katha karanawa kiyana kathawa] thahawuru kale. ?
John Chris **də** French speak do COMP rumour confirm did.E

b. ✓ John [Chris$_F$ French katha karanawa kiyana kathawa] **də** thahawuru kale ?
John Chris French speak do COMP rumour **də** confirm did.E
'Was it Chris$_i$ that John confirmed the rumour that t$_i$ speaks French? '

(24) Adjunct island:

a. ✓ John [Chris **də** chitra.patiya balanna kalin] kema keewae
John Chris **də** film see before meal ate.E

b. ✓ John [Chris$_F$ chitra.patiya balanna kalin] **də** kema keewae
John Chris film see before **də** meal ate.E
'Was it Chris$_i$ that John had dinner before t$_i$ finished the film?'

⇩

PROBLEM 2 for the choice function view of *də*:
Given the distribution of *də*, PolQs cannot be reduced to AltQs. Hence, the challenge of *də* in PolQs is not solved: no intuitive link between *də* and interrogativity.

[2] We thank Tharanga Weerasooriya, p.c, for the judgments in this section.

4. PROPOSAL

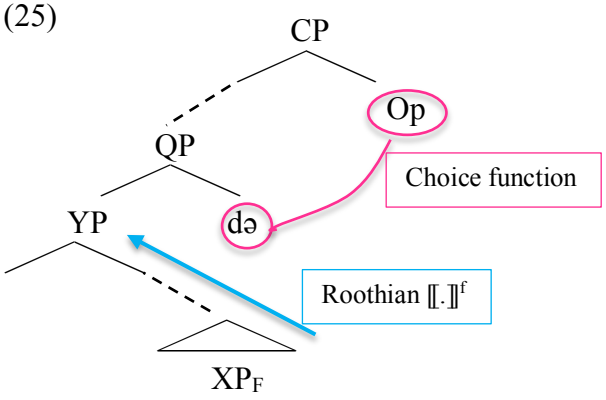
■ Idea:

We keep the general two-legged strategy (25) in the literature and modify it as in (26): For the upper leg, instead of using a choice function –selecting at a distance–, we will use Kratzerian focus values $[\![.]\!]^h$ which will combine…

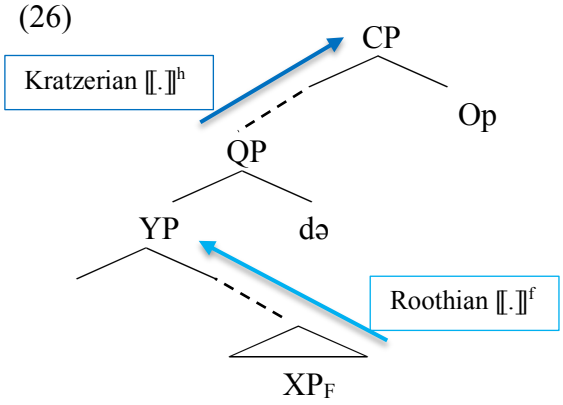
… not only with the **operator Force$_Q$** (for WhQs and for AltQs)

… but also with the **squiggle operator** ~ (for AltQs and for PolQs).

(25)



(26)



■ Three ingredients:

① Kratzerian focus framework (Kratzer 1991, Wold 1996, Beck 2006)

② Discourse structure and F-marking in PolQ/AltQs (Roberts96, Biezma09, Meertens et al. 2019)

③ Our proposed lexical entries

■ INGREDIENT ①: Kratzerian focus framework

- Each expression has an ordinary semantic value $[\![.]\!]$ and a focus semantic value $[\![.]\!]^h$.
- The Focus feature F is indexed and its index is interpreted via assignment h.
- Basic lexical entries for English and Functional Application rule:[3]

(27) a. $[\![\text{John}]\!] = \text{john}$
b. $[\![\text{John}]\!]^h = \text{john}$

(28) a. $[\![\text{John}_{F1}]\!] = \text{john}$
b. $[\![\text{John}_{F1}]\!]^h = h(1)$

(29) a. $[\![\text{leave}]\!] = \lambda x.\lambda w.\text{LEAVE}_w(x)$
b. $[\![\text{leave}]\!]^h = \lambda x.\lambda w.\text{LEAVE}_w(x)$

⇩

(30) a. $[\![\text{John}_{F1}\ \text{left}]\!] = \lambda w.\text{LEAVE}_w(j)$
b. $[\![\text{John}_{F1}\ \text{left}]\!]^h = \lambda w.\text{LEAVE}_w(h(1))$

(31) ~~a. $[\![\text{who}]\!]$~~
~~b. $[\![\text{who}]\!]^h$~~

(32) a. $[\![\text{who}_{F1}]\!] = \#$ (i.e., undefined)
b. $[\![\text{who}_{F1}]\!]^h = h(1)$

(33) a. $[\![\text{leave}]\!] = \lambda x.\lambda w.\text{LEAVE}_w(x)$
b. $[\![\text{leave}]\!]^h = \lambda x.\lambda w.\text{LEAVE}_w(x)$

⇩

(34) a. $[\![\text{who}_1\ \text{left}]\!] = \#$
b. $[\![\text{who}_1\ \text{left}]\!]^h = \lambda w.\text{LEAVE}_w(h(1))$

(35) Functional Application:
$[\![\text{F A}]\!] = [\![\text{F}]\!]([\![\text{A}]\!])$
$[\![\text{F A}]\!]^h = [\![\text{F}]\!]^h([\![\text{A}]\!]^h)$

[3] More precisely, $[\![\text{John}_{F1}]\!]^h = h(1)$ if $1 \in \text{Dom}(1)$ and $[\![\text{John}_{F1}]\!]^h = \text{john}$ otherwise (see Beck 2006:fn6). Function h always starts up empty (Beck 2006:14) and grows as operators introduce new mappings (e.g., $[\![\text{IP}]\!]^{hx/i}$ in the text below). This will be relevant later for PolQs.

- Adding the ~-operator and the Force_Q operator:

(36)[4] a. $[\![\text{IP} \sim \text{C}]\!]$ is defined only if $[\![\text{C}]\!] \subseteq \{p: \exists x\ [p=[\![\text{IP}]\!]^{hx/i}]\}$;
if defined, then $[\![\text{IP} \sim \text{C}]\!] = [\![\text{IP}]\!]$
b. $[\![\text{IP} \sim \text{C}]\!]^h = [\![\text{IP}]\!]^h$

(37) a. $[\![\text{Force}_{Q,i}\ \text{IP}]\!]$ = $\{p: \exists x\ [p=[\![\text{IP}]\!]^{hx/i}]\}$ [To be modified later]
b. $[\![\text{Force}_{Q,i}\ \text{IP}]\!]^h$ = $[\![\text{Force}_{Q,i}\ \text{IP}]\!]$

(38) Q: Who left?
A: $[\text{John}_{F1}$ left $] \sim \text{C}$

⇩

(30) b. $[\![\text{John}_{F1}\ \text{left}]\!]^h = \lambda w.\text{LEAVE}_w(h(1))$

⇩

(40) $[\![[\text{John}_{F1}\ \text{left}] \sim \text{C}]\!]$ = defined only if
$[\![\text{C}]\!] \subseteq \{p: \exists x[p=[\![\text{John}_{F1}\ \text{left}]\!]^{hx/1}\}$;
$[\![\text{C}]\!] \subseteq \{p: \exists x[p=\lambda w.\text{LEAVE}_w(^{hx/1}(1))\}$;
$[\![\text{C}]\!] \subseteq \{p: \exists x[p=\lambda w.\text{LEAVE}_w(x)\}$;
$[\![\text{C}]\!] \subseteq \{\ \lambda w.\text{LEAVE}_w(\text{john}),$
$\lambda w.\text{LEAVE}_w(\text{bill}),$
$\lambda w.\text{LEAVE}_w(\text{chris}), \ldots\ \}$

(39) $[_{CP}\ \text{Force}_{Q,1}\ [_{IP}\ \text{who}_1\ \text{left}]\ ]$

⇩

(34) b. $[\![\text{who}_1\ \text{left}]\!]^h = \lambda w.\text{LEAVE}_w(h(1))$

⇩

(41) $[\![\text{Force}_{Q,1}\ [\text{who}_{F1}\ \text{left}]]\!]$
$= \{p: \exists x\ [p=[\![\text{who}_{F1}\ \text{left}]\!]^{hx/1}\}$;
$= \{p: \exists x\ [p=\lambda w.\text{LEAVE}_w(^{hx/1}(1))\}$;
$= \{p: \exists x\ [p=\lambda w.\text{LEAVE}_w(x)\}$
$= \{\ \lambda w.\text{LEAVE}_w(\text{john}),$
$\lambda w.\text{LEAVE}_w(\text{bill}),$
$\lambda w.\text{LEAVE}_w(\text{chris}), \ldots\ \}$

- Building on and modifying this focus framework, we propose the following division of labor for Sinhala:

(42) i. The **focus feature F** is expressed **prosodically** by focal accent (or it is carried inherently by wh-word). It is modelled via the **Roothian $[\![.]\!]^f$**.
ii. The **focus index i** is carried by the **Q-particle**. It is modelled via **Kratzerian $[\![.]\!]^h$**.

(43) a. $[\![\text{Chitra}_F]\!]$ = chitra
b. $[\![\text{Chitra}_F]\!]^f$ = $\{x: x \in D_e\}$

(44) a. $[\![\text{who}_F]\!]$ = #
b. $[\![\text{who}_F]\!]^f$ = $\{x: x \in D_e\}$

(45) a. $[\![\text{XP da}_i]\!]$ = $[\![\text{XP}]\!]$
b. $[\![\text{XP da}_i]\!]^h$ = $\lambda w: h(1) \in [\![\text{XP}]\!]^f.\ h(1)$

⇩

Take-home message for Sinhala:
The focus index i carried by the Q-particle will be targeted by **~-operator** and/or by **Force_Q** depending on the question type.

[4] Beck (2006) defines the ~-operator as an unselective binder, as in (i). Here we have made it select index *i*, for simplicity. Nothing hinges on this choice. Furthermore, Beck (2006) assumes that ~ resets $[\![.]\!]^h$, as in (ii). We follow Romero (2015) in departing from this assumption.
(i) $[\![\text{IP} \sim \text{C}]\!]$ is defined only if $[\![\text{C}]\!] \subseteq \{[\![\text{IP}]\!]^{h'}: h' \in H \ \&\ h' \text{ is total}\}$; if defined, then $[\![\text{IP} \sim \text{C}]\!] = [\![\text{IP}]\!]$
(ii) $[\![\text{IP} \sim \text{C}]\!]^h = [\![\text{IP}]\!]$

■ INGREDIENT ②: Roberts' (1996) discourse framework

- The structure of a discourse includes a hierarchically ordered set of implicit or explicit moves (questions and answers): (46)
- Following moves must be *congruent* with the preceding Question-under-Discussion (QUD): Q/A pairs like (38) and Q…Q sequences like (47)-(48).
- Congruence is secured by inserting the ~-operator in the corresponding LFs (simplified here from Roberts 1996): (49)-(50)

(46) 1. 'Who$_{\{john,bill\}}$ left when$_{\{morning,afternoon\}}$?'
   a. 'Who left in the morning?'
      i. 'Did John leave in the morning?'
      ii. 'Did Bill leave in the morning?'
   b. 'Who left in the afternoon?'
      i. 'Did John leave in the afternoon?'
      ii. 'Did Bill leave in the afternoon?'

(47) a. Who left? ✓Did JOHN leave?
   b. Who left? # Did John LEAVE?

(48) a. Who left? ✓Did JOHN or BILL leave?
   b. Who left? # Did John LEAVE or STAY?

(49) PolQ:
   a. [Force$_Q$ [$_{IP}$ JOHN$_{F1}$ leave]~$_1$**C**]
   b. QUD/⟦C⟧ ⊆ {p: ∃x[p=⟦[JOHN$_{F1}$ leave]⟧$^{hx/1}$}= {λw.LEAVE$_w$(john), λw.LEAVE$_w$(bill), λw.LEAVE$_w$(chris), …}

(50) AltQ:
   a. [Force$_Q$ [[$_{IP}$ JOHN$_{F1}$ ~~leave~~]~$_1$**C** or [$_{IP}$ Bill$_{F1}$ leave]~$_1$**C**]]
   b. QUD/⟦C⟧ ⊆ {p: ∃x[p=⟦[JOHN$_{F1}$ leave]⟧$^{hx/1}$}= {λw.LEAVE$_w$(john), λw.LEAVE$_w$(bill), λw.LEAVE$_w$(chris), …}
   c. QUD/⟦C⟧ ⊆ {p: ∃x[p=⟦[BILL$_{F1}$ leave]⟧$^{hx/1}$} = {λw.LEAVE$_w$(john), λw.LEAVE$_w$(bill), λw.LEAVE$_w$(chris), …}

⇩

Take-home message for Sinhala:
In PolQs and AltQs, the ~ operator will target the focus index i carried by the Q-particle.

⇩⇩
⇩

This circumvents problems 1 and 2 of the choice function view:

1. In AltQs, one occurrence of *də* per disjunct, since each disjunct must check discourse congruence via its ~-operator
2. In PolQs, *də* does not serve ForceQ but just ~-operator, so no relation between XP-*də* and interrogativity or answer choices.

■ INGREDIENT ③: Our proposed lexical entries[5]

(51) The operator $\text{Force}_{Q,i}$ for WhQs and AltQs:
a. $[\![\text{Force}_{Q,i\_1\ldots j\_n}\ \text{IP}]\!] = \lambda p$: $p \in [\![\text{IP}]\!]$ if $[\![\text{IP}]\!]$ is defined. $\exists x_1,\ldots,y_n\ [p=[\![\text{IP}]\!]^{hx/i\ldots y/n}]$
b. $[\![\text{Force}_{Q,i\_1\ldots j\_n}\ \text{IP}]\!]^h = [\![\text{Force}_{Q,i\_1\ldots j\_n}\ \text{IP}]\!]$

(52) The operator Force_Q for PolQs:
a. $[\![\text{Force}_Q\ \text{IP}]\!] = \lambda p.\ p = [\![\text{IP}]\!]^h$
b. $[\![\text{Force}_Q\ \text{IP}]\!]^h = [\![\text{Force}_{Q,i\_1\ldots j\_n}\ \text{IP}]\!]$

(53) The squiggle operator ~: (=36)
a. $[\![\text{IP} \sim \text{C}]\!]$ is defined only if $[\![\text{C}]\!] \subseteq \{p: \exists x\ [p=[\![\text{IP}]\!]^{hx/i}]\}$;
if defined, then $[\![\text{IP} \sim \text{C}]\!] = [\![\text{IP}]\!]$
b. $[\![\text{IP} \sim \text{C}]\!]^h = [\![\text{IP}]\!]^h$

(54) Disjunction *or*:
a. $[\![\text{IP1 or IP2}]\!] = \{ [\![\text{IP1}]\!], [\![\text{IP2}]\!] \}$ (Alonso-Ovalle 2006, a.o.)
b. $[\![\text{IP1 or IP2}]\!]^h = [\![\text{IP1}]\!]^h \cup [\![\text{IP2}]\!]^h$

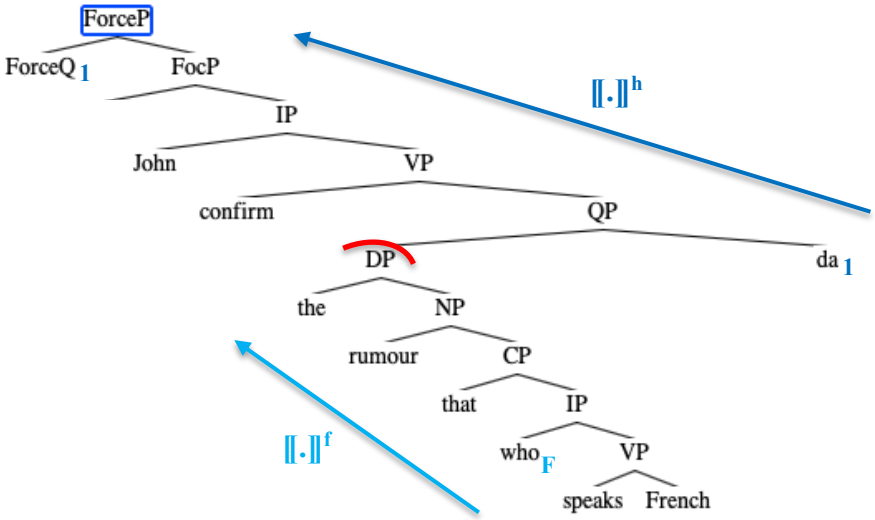
⇩

Take-home message for Sinhala:
In WhQs and AltQs, Force_Q will target the focus index i carried by the Q-particle.

[5] $\text{Force}_{Q,i}$ for WhQs and AltQs and Force_Q for PolQs are not unified into a single lexical entry at this point (though note that the blue parts can be easily unified). We leave this for future work.

■ Sample derivation of **WhQ** with island in Sinhala:

(55)



(56) a. $[\![DP]\!] = \#$

b. $[\![DP]\!]^f = \{ \lambda w.\ \iota q\ [RUMOR_w(q) \wedge q = \lambda w'.SPEAK_{w'}(chitra, french)]$
$\lambda w.\ \iota q\ [RUMOR_w(q) \wedge q = \lambda w'.SPEAK_{w'}(guna, french)]$,
$\lambda w.\ \iota q\ [RUMOR_w(q) \wedge q = \lambda w'.SPEAK_{w'}(ali, french)], \ldots\}$

(57) a. $[\![DP\ da_1]\!] = \#$

b. $[\![DP\ da_1]\!]^h = \lambda w: h(1) \in [\![DP]\!]^f.\ h(1)$
$= \lambda w: h(1) \in \{\lambda w.\ \iota q\ [RUMOR_w(q) \wedge q = \lambda w'.SPK_{w'}(chitra, fr)]\ .\ h(1)$
$\lambda w.\ \iota q\ [RUMOR_w(q) \wedge q = \lambda w'.SPK_{w'}(guna, fr)]$,
$\lambda w.\ \iota q\ [RUMOR_w(q) \wedge q = \lambda w'.SPK_{w'}(ali, fr)], \ldots\}$

(58) a. $[\![FocP]\!] = \#$

b. $[\![FocP]\!]^h = \lambda w: h(1) \in [\![DP]\!]^f.\ CONFIRM_w(j,h(1))$
$= \lambda w: h(1) \in \{\lambda w.\ \iota q\ [RUMOR_w(q) \wedge q = \lambda w'.SPK_{w'}(chitra, fr)]\ .\ CONFIRM_w(j,h(1))$
$\lambda w.\ \iota q\ [RUMOR_w(q) \wedge q = \lambda w'.SPK_{w'}(guna, fr)]$,
$\lambda w.\ \iota q\ [RUMOR_w(q) \wedge q = \lambda w'.SPK_{w'}(ali, fr)], \ldots\}$

(59) $[\![Force_{Q,1}\ FocP]\!]$

$= \lambda p:$ ~~$p \subset [\![FocP]\!]$ if $[\![FocP]\!]$ is defined~~. $\exists x\ [p = [\![FocP]\!]^{hx/1}]$

$= \lambda p.\ \exists x\ [p = [\![FocP]\!]^{hx/1}]$

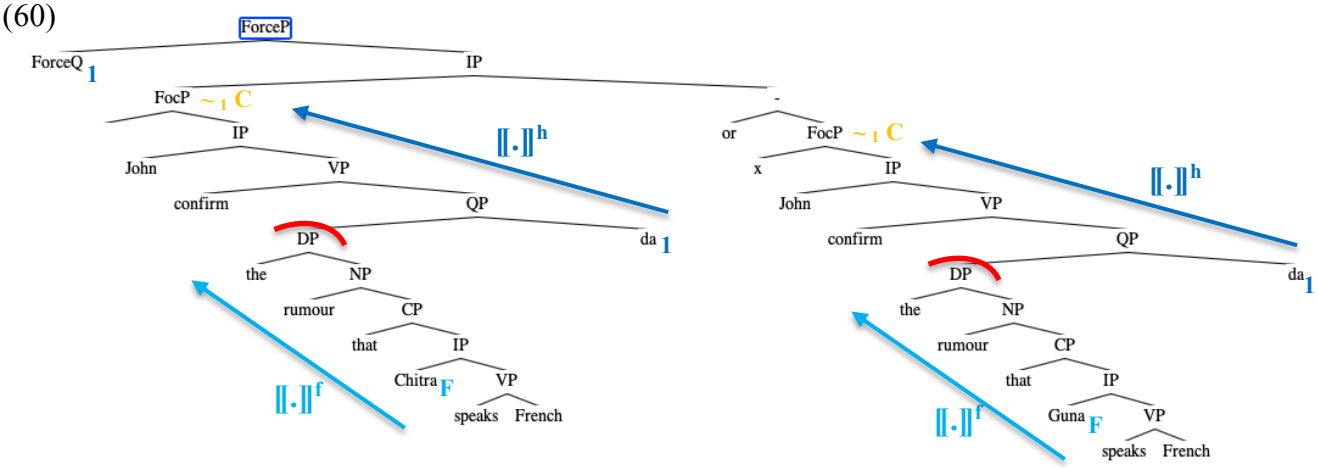
$= \lambda p.\ \exists x\ [p = \lambda w: h^{x/1}(1) \in \{\lambda w.\ \iota q\ [RUMOR_w(q) \wedge q = \lambda w'.SPK_{w'}(chitra, fr)]\ .\ CONF_w(j,h^{x/1}(1))]$
$\lambda w.\ \iota q\ [RUMOR_w(q) \wedge q = \lambda w'.SPK_{w'}(guna, fr)]$,
$\lambda w.\ \iota q\ [RUMOR_w(q) \wedge q = \lambda w'.SPK_{w'}(ali, fr)], \ldots\}$

$= \lambda p.\ \exists x\ [p = \lambda w: x \in \{\lambda w.\ \iota q\ [RUMOR_w(q) \wedge q = \lambda w'.SPK_{w'}(chitra, fr)]\ .\ CONF_w(j,x)]$
$\lambda w.\ \iota q\ [RUMOR_w(q) \wedge q = \lambda w'.SPK_{w'}(guna, fr)]$,
$\lambda w.\ \iota q\ [RUMOR_w(q) \wedge q = \lambda w'.SPK_{w'}(ali, fr)], \ldots\}$

$= \{ \lambda w.\ CONFIRM_w(j, \iota q\ [RUMOR_w(q) \wedge q = \lambda w'.SPK_{w'}(chitra, french)]),$
$\lambda w.\ CONFIRM_w(j, \iota q\ [RUMOR_w(q) \wedge q = \lambda w'.SPK_{w'}(guna, french)]),$
$\lambda w.\ CONFIRM_w(j, \iota q\ [RUMOR_w(q) \wedge q = \lambda w'.SPK_{w'}(ali, french)]), \ldots\}$

■ Sample derivation of an **AltQ** with island in Sinhala:

(60)



(61) First FocP:

a. $[\![\text{FocP}]\!] = \lambda w.\ \text{CONFIRM}_w(j, \iota q\ [\text{RUMOR}_w(q) \wedge q = \lambda w'.\text{SPK}_{w'}(\text{chitra, fr})])$

b. $[\![\text{FocP}]\!]^h = \lambda w: h(1) \in [\![\text{DP}]\!]^f.\ \text{CONFIRM}_w(j,h(1))$

$= \lambda w: h(1) \in \{\lambda w.\ \iota q\ [\text{RUMOR}_w(q) \wedge q = \lambda w'.\text{SPK}_{w'}(\text{chitra, fr})]\ .\ \text{CONFIRM}_w(j,h(1))$
$\lambda w.\ \iota q\ [\text{RUMOR}_w(q) \wedge q = \lambda w'.\text{SPK}_{w'}(\text{guna, fr})],$
$\lambda w.\ \iota q\ [\text{RUMOR}_w(q) \wedge q = \lambda w'.\text{SPK}_{w'}(\text{ali, fr})], \ldots\}$

(62) Second FocP:

a. $[\![\text{FocP}]\!] = \lambda w.\ \text{CONFIRM}_w(j, \iota q\ [\text{RUMOR}_w(q) \wedge q = \lambda w'.\text{SPK}_{w'}(\text{guna, fr})])$

b. $[\![\text{FocP}]\!]^h = \lambda w: h(1) \in [\![\text{DP}]\!]^f.\ \text{CONFIRM}_w(j,h(1))$

$= \lambda w: h(1) \in \{\lambda w.\ \iota q\ [\text{RUMOR}_w(q) \wedge q = \lambda w'.\text{SPK}_{w'}(\text{chitra, fr})]\ .\ \text{CONFIRM}_w(j,h(1))$
$\lambda w.\ \iota q\ [\text{RUMOR}_w(q) \wedge q = \lambda w'.\text{SPK}_{w'}(\text{guna, fr})],$
$\lambda w.\ \iota q\ [\text{RUMOR}_w(q) \wedge q = \lambda w'.\text{SPK}_{w'}(\text{ali, fr})], \ldots\}$

(63) a. $[\![\text{FocP} \sim_1 \text{C}]\!]$ is defined only if

$[\![\text{C}]\!] \subseteq \{p: \exists x\ [p = [\![\text{IP}]\!]^{hx/i}]\}$, i.e.,

$[\![\text{C}]\!] \subseteq \{\ \lambda w.\ \text{CONFIRM}_w(j, \iota q\ [\text{RUMOR}_w(q) \wedge q = \lambda w'.\text{SPK}_{w'}(\text{chitra, fr})]),$
$\lambda w.\ \text{CONFIRM}_w(j, \iota q\ [\text{RUMOR}_w(q) \wedge q = \lambda w'.\text{SPK}_{w'}(\text{guna, fr})]),$
$\lambda w.\ \text{CONFIRM}_w(j, \iota q\ [\text{RUMOR}_w(q) \wedge q = \lambda w'.\text{SPK}_{w'}(\text{ali, fr})]),\ \ldots\}$

b. $[\![\text{FocP} \sim_1 \text{C}]\!]^h$

$= \lambda w: h(1) \in [\![\text{DP}]\!]^f.\ \text{CONFIRM}_w(j,h(1))$

$= \lambda w: h(1) \in \{\lambda w.\ \iota q\ [\text{RUMOR}_w(q) \wedge q = \lambda w'.\text{SPK}_{w'}(\text{chitra, fr})]\ .\ \text{CONFIRM}_w(j,h(1))$
$\lambda w.\ \iota q\ [\text{RUMOR}_w(q) \wedge q = \lambda w'.\text{SPK}_{w'}(\text{guna, fr})],$
$\lambda w.\ \iota q\ [\text{RUMOR}_w(q) \wedge q = \lambda w'.\text{SPK}_{w'}(\text{ali, fr})], \ldots\}$

(64) a. $[\![\text{FocP or FocP}]\!] = \{\ [\![\text{FocP}]\!], [\![\text{FocP}]\!]\}$

$= \{\ \lambda w.\ \text{CONFIRM}_w(j, \iota q\ [\text{RUMOR}_w(q) \wedge q = \lambda w'.\text{SPK}_{w'}(\text{chitra, fr})]),$
$\lambda w.\ \text{CONFIRM}_w(j, \iota q\ [\text{RUMOR}_w(q) \wedge q = \lambda w'.\text{SPK}_{w'}(\text{guna, fr})])\ \}$

b. $[\![\text{FocP or FocP}]\!]^h = [\![\text{FocP}]\!]^h \cup [\![\text{FocP}]\!]^h$

$= [\lambda w: h(1) \in [\![\text{DP}]\!]^f.\ \text{CONFIRM}_w(j,h(1))] \cup$
$[\lambda w: h(1) \in [\![\text{DP}]\!]^f.\ \text{CONFIRM}_w(j,h(1))]$

$= \lambda w: h(1) \in [\![\text{DP}]\!]^f.\ \text{CONFIRM}_w(j,h(1))$

$=$ (61.b) $=$ (62.b)

(65) $[\![\text{Force}_{Q,1}\ [\text{FocP or FocP}]]\!]$

$= \lambda p$: $p \in [\![\text{FocP or FocP}]\!]$ if $[\![\text{FocP or FocP}]\!]$ is defined. $\exists x\ [p = [\![\text{FocP or FocP}]\!]^{hx/1}]$

$= \lambda p$: $p \in \{\lambda w.\ \text{CONFIRM}_w(j, \iota q\ [\text{RUMOR}_w(q) \wedge q = \lambda w'.\text{SPK}_{w'}(\text{chitra, fr})]),$.
$\lambda w.\ \text{CONFIRM}_w(j, \iota q\ [\text{RUMOR}_w(q) \wedge q = \lambda w'.\text{SPK}_{w'}(\text{guna, fr})])\}$
$\exists x\ [p = [\![\text{FocP or FocP}]\!]^{hx/1}]$

$= \lambda p$: $p \in \{\lambda w.\ \text{CONFIRM}_w(j, \iota q\ [\text{RUMOR}_w(q) \wedge q = \lambda w'.\text{SPK}_{w'}(\text{chitra, fr})]),$.
$\lambda w.\ \text{CONFIRM}_w(j, \iota q\ [\text{RUMOR}_w(q) \wedge q = \lambda w'.\text{SPK}_{w'}(\text{guna, fr})])\}$
$\exists x\ [p = \lambda w$: $h^{x/1}(1) \in [\![\text{DP}]\!]^f$. $\text{CONFIRM}_w(j, h^{x/1}(1))]$

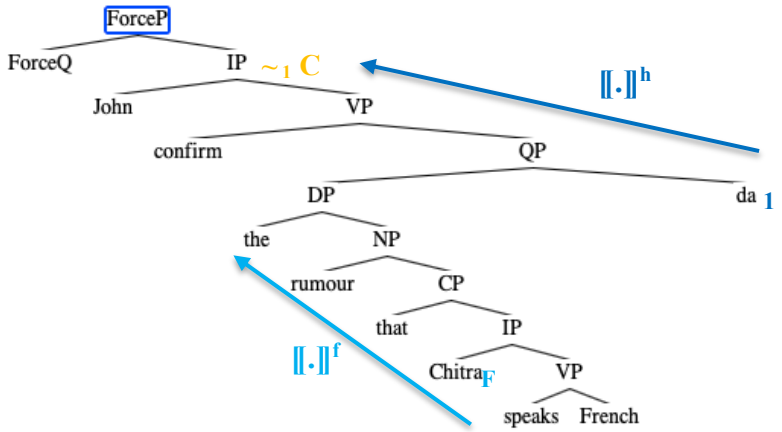
$= \lambda p$: $p \in \{\lambda w.\ \text{CONFIRM}_w(j, \iota q\ [\text{RUMOR}_w(q) \wedge q = \lambda w'.\text{SPK}_{w'}(\text{chitra, fr})]),$.
$\lambda w.\ \text{CONFIRM}_w(j, \iota q\ [\text{RUMOR}_w(q) \wedge q = \lambda w'.\text{SPK}_{w'}(\text{guna, fr})])\}$
$\exists x\ [p = \lambda w$: $x \in [\![\text{DP}]\!]^f$. $\text{CONFIRM}_w(j, x)]$

$= \lambda p$: $p \in \{\lambda w.\ \text{CONFIRM}_w(j, \iota q\ [\text{RUMOR}_w(q) \wedge q = \lambda w'.\text{SPK}_{w'}(\text{chitra, fr})]),$.
$\lambda w.\ \text{CONFIRM}_w(j, \iota q\ [\text{RUMOR}_w(q) \wedge q = \lambda w'.\text{SPK}_{w'}(\text{guna, fr})])\}$
$\exists x\ [p = \lambda w$: $x \in \{\lambda w.\ \iota q\ [\text{RUMOR}_w(q) \wedge q = \lambda w'.\text{SPK}_{w'}(\text{chitra, fr})]$. $\text{CONFIRM}_w(j, x)]$
$\lambda w.\ \iota q\ [\text{RUMOR}_w(q) \wedge q = \lambda w'.\text{SPK}_{w'}(\text{guna, fr})],$
$\lambda w.\ \iota q\ [\text{RUMOR}_w(q) \wedge q = \lambda w'.\text{SPK}_{w'}(\text{ali, fr})], \ldots\}$

$= \lambda p$: $p \in \{\lambda w.\ \text{CONFIRM}_w(j, \iota q\ [\text{RUMOR}_w(q) \wedge q = \lambda w'.\text{SPK}_{w'}(\text{chitra, fr})]),$.
$\lambda w.\ \text{CONFIRM}_w(j, \iota q\ [\text{RUMOR}_w(q) \wedge q = \lambda w'.\text{SPK}_{w'}(\text{guna, fr})])\}$
$p \in \{\lambda w.\ \text{CONFIRM}_w(j, \iota q\ [\text{RUMOR}_w(q) \wedge q = \lambda w'.\text{SPK}_{w'}(\text{chitra, fr})]),$
$\lambda w.\ \text{CONFIRM}_w(j, \iota q\ [\text{RUMOR}_w(q) \wedge q = \lambda w'.\text{SPK}_{w'}(\text{guna, fr})]),$
$\lambda w.\ \text{CONFIRM}_w(j, \iota q\ [\text{RUMOR}_w(q) \wedge q = \lambda w'.\text{SPK}_{w'}(\text{ali, fr})]), \ldots\}$

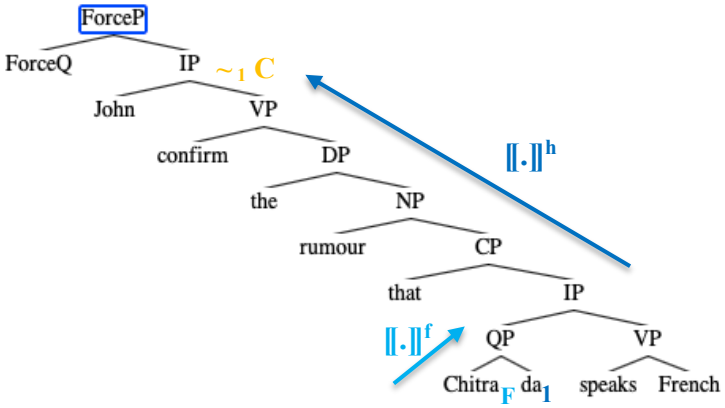
■ Sample derivation of a **PolQ** with island in Sinhala:

(66)



⇨ as in AltQs

(67)



(68) a. $[\![\text{Chitra}_F]\!]$ = chitra
b. $[\![\text{Chitra}_F]\!]^f$ = $\{x: x \in D_e\}$

(69) a. $[\![\text{Chitra}_F\ da_1]\!]$ = chitra
b. $[\![\text{Chitra}_F\ da_1]\!]^h$ = $\lambda w: h(1) \in [\![\text{Chitra}]\!]^f.\ h(1)$
= $\lambda w: h(1) \in \{z: z \in D_e\}.\ h(1)$

(70) a. $[\![IP]\!]$ = $\lambda w.\ \text{CONFIRM}_w(j, \iota q\ [\text{RUMOR}_w(q) \wedge q = \lambda w'.\text{SPK}_{w'}(\text{chitra}, fr)])$
b. $[\![IP]\!]^h$ = $\lambda w: h(1) \in \{z: z \in D_e\}.\ \text{CONF}_w(j, \iota q\ [\text{RUMOR}_w(q) \wedge q = \lambda w'.\text{SPK}_{w'}(h(1), fr)])$

(71) a. $[\![IP \sim_1 C]\!]$ is defined only if
$[\![C]\!] \subseteq \{p: \exists x\ [p = [\![IP]\!]^{h^{x/i}}]\}$;
$[\![C]\!] \subseteq \{p: \exists x\ [p = \lambda w: h^{x/i}(1) \in \{z: z \in D_e\}.\ \text{CONF}_w(j, \iota q\ [\text{RUMOR}_w(q) \wedge q = \lambda w'.\text{SPK}_{w'}(h^{x/i}(1), fr)])\}$;
$[\![C]\!] \subseteq \{p: \exists x\ [p = \lambda w: x \in D_e.\ \text{CONF}_w(j, \iota q\ [\text{RUMOR}_w(q) \wedge q = \lambda w'.\text{SPK}_{w'}(x, fr)])\}$;
$[\![C]\!] \subseteq \{\lambda w.\ \text{CONFIRM}_w(j, \iota q[\text{RUMOR}_w(q) \wedge q = \lambda w'.\text{SPK}_{w'}(\text{chitra}, \text{french})]),$
$\lambda w.\ \text{CONFIRM}_w(j, \iota q[\text{RUMOR}_w(q) \wedge q = \lambda w'.\text{SPK}_{w'}(\text{guna}, \text{french})]),$
$\lambda w.\ \text{CONFIRM}_w(j, \iota q[\text{RUMOR}_w(q) \wedge q = \lambda w'.\text{SPK}_{w'}(\text{ali}, \text{french})]), \ldots\}$
b. $[\![IP \sim_1 C]\!]^h$ = $[\![IP]\!]^h$

(72) $[\![\text{Force}_Q\ IP]\!]$ = $\lambda p.\ p = [\![IP]\!]^h$
= $\lambda p.\ p = \lambda w.\ \text{CONFIRM}_w(j, \iota q\ [\text{RUMOR}_w(q) \wedge q = \lambda w'.\text{SPK}_{w'}(\text{chitra}^6, fr)])$

[6] See footnote 3.

5. CONCLUSIONS AND OUTLOOK

- In a prominent line of work (Hagstrom 1998, Cable 2010, Slade 2011), Q-particles like Sinhala *də* have been analyzed as introducing a choice function that mediates between the Roothian focus value $[\![.]\!]^f$ and the Force_Q operator.

- This line of work has been shown to face (at least) two problems:
  - For AltQs, there is no rationale for the multiple use of *də* when we are intuitively choosing only once.
  - In PolQs, *də* is intuitively not choosing from the focus value $[\![.]\!]^f$ of its syntactic sister. Trying to reduce PolQs to partially elided AltQs to avoide this problem fails to account for the asymmetric distribution of *də* in the two question types.

- A new analysis has tentatively been proposed whereby the Q-particles *də* mediates between two focus percolation systems: Roothian focus value $[\![.]\!]^f$ and Kratzerian focus value $[\![.]\!]^h$. The Kratzerian focus value $[\![.]\!]^h$ will serve not only the Force_Q operator (in WhQs and AltQs) but also the ~-operator (in AltQs and PolQs).

- This new analysis circumvents the two problems faced by the choice function view:
  - In AltQs, two *də* particles are present because we check congruence with the previous discourse via the ~-operator twice, once per disjunct.
  - In PolQs, *də* does not link to Force_Q (hence, no link to interrogativity or choice of answer) but just to the ~-operator for discourse congruence.

- For the future:
  - Extension to Q-particles in so-called Q-adjunction languages like Japanese and Korean.
  - Comparison of *də* in questions with *də* with indefinites.

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