

Mandarin *háishi* and the analysis of alternative question disjunction¹

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Goals of this talk

- In this talk, I present a **syntax/semantics for *háishi* alternative questions which utilizes Roothian focus alternatives**, following Beck and Kim (2006);
- motivate this proposal through a careful look at *háishi*'s **island sensitivity**, its cooccurrence with **the focus marker *shi***, its **intervention effects**, and **non-question uses**;
- and argue against **the Conjunction Reduction analysis** (R. Huang, 2009, 2010) of *háishi* alternative questions.

1 Introduction

Disjunction can surface in questions in at least two ways, distinguished in English by prosody:

(1) **An alternative question:**

Q: Do you want coffee or tea?
 # A: Yes.
 # A: No.
 ✓ A: (I want) tea.
 ✓ A: (I want) coffee.

(2) **Disjunction in a polar question:**

Q: Do you want coffee or tea?
 ✓ A: Yes.
 ✓ A: No.
 ? A: (I want) tea.
 ? A: (I want) coffee.

Mandarin Chinese distinguishes these two types of questions with different disjunctions: alternative questions use the disjunction *háishi* (還是) and the other (logical) disjunction is *huo(zhe/shi)* (或(者/是)).²

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²Other examples of languages which draw this distinction include Sinhala (alternative *da*, logical *hari*) (Slade, 2011), Finnish (alternative *vai*, logical *tai*), and Basque (alternative *edo*, logical *ala*) (Haspelmath, 2000).

(3) **Mandarin alternative disjunction *háishi*:**

你 想 喝 咖啡 还是 红茶 (呢)
 ni xiang he kafei haishi hongcha ne
 you want drink coffee **HAISHI** tea Q

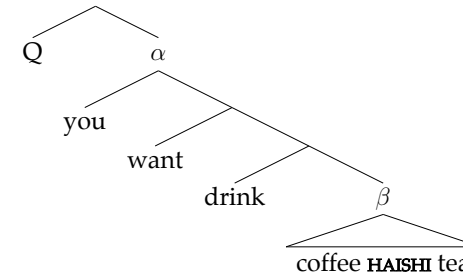
Alternative question: 'Do you want to drink tea or coffee?' = (1)

Following Hamblin (1973); Karttunen (1977), we want to interpret (3) as a set of (intensional) propositions corresponding to possible answers:

$$(3') \llbracket (3) \rrbracket = \{ \lambda w. \text{you want to drink coffee in } w, \lambda w. \text{you want to drink tea in } w \}$$

2 Proposal

☞ Mandarin *háishi* alternative questions are computed using a **pointwise computation of alternatives** as used by focus-sensitive operators (Rooth, 1985, 1992).



(4) $\llbracket \beta \rrbracket^A = \{ \text{coffee, tea} \}$, $\llbracket \beta \rrbracket^I$ undefined

(5) $\llbracket \alpha \rrbracket^A = \{ \lambda w. \text{you want to drink coffee in } w, \lambda w. \text{you want to drink tea in } w \}$, $\llbracket \alpha \rrbracket^I$ undefined

where $\llbracket \cdot \rrbracket^A$ indicates the *focus semantic value* and $\llbracket \cdot \rrbracket^I$ indicates the *ordinary (intensional) semantic value*.

(6) **Beck and Kim (2006):** the task of Q is to lift the focus semantic value of its complement into an ordinary (question) semantic value.

(7) $\llbracket [Q \alpha] \rrbracket^I = \llbracket \alpha \rrbracket^A$ (from 5)

☞ **The alternative disjunction *háishi* produces only a focus semantic value**, requiring an operator such as Q to turn it into an interpretable ordinary semantic value. (Other operators which can use *háishi*'s focus semantic value will be discussed in §4.4.)

3 An alternative: Conjunction Reduction (R. Huang, 2009)

R. Huang (2009, 2010) proposes that *háishi* alternative questions are always cases of clausal disjunction with Conjunction Reduction (CR).

(8) CR analysis of (3):

[你 想 喝 咖啡] 還是 [你 想 喝 紅茶]
 ni xiang he kafei haishi ni xiang he hongcha
 you want drink coffee HAISHI you want drink tea

4 Properties of *háishi* alternative questions

Next I will present a variety of facts which can be explained by a focus-semantic approach but are difficult to explain with such a CR approach.

4.1 Island-([?]in)sensitivity

As noted by J. Huang (1991), *háishi* alternative questions are not sensitive to sentential subject and relative clause islands, while A-not-A questions are:

(9) Sentential subjects: (J. Huang, 1991, 313–314)

a. *háishi* alternative question:

[我 去 美國 還是 英國] 比較 好?
 wo qu meiguo haishi yingguo bijiao hao
 I go America HAISHI England comparatively good
 Alt question: 'Is it better for me to go to America or to England?'

b. A-not-A question:

*[我 去 不 去 美國] 比較 好?
 wo qu bu qu meiguo bijiao hao
 I go NEG go American comparatively good
 Intended: 'Is it better for me to go to America or not?'

(10) Relative clauses: (J. Huang, 1991, 314)

a. *háishi* alternative question:

你 喜歡 [認識 你 還是 不 認識 你] 的人?
 ni xihuan [renshi ni haishi bu renshi ni] de ren
 you like know you HAISHI NEG know you DE person
 Alternative question: 'Do you like people who know you or people who don't know you?'

b. A-not-A question:

*你 喜歡 [認識 不 認識 你] 的人?
 ni xihuan [renshi bu renshi ni] de ren
 you like know NEG know you DE person
 Intended: 'Do you like people who know you or people who don't?'

These facts have been used by R. Huang (2009, 2010) as evidence for the CR approach. However, *háishi* alternative questions are not without island sensitivity: in particular, *háishi* alternative questions are subject to *wh*-islands.

(11) Baseline:

✓你 覺得 [張三 喜歡 李四 還是 王五] (呢)?
 ni juede Zhangsan xihuan Lisi haishi Wangwu ne
 you think Zhangsan like Lisi HAISHI Wangwu Q

Matrix alt question: Is it Lisi or Wangwu that you think Zhangsan likes?

(12) *háishi* is *wh*-island-sensitive:

háishi cannot be interpreted in matrix over a *wh*-question

*你 想知道 [誰 喜歡 李四 還是 王五] (呢)?
 ni xiangzhidao shei xihuan Lisi haishi Wangwu ne
 you wonder who like Lisi HAISHI Wangwu Q

Intended: matrix alternative question: Is it Lisi or Wangwu that you want to know who likes?

R. Huang (2009, 2010) would predict that a matrix-alternative-question reading is always available for these sentences. Consider the following CR derivation for (12):

(12') [你 想知道 誰 喜歡 李四] 還是 [你 想 知道 誰 喜歡 王五]?
 ni xiangzhidao shei xihuan Lisi haishi ni xiang zhidao shei xihuan Wangwu
 you wonder who like Lisi HAISHI you want know who like Wangwu

☞ The focus alternatives approach to *háishi* questions predicts this pattern of island-sensitivity, in the same way that Japanese *wh*-nominals yield *wh*-island effects according to Shimoyama (2006):

The computation of focus alternatives itself is not island-sensitive. Question-embedding verbs such as *xiang zhidao* 'wonder' require that their complement be headed by Q, converting CP₂'s focus semantic value. The complement of Q₁ will no longer contain multiple focus alternatives, so CP₁ cannot be interpreted as a question.

(12'') [CP₁ Q₁ you wonder [CP₂ Q₂ who like [Lisi HAISHI Wangwu]]]

4.2 Position of *shì*

Háishi disjunction is optionally marked on the left by *shì* (是):

(13) *shì* marking the left edge of a *háishi* disjunction

你 是 [想 喝 咖啡] 還是 [想 喝 紅茶] (呢)?
 ni shi xiang he kafei haishi xiang he hongcha ne
 you SHI want drink coffee HAISHI want drink tea Q

Alternative question: 'Do you want to drink tea or coffee?'

☞ The focus marker *shì* does not simply mark the left edge of *háishi* disjunctions. **Instead, its position corresponds to the three different *shì* focus markers independently attested.**

(14) Three different bare *shì* focus constructions (Paul and Whitman, 2008):³

	mechanism	focused constituent
sentence-initial	cleft	subject
sentence-initial	emphasis	entire sentence
sentence-medial	Association With Focus	any constituent within VP

(15) Disjunction in subject ⇒ sentence-initial *shì* (subject focus)

(是) [張三] 還是 [李四] (*是) 喜歡 他 (呢)?
 shi Zhangsan haishi Lisi shi xihuan ta ne
 SHI Zhangsan HAISHI Lisi SHI like him Q

Alternative question: 'Does Zhangsan or Lisi like him?'

(16) Disjunction over distinct clauses ⇒ sentence-initial *shì* (sentence focus)

(是) [你 (*是) 弄 錯 了] 還是 [電腦 自己 當機 了] (呢)?
 shi ni shi nong cuo le haishi diannaoyi ziji dangji le ne
 SHI you SHI make wrong LE HAISHI computer ZIJI crash LE Q

Alt question: 'Did you make a mistake or did the computer crash by itself?'

(17) Disjunction within vP ⇒ sentence-medial *shì*

(*是) 你 (是) 想 [掃 地] 還是 [洗 碗] (呢)?
 shi ni shi xiang sao di haishi xi wan ne
 SHI you SHI want sweep ground HAISHI wash dishes Q

Alternative question: 'Do you want to sweep or wash dishes?'

³'Bare *shì*,' as opposed to the *shì...de* construction, which Paul and Whitman (2008) shows to be a distinct construction with very different properties.

Shì in other syntactic positions not independently attested are not licensed by the *háishi* alternative question:

(18) *shì* within vP (even if left of *háishi* disjunction) is ungrammatical:

* 你 想 喝 [是] [咖啡] 還是 [紅茶] (呢)?
 ni xiang he shi kafei haishi hongcha ne
 you want drink SHI coffee HAISHI tea Q

Intended: alternative question: 'Do you want to drink tea or coffee?'

☞ The *shì* which optionally marks *háishi* alternative questions is the standard Mandarin focus marker *shì*. Erlewine (2010) argues that the focus marker *shì* marks the position where focus alternatives are computed.

4.3 Intervention effects

Beck (2006) argues that *intervention effects* occur when a focus-sensitive operator intervenes between a *wh*-item and its corresponding complementizer:

(19) Beck's (2006) schema for focus intervention effects:

*[Q_i ... [Focus-Op [... wh_i ...]]]

Beck (2006); Beck and Kim (2006) show that such intervention effects also occur with alternative questions. Below we see that the focus-sensitive negation *bu* yields intervention effects in Mandarin *háishi* alternative questions:

(20) Intervention effects in alternative questions (Beck and Kim, 2006, p. 172):

- ✓ Did Sue read ['Pluralities'] or ['Barriers']?
- * Didn't Sue read ['Pluralities'] or ['Barriers']?

(21) Baseline

✓ 你 想 [掃 地] 還是 [洗 碗] (呢)?
 ni xiang sao di haishi xi wan ne
 you want sweep floor HAISHI wash dishes Q

Alternative question: 'Do you want to sweep the floor or wash dishes?'

(22) Negation above the disjunction is ungrammatical

* 你 [不] 想 [掃 地] 還是 [洗 碗] (呢)?
 ni bu xiang sao di haishi xi wan ne
 you NEG want sweep floor HAISHI wash dishes Q

Intended: alternative question: 'Do you not want to sweep the floor or not want to wash dishes?'

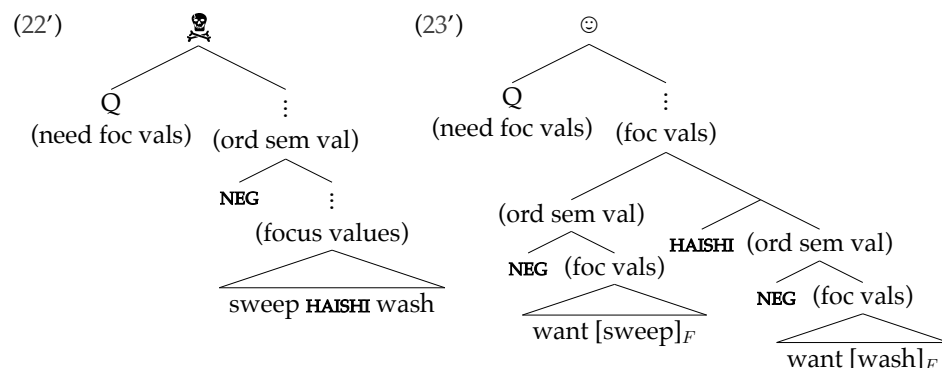
(23) **No intervention with disjuncts which include the negation**

✓你 [不想 掃 地] 還是 [不想 洗 碗] (呢)?
 ni bu xiang sao di haishi bu xiang xi wan ne
 you NEG want sweep floor HAISHI NEG want wash dishes Q

Alternative question: 'Do you not want to sweep the floor or not want to wash dishes?'

Note that the CR analysis does not predict any differences between (22) and (23), as both represent the same underlying (pre-CR) syntactic structure.

☞ **The proposal given here can account for this contrast**, as the focus-sensitive negation intervenes between Q and the *háishi* disjunction in (22) but not in (23).



Similarly, subject focus constructions which are shown to show intervention effects in Chinese *wh*-questions (Yang, 2006) and alternative questions in other languages (Beck and Kim, 2006) also trigger intervention effects in *háishi* alternative questions:

(24) **Subject focus triggers intervention effects (Beck and Kim, 2006):**

* Did only [John]_F drink coffee or tea?

- (25) a. *是 [張三]_F 吃了 [蘋果] 還是 [橘子] (呢)?
 shi Zhangsan chi le pingguo haishi juzi ne
 SHI Zhangsan eat LE apple HAISHI orange Q
 Intended: alt q: 'Was it Zhangsan who ate an apple or an orange?'
- b. *只有 [張三]_F 吃了 [蘋果] 還是 [橘子] (呢)?
 zhiyou Zhangsan chi le pingguo haishi juzi ne
 only Zhangsan eat LE apple HAISHI orange Q
 Intended: alt q: 'Did only Zhangsan eat an apple or an orange?'

4.4 **Non-alternative question contexts**

The distinctive feature of *háishi*, as opposed to the "logical" disjunction *huo(zhe/shi)*, is that *háishi* normally requires an alternative question interpretation. However, there are some environments where *háishi* does not have this requirement:

(26) **Under *dou* quantification (J. Huang et al., 2009, p. 242):**

[橘子] {還是/或者} [蘋果] 都 行
 juzi {haishi/huozhe} pingguo dou xing
 oranges HAISHI/or apples all okay
 'Either oranges or apples will do.'
 'Whether it's oranges or apples, [both possibilities] will do.'

(27) **Within a conditional (R. Huang, 2010, p. 128):**

要是 阿Q [辭職] 還是 [退休] 的話, 請 告訴 我
 yaoshi Akiu cizhi haishi tuixiu dehua qing gaosu wo
 if Akiu resign or retire the.case please tell me
 'If Akiu resigns or retires, please tell me.'

(28) **Under a modal (R. Huang, 2010, p. 130):**

他 可能 喜歡 [張三] 還是 [李四]
 ta keneng xihuan Zhangsan haishi Lisi
 s/he might like Zhangsan HAISHI Lisi
 'S/he might like Zhangsan or Lisi.'

Alonso-Ovalle (2006) presents an analysis for the interpretation of disjunction under conditionals and modals, as well as free choice uses of disjunction, using the atomic disjuncts projected through focus alternatives.

☞ As *háishi* lacks an ordinary semantic value, it requires an operator such as Q (6) in order to be interpreted, **unless another operator has already constructed an ordinary focus value out of the focus semantic value of *háishi***.⁴ Thus such environments can block the alternative question "force" of *háishi*.

☞ **The logical disjunction *huo(zhe/shi)* has the logical disjunctive ordinary semantic value but has the same focus semantic value as with *háishi***. This is the denotation given by Alonso-Ovalle (2006) for English 'or.'

These denotations for *háishi* and *huo(zhe/shi)* explain how they are interchangeable in non-question environments as such environments only utilize the focus alternatives constructed via disjunction which both *háishi* and *huo(zhe/shi)* provide.⁵

⁴Under the proposal made here, a syntactic mechanism such as marking *háishi* [+wh] in order to derive the difference between *háishi* and *huo(zhe/shi)* (J. Huang et al., 2009) is no longer required.

⁵However, this predicts that *huo(zhe/shi)* disjunction can also be interpreted as an alternative question, given Q. It is possible that there are pragmatic competition reasons why such readings are dispreferred or ungrammatical.

5 Conclusion

Today I presented a **new syntax/semantics for Mandarin *háishi* alternative questions** which utilize the **Roothian pointwise computation of alternatives** used by focus-sensitive operators. In particular,

- this proposal explains *háishi* alternative questions' ***wh*-island sensitivity** and their **intervention effects**;
- I showed that the *shì* which optionally occurs to the left of *háishi* disjunctions is in fact **the general Mandarin focus marker *shì*** (Erlewine, 2010; Paul and Whitman, 2008);
- I proposed that *háishi* projects only a focus-semantic value while the logical disjunction *huo(zhe/shi)* also produces an ordinary semantic value, **explaining the difference between *háishi* and *huo(zhe/shi)*** and their availability in non-question environments;
- I noted that **the Conjunction Reduction approach (R. Huang, 2009, 2010) cannot adequately account for these facts.**

Note that other vP-level focus operators (aside from the negation *bu*) such as 'only' *zhǐ* do not trigger intervention effects. This discrepancy is also seen in English:

(29) **vP-level 'only' does not trigger intervention effects**

- ✓ Do you only want to [sweep the floor] or [wash dishes]?
- ✓ 你 只 想 [掃 地] 還是 [洗 碗] (呢)?
ni zhi xiang sao di haishi xi wan ne
you only want sweep floor **HAISHI** wash dishes Q

The validity of the English version is also unexpected by Beck and Kim's (2006) analysis of intervention effects in alternative questions. Further work is required to give a principled account of precisely which focus-sensitive operators are interveners at which syntactic levels.

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