

Mandarin alternative questions question focus alternatives*

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Goals of this talk

- In this talk, I present a **syntax/semantics for *háishi* alternative questions which utilizes Rooth-Hamblin focus alternatives**, following Beck and Kim (2006);
- motivate this proposal through a careful look at *háishi*'s **island sensitivity**, cooccurrence with **focus marker *shì***, **intervention effects**, and **non-question uses**.

Arguments against some alternative analyses are sketched in the appendix.

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/shì)* (或(者/是)).¹

¹I thank Irene Heim, David Pesetsky, Paul Hagstrom, Norvin Richards, Jim Huang, Hadas Kotek, Noah Constant, and the audience at the European Association of Chinese Linguistics 7. All errors are my own.

²Other examples of languages which draw this distinction include Sinhala (alternative *da*, logical *hari*; Slade 2011), Finnish (alternative *vai*, logical *tai*; Kaiser 2004), and Basque (alternative *edo*, logical *ala*; Haspelmath 2000).

(3) Mandarin alternative disjunction *háishi*:

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

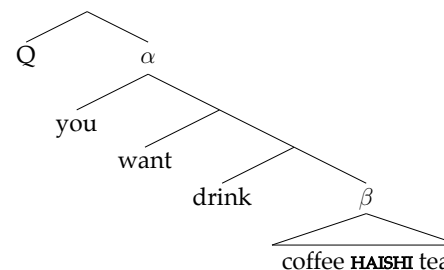
Alternative question: 'Do you want to drink coffee or tea?' = (1)

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) $\llbracket\beta\rrbracket^f = \{\text{coffee, tea}\}, \llbracket\beta\rrbracket^o \text{ undefined}$

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

where $\llbracket\cdot\rrbracket^f$ indicates the *focus semantic value* and $\llbracket\cdot\rrbracket^o$ 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) $\llbracket\llbracket Q \alpha \rrbracket\rrbracket^o = \llbracket\alpha\rrbracket^f$ (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 §3.4.)

3 Properties of *háishi* alternative questions

I now present a variety of facts which can be easily explained by my proposal utilizing focus alternatives. (Alternative analyses are discussed in the appendix.)

3.1 Island-([?]in)sensitivity

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

(J. Huang (1991) is an investigation of the Mandarin “A-Not-A” polar question,)
 (and argues for null operator movement in the A-Not-A question.)

(8) 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?’

(9) 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?’

☞ However, *háishi* alternative questions are not without island sensitivity: in particular, *háishi* alternative questions are subject to *wh*-islands.

(10) 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?

(11) *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 wonder who likes?

☞ 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 into an ordinary semantic value. The complement of Q₁ will no longer contain multiple focus alternatives, so CP₁ cannot be interpreted as a question.

(11’’) [CP₁ Q₁ you wonder [CP₂ Q₂ who like [Lisi HAISHI Wangwu]]]

3.2 Position of *shì*

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

(12) *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 coffee or tea?’

☞ 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.

(13) **Three different bare *shì* focus constructions (Paul and Whitman, 2008):²**

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

(14) **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?'

(15) **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?'

(16) **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?'

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

(17) ***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 coffee or tea?'

☞ **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.

Other analyses which involve movement or Conjunction Reduction would have to stipulate the availability of *shì* in alternative questions, with precisely the same distribution as the focus marker *shì*.

²"Bare *shì*," as opposed to the *shì...de* construction, which Paul and Whitman (2008) shows to be a distinct construction with very different properties.

3.3 Intervention effects

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

(18) **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:

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

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

(20) **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?'

(21) **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?'

(22) **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 or not want to wash dishes?'

☞ **The proposal given here can account for this contrast**, as the focus-sensitive negation intervenes between Q and the *háishi* disjunction in (21) but not in (22).

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:

- (23) **Subject focus triggers intervention effects (Beck and Kim, 2006):**
 * Did only [John]_F drink coffee or tea?
- (24) 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?’

3.4 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:

- (25) **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.’
- (26) **Within a conditional (based on R. Huang, 2010, p. 128):**
 要是 阿Q [辭職] {還是/或者} [退休] 的話, 請 告訴 我
 yaoshi Akiu cizhi {haishi/huozhe} tuixiu dehua qing gaosu wo
 if Akiu resign HAISHI/or retire the.case please tell me
 ‘If Akiu resigns or retires, please tell me.’
- (27) **Under a modal (based on R. Huang, 2010, p. 130):**
 他 可能 喜歡 [張三] {還是/或者} [李四]
 ta keneng xihuan Zhangsan {haishi/huozhe} Lisi
 s/he might like Zhangsan HAISHI/or 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 in order to be interpreted, **unless another operator has already constructed an ordinary focus value out of the focus semantic value of *háishi*.**³ 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 *háishi*.** This is the denotation given by Alonso-Ovalle (2006) for English ‘or.’

My analysis predicts that (a) *háishi* and *huo(zhe/shi)* are interchangeable and (b) *háishi* loses its alternative question “force” precisely in the scope of those operators which utilize focus alternatives for free choice interpretation.⁴

4 Conclusion

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

- my 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.
 - Different lexical items for logical and alternative-question-triggering disjunctions are also attested in Sinhala, Finnish, and Basque. The proposal here provides an approach to the formal semantics of these disjunctions, and makes concrete predictions about their distributions.

³Under 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.

⁴However, this predicts that *huo(zhe/shi)* disjunction can also be interpreted as an alternative question, given Q. It is possible that there is pragmatic blocking across derivations which makes such a reading dispreferred or ungrammatical.

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Appendix: alternatives to the focus alternatives

There are broadly two types of analyses previously put forth for Mandarin *háishi* alternative questions: covert movement and Conjunction Reduction.

4.1 Covert movement (J. Huang, 1982)

J. Huang (1982) proposes that the disjunctive phrase moves to CP at LF. Assuming covert movement can violate Subjacency/CED, the lack of island effects for object alternative questions may be expected.

(28) LF movement analysis of (3):

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

As noted by R. Huang (2010), however, J. Huang’s (1982) analysis predicts that embedded *háishi* disjunction of non-arguments cannot move covertly to take matrix scope, due to the ECP. Embedded *háishi* disjunctions of adjuncts can, however, be interpreted as matrix alternative questions.

4.2 Conjunction Reduction

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

(29) Conjunction Reduction 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

It is unclear how such approaches would derive the properties of *háishi* alternative questions presented here⁵ nor is it clear what principles govern such a “Conjunction Reduction” operation. Han and Romero (2004) attempts to make this Reduction operation more concrete by adopting Schwarz’s (1999) analysis of Conjunction Reduction as gapping, presenting parallels between the syntax of alternative questions and gapping in Hindi and Korean. Note, however, that Mandarin Chinese famously lacks gapping constructions (Tang, 2001, a.o.).

⁵R. Huang (2010) argues for a variant which involves local clausal disjunction with Conjunction Reduction, which introduces a choice variable which is unselectively bound by a higher Q. This approach may be able to explain the wh-island-sensitivity and some intervention effects, but cannot explain the intervention which arise from subject focus constructions (24) as the intervener is in the same minimal clause as the disjunction.