

Focus, QUD, and existential *wh*-indefinites in Mandarin

Matthew Ganquan SHI; Haihua PAN

Dept of Linguistics & Modern Languages, The Chinese University of Hong Kong



Introduction

Wh-phrases in Mandarin have a non-interrogative meaning as *wh*-indefinites when they are **not bound by an interrogative/Q operator**.

- **Early view:** They are Negative Polarity Items (NPIs).
(Cheng, 1991; Huang, 1982; Li, 1992; Lin, 1998, a.o.)
 - Yet counter-examples are found in non-DE environments (Chen, 2017; M. Liu & Yang, 2021).
- (1) *Zhāngsān mǎi-le sān běn shénme shū.* (Chen, 2017: 115)
ZS buy-ASP three CL what book
'ZS bought three books of a certain kind, (but I don't know what kind it is).'
- **Recent view:** Mandarin *wh*-indefinites are epistemic indefinites.
 - Don't *know/care* about the referent's identity: Ignorance/indifference inference.
(M. Liu & Yang, 2021, following Alonso-Ovalle & Menéndez-Benito, 2010, 2015)
 - *Shénme*+NP refers to a kind but not individual of the NP. (Chen, 2017)
- It remains unclear **why (2) is odd** in most literature:
- (2) *#Zhāngsān xǐhuān shuí/shénme-rén.*
ZS like who/what-person
Intend: 'ZS likes someone.'

- **How to account for (1) & (2): *wh*-indefinites in simple positive contexts (SPCs)?**
 - An NPI-based account? \leftarrow *fails to predict (1)*
 - Telicity? (Chen, 2018) \leftarrow *very weak*
 - Default object stress? (M. Liu & Yang, 2021, following Dong, 2009) \leftarrow *related with focus?*

Proposal

Framework: Question Under Discussion (QUD) (Roberts, 1996/2012):

- The felicity of *wh*-phrases in SPCs is modulated by **focus** & the **QUD**.
- ***Q_{matrix}*-bound (thus focused) *wh*-phrases:** The sentence is a question with a *wh*-interrogative and becomes a QUD to the discourse.
- **Existential (E-bound) *wh*-phrases being focused:** The sentence is an assertion (NB: we ignore polar questions in this poster) with a *wh*-indefinite **not informative** to its immediate QUD (Büring, 2003).
- **Prediction:** When the E-bound *wh*-indefinite is not focused, it is licensed.

More data on Mandarin existential *wh*-indefinites

Despite the infelicity of (2), a *wh*-indefinite is licensed **when it is...**

- (3) **A non-sentence-final object**
Zhāngsān bèi (yī gè) shénme dōngxi yǎo le.
ZS BEI one CL what thing bite SFP
'ZS was bitten by something, (but I don't know what it is).'
- (4) **With a modifier**
Zhāngsān xǐhuān yǔyánxuéxi de shuí/shénme-rén.
ZS like ling.department DE who/what-person
'ZS likes someone from Ling Dept, (but I don't know who exactly).'
- (5) **With a telic predicate**
?Zhāngsān xǐhuān-shàng le shuí/shénme-rén.
ZS fall.in.love.with ASP who/what-person
'ZS fell in love with someone, (but I don't know who exactly).'

\Rightarrow **HYPOTHESIS:** These E-bound *wh*-indefinites cannot bear focus on their own.

- It is the **bolded** parts in (3)-(5) that are in focus.
- In (1), the Num-CL *Sān běn* 'three CL' or the whole DP *sān běn shénme shū* 'three books of a certain kind' can bear the focus, while (2) does not have such choices.

Indeed, when **the whole sentence is in focus**, (2) is more acceptable:

- (6) **Inferred facts: *Joshua found that ZS wrote a love letter, so he told Lisi...***
Wǒ fāxiàn [Zhāngsān xǐhuān shuí/shénme-rén]^F.
I find ZS like who/what-person
'I found that **ZS liked someone**.'

De-focus-ness of Mandarin existential *wh*-indefinites

This de-focus-ness of the E-bound *wh*-indefinites is further attested.

- (7) **(In)congruence in the question-answer (Q-A) pairs:** *A is bad to Q1 but not Q2*
 - a. Q1: *#Yuèhàn zuótiān jiàn-le shuí?*
John yesterday meet-ASP what-person
'Who did John meet yesterday?'
 - b. Q2: *Yuèhàn zuótiān zuò-le shénme?*
John yesterday do-ASP what
'What did John do yesterday?'
 - c. A: *tā jiàn-le shénme-rén.*
he meet-ASP what-person
'He met someone.'
- (8) **Incompatibility with the focus-sensitive operator *only***
 - a. *#Lǐsī chūmén zhǐ mǎi-le [shénme shū]^F, méi mǎi [bié de shū]^F.*
Lisi go-out only buy-ASP what book NEG buy other DE books
 - b. *Lǐsī chūmén zhǐ [mǎi-le shénme shū]^F, méi [qù kàn diànyǐng]^F.*
Lisi go-out only buy-ASP what book NEG go see movie
'Lisi went out only **to buy some book**, but not to go to the movies.'
- (9) **Incompatibility with structural focus positions**
 - a. ***Lian...dou*** 'even...' (Ernst & Wang, 1995; Shyu, 1995)
#Mǎi lián [shénme shū]^F dōu méi mǎi, gèng hékuàng shì
Mary LIAN what book DOU NEG buy more not-to-mention be
[bié de shū]^F.
other DE book
 - b. ***Shi...de*** 'it is ... that' (Huang, 1982; Teng, 1979)
#Qiáozhì qù jìshì mǎi de shì [shénme dōngxi]^F.
George go market sell DE be what thing

Question Under Discussion (Roberts, 1996/2012) & Focus

A question *Q* **establishes a new QUD** and invites the audience to address it.

An assertion *A* is intended to **answer a(n) (implicit) QUD** and update the Common Ground (CG, Stalnaker, 1978).

1. The asserted content is **new** to the discourse. \rightarrow *the focused element*
2. Focus also cues what has been asked. \rightarrow *an implicit QUD* (Büring, 2003)
Q-A Congruence Requirement: $\llbracket A \rrbracket^F = \llbracket Q \rrbracket^O$.
The focus activates a set of alternatives (Rooth, 1985, 1992). *The QUD expresses a Hamblin (1973) set of alternative propositions equal to the focal alternatives.*
3. Existential presupposition of a question:
At least one proposition of the Hamblin set is true (Keenan & Hull, 1973).

Congruent QUD Reconstruction Algorithm (CQRA) via Focus in (10)

- (10) a. Assertion: $[_{CP} \ C[_{QUD} \ [...[XP]^F \ ...]]]$ \leftarrow XP is in focus
- b. Step 1: *Wh*-phrase substitution
 $[_{CP} \ C[_{QUD} \ [...[_{XP} \ \text{wh}_{[???]}]^F \ ...]]]$ \leftarrow the *wh*-phrase is yet to be bound
- c. Step 2: Matrix *Q*-force implementation
 $[_{CP} \ C[_{QUD} \ [...[_{XP} \ \text{wh}_{[+Q]}]^F \ ...]]]$ \leftarrow *the reconstructed immediate QUD*

Asking a question: Inquiries over its Hamblin set

Suppose $Q = \{q_1, q_2, ..., q_i\}$, where $q_1, q_2, ..., q_i$ are all propositions.

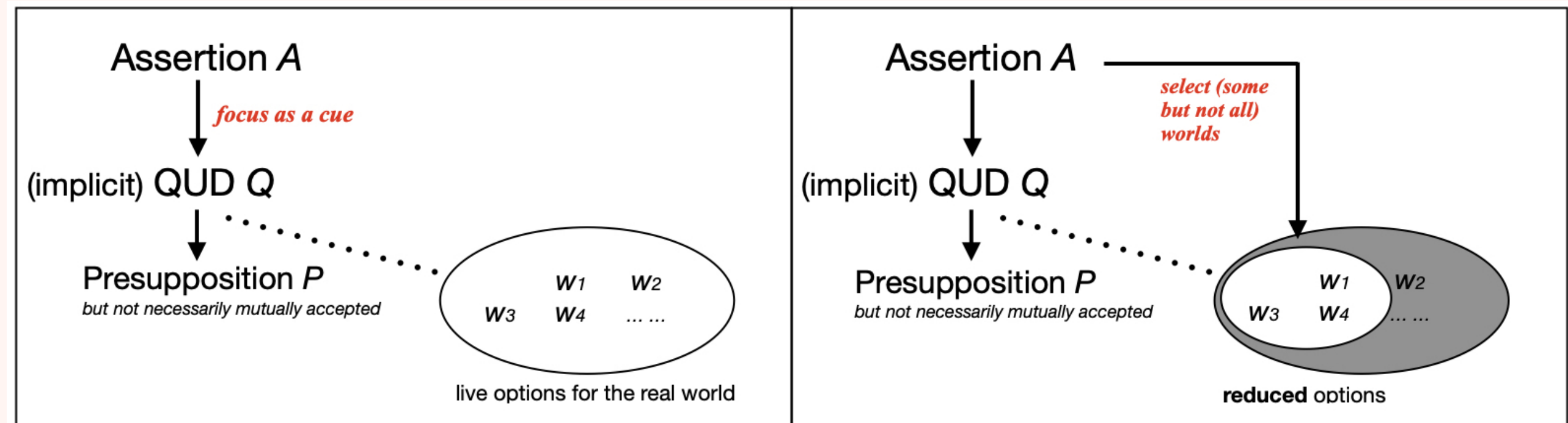
- *Q* corresponds to a set *W* of 2^i possible worlds, where, e.g., $w_1: \forall q \in Q. q = 1$.
- Asking *Q* equals to inquiring about the truth values of all *qs* in question.
- The speaker asking *Q* presupposes that $\exists q \in Q. q = 1$.

QUD & Assertion: Informativity

What does an assertion do?

Evaluate **at least some** of the truth values of *qs* in *Q* (Roberts, 1996/2012).

- **Relevance Req.:** Introduce a *partial answer*.
- **Informativity Req.** Reduce *W*.



- **NB:** Roberts defines good assertions to be **relevant**, **congruent**, & **informative**.
- Via **CQRA**, both **Relevance** & **Congruence** are met.
- We proceed to check the **Informativity**.

Analysis: The evaluation of informativity

Three scenarios (A-C) are considered:

(A) *Wh*-indefinites in focus

- Imagine a world with 4 individuals, $U = \{ZS, J, M, N\}$; predicate *like* is irreflexive.
- Denote $p = like_w(ZS, J)$, $q = like_w(ZS, M)$, & $r = like_w(ZS, N)$, and $L = \{p, q, r\}$.

1. **When hearing (2), we reconstruct a QUD via CQRA:**

(11) *Zhāngsān xǐhuān shuí/shénme-rén (ne_{SFP})?* = ?*L*
'Who does ZS like?'

2. **2*2*2=8 possible worlds to be evaluated:**

$W = \{p \wedge q \wedge r, \neg p \wedge q \wedge r, p \wedge \neg q \wedge r, \neg p \wedge \neg q \wedge r, ..., \neg p \wedge \neg q \wedge \neg r\}$

3. An **informative** answer eliminates **at least one** possible world among the 8, e.g.:

- 1) $\llbracket ZS \text{ likes everyone.} \rrbracket = p \wedge q \wedge r = \forall p' \in L. p' = 1$ one possible world left
- 2) $\llbracket ZS \text{ likes J.} \rrbracket = p$ 4 worlds left
- 3) $\llbracket ZS \text{ likes shénme rén.} \rrbracket = \textcircled{1} \exists x \in U \setminus \{ZS\}. like_w(ZS, x) = \exists p' \in L. p' = 1$ normal meaning
OR = $\textcircled{2} \Box_s \exists x \in U \setminus \{ZS\}. like_w(ZS, x) \wedge \neg \cup \{\Box_s like_w(ZS, x) | x \in U \setminus \{ZS\}\}$ enriched meaning
(Chierchia, 2013; Chierchia et al., 2012; Kratzer & Shimoyama, 2002; M. Liu & Yang, 2021)
NB: \Box_s is an assertoric/belief operator that reads *the speaker believes that p*.

For (2), $\textcircled{1}$ is presupposed by the question; while $\textcircled{2}$ *does* add ignorance inference, it fails to reduce any options \Rightarrow **the Informativity Requirement is violated**

(B) A focused phrase not containing the *wh*-indefinite

E.g., (4), $\llbracket yuyan.xuexi \rrbracket^F = \{Dept.of.Ling, Dept.of.Math, ...\}$

\Rightarrow (4) excludes possible worlds in which *ZS doesn't like anyone from Ling. Dept.*

(C) A focused phrase containing the *wh*-indefinite

E.g., (7b-c), $\llbracket jian.le.shenme.ren \rrbracket^F = \{met.with.someone, went.to.a.movie, ...\}$

\Rightarrow (7) excludes possible worlds in which *John didn't meet with anyone yesterday*.

Conclusions

- The QUD model formalizes the following restriction: *Wh*-indefinites in simple positive contexts cannot bear focus due to **Non-Informativity**.
- The contrast btn. (2) & others boils down to the informativity and how speakers tend to reconstruct the QUD, e.g., via default focus (D. Liu & Xu, 1998; Xu, 2004).
- (1-5, 7-9) are also acceptable when the *wh*-phrase is instead Q-bound.
- **Future research:** Whether *wh*-indefinites are universally de-focused.
 - For E-boundness, include polar questions, negations, & modals.
 - Do non-E-bound *wh*-indefinites also resist being focused?



NB: The references used in this poster can be found in the QR code \rightarrow