

**Dou and scope effects in Mandarin relative clauses**  
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**Puzzle:** An embedded quantificational phrase (QP) in a Mandarin relative clause (RC) can take wide scope over an RC-external one and bind a pronoun in the matrix clause, which is not c-commanded by the QP (1a). The exceptional-scope effects disappear when the embedded QP is associated with the particle *dou* inside the RC (1b) (Huang 1982, 1983; Aoun and Li 1993, 2003, a.o.). I observe that the same RC in (1b) embedded in a specificational sentence (1c) admits a *multiple-individual reading*, which is similar to the scope effects in (1a): Among the women each man *x* invited, there is one woman who is *x*'s mom.

- (1) a. [RC [ **mei-ge nanren** ]<sub>1</sub> yaoqing \_\_\_ de ] **yi-ge nüren** yongbao-le ta<sub>1</sub>  
every-CL man invite DE one-CL woman hug-ASP 3SG  
≈ 'There is a woman *y* who was invited by every man and *y* hugged someone.' (∃ > ∀)  
≈ 'For every man *x*, there is a (possibly different) woman *y* who *x* invited and *y* hugged *x*.'  
(∀ > ∃)
- b. [RC [[ **mei-ge nanren** ]<sub>1</sub>]<sub>[+F]</sub> **dou** yaoqing \_\_\_ de ] **yi-ge nüren** yongbao-le ta\*<sub>1</sub>  
every-CL man DOU invite DE one-CL woman hug-ASP 3SG  
(∃ > ∀/\*∀ > ∃)
- c. [RC [[ **mei-ge nanren** ]<sub>1</sub>]<sub>[+F]</sub> **dou** yaoqing \_\_\_ de ] **yi-ge nüren** shi ta<sub>1</sub> mama  
every-CL man DOU invite DE one-CL woman be 3SG mom  
'A woman who [every man]<sub>1</sub> invited is his<sub>1</sub> mom.' (✓ *multiple-individual reading*)

**Proposal:** I propose that an RC-embedded QP in Mandarin pre-D(eterminer) RCs can undergo long QR to [Spec, DP] (2) (phase heads in boxes), which does not violate locality constraints on QR, namely the Phase Impenetrability Condition and Scope Economy (Fox 2000; Cecchetto 2004, a.o.). However, *dou* blocks this QR step due to its *non-vacuity presupposition* (Xiang 2020), as shown in (4), thus creating the contrast between (1a) and (1b). The multiple-individual reading in (1c), on the other hand, is a natural-function reading, different from a wide-scope reading in several aspects (Jacobson 1994; Sharvit 1999), and *dou* is compatible with a natural-function RC.

- (2) ✓ *Long QR out of a prenominal pre-D RC*  
[DP <QP<sub>subj</sub>> [DP [RC<sub>i</sub> OP<sub>j</sub> [C' [C<sub>+rel</sub>] [TP QP<sub>subj</sub> V \_\_\_<sub>j</sub>]]] [D' [D/NUM-CL] [NP HEAD \_\_\_<sub>i</sub>]]]]

- (3) (1b) after hypothetical QR:

...[DP **every man** [2... [RC 1 [*douc-pro1*] [S [\_\_\_<sub>2</sub>]<sub>[+F]</sub> invited \_\_\_<sub>1</sub>]]] one [Head woman]]...

- (4) For any *g*, assuming  $\llbracket C \rrbracket^g = C$ ,  $\text{DOM}(\llbracket RC \rrbracket^g) = \emptyset$ , because,

- a.  $\llbracket RC \rrbracket^g = \lambda y : \llbracket dou_{C-pro1} S \rrbracket^{g[1 \rightarrow y]}$  is defined.  $\llbracket dou_{C-pro1} S \rrbracket^{g[1 \rightarrow y]}$   
 $= \lambda y : \text{SUB}(\llbracket S \rrbracket^{g[1 \rightarrow y]}, C(y)) \neq \emptyset$ .  $\llbracket S \rrbracket^{g[1 \rightarrow y]} = 1 \wedge \forall q \in \text{SUB}(\llbracket S \rrbracket^{g[1 \rightarrow y]}, C(y)) [O(q) = 0]$
- b. For any *y*,
- i.  $\llbracket S \rrbracket^{g[1 \rightarrow y]} = 1$  iff  $\text{INVITE}(g(2), y)$ ;    ii.  $C(y) = \{\text{INVITE}(x, y) \mid x \text{ is a relevant individual}\}$ ;  
iii.  $\text{SUB}(\llbracket S \rrbracket^{g[1 \rightarrow y]}, C(y)) = \emptyset$ . (*non-vacuity presupposition failure*)

**Conclusion and implications:** The proposed long QR and *dou*'s blocking effect have two folds of implications. First, the possibility of long QR suggests that QR is not restricted in Mandarin across the board, and the scope rigidity in Mandarin transitive clauses compared to their English counterparts can be attributed to the lack of independent motivation for the object QP to undergo QR over the subject QP in Mandarin. Potential reasons and preliminary evidence for the lack of motivation will be discussed in the paper but left open for future research. Second, the interaction of *dou* with RCs embedded in different kinds of matrix clauses sheds lights on the relationship between a focus-sensitive operator and movement of its associate. A focus-sensitive operator like *dou* does not always block movement of its associate, as long as the moved element can be interpreted in its base position or within the preadjacent clause. Hence, it is the position of interpretation, rather than the surface form, of an element that licenses its association with an operator.