Quantifier scope in Mandarin ditransitives

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1. Introduction

Scope-rigid language ??

passives-actives
ditransitives (PPDs - DOC)

locatives
ablatives

Movement Analysis
Problems of other account
Conclusions
2. Data I: Active-Passive pairs

- **Mandarin actives typically show fixed scope:**
  (1) Liangge nuren du-guo meiben shu...
      two women read-asp every book
      'Two women read every book.' (2 > ∀, *∀ > 2)

- **Mandarin passives allow flexible scope:**
  (2) Liangge xiansuo bei meigeren zhaodao...
      two clues by everyone found
      'two clues were found by everyone.' (2 > ∀, ∀ > 2)

(Aoun & Li 1993)
2. Data II: DOC – PPD pairs

- Mandarin double object constructions (DOCs) show fixed scope:

  (3) Laoshi song-le [liang-ge xuesheng] [mei-ben shu].
  teacher give-asp two-cl student every-cl book
  'The teacher gave two students every book.'
  \((2 > \forall, *\forall > 2)\)

  (4) Zhangsan mai-le [liang-ge xuesheng] [mei-ben shu].
  Zhangsan sell-asp two-cl student every-cl book
  'Zhangsan sold two students every book.'
  \((2 > \forall, *\forall > 2)\)

2. Data II: PPD - DOC pairs

- Mandarin prepositional datives (PPDs) allow flexible scope:

  (5) Laoshi song-le [liang-ben shu] [PP gei mei-ge xuesheng].
  teacher give-asp two-cl book to every-cl student
  'The teacher gave two books to every students.'
  \[2 > \forall, \forall > 2\]

  (6) Zhangsan mai-le [liang-ben shu] [PP geimei-ge xuesheng].
  Zhangsan sell-asp two-cl book to every-cl student
  'Zhangsan sold two book to every students.'
  \[2 > \forall, \forall > 2\]

2. Data III: more PPDs

- Some PPDs even prefer inverse scope:

(7) Laoshi song-le [xie pingyu] [pp gei mei-ge xuesheng].
    teacher give-asp some comment to every-cl student
    'The teacher gave some comment to every students.'
    \[(\exists > \forall, \forall > \exists)\]

(8) Guo shengri de tongxue yao hui-song
    Celebrate birthday DE student needs give-back
    [liwu] [pp gei mei-wei lai zhuhe shengri de tongxue].
    gift to every-cl come congratulate birthday DE students.
    'The student who celebrated his birthday needs to give back some gift to every student who came to his birthday party.'
    \[(\exists > \forall, \forall > \exists)\] (CCL corpous)
2. Data IV: Locatives

- Preverbal PPs show fixed scope:
  
  (9) Chushi zai yi-ge panzi li fang-le mei-ge jiaozii.
  Chef in one-cl plate inside put-asp every-cl dumpling
  'The chef put every dumpling in a plate.'
  
  \((\exists > \forall, *\forall > \exists)\)

  (10) Laoshi zai yi-ge heiban shang xie-le mei-ge ju-zi.
  teacher at one-cl blackboard on write-le every-cl sentence
  'The teacher wrote every sentence on a blackboard.'
  
  \((\exists > \forall, *\forall > \exists)\)
2. Data IV: Locatives

- Post-verbal PPs allow **flexible scope**:
  
  (11) Chushi fang-le yi-ge jiaozi zai mei-ge panzi li.  
  Chef put-asp one-cl dumpling in every-cl plate inside  
  'The chef put a dumpling on every plate.'  
  
  (∀ > ∃, ∃ > ∀)

  (12) Laoshi xie-le yi-ge ju-zi zai mei-ge heiban shang.  
  teacher write-le one-cl sentence at every-cl blackboard on  
  'The teacher wrote a sentence on every blackboard.'  
  
  (∃ > ∀, ∀ > ∃)
2. Data V: Ablatives

- Preverbal PPs show fixed scope:

  (13) Zuojia cong yi-wei duzhe nali shou-dao mei-feng xin
       writer from one-cl reader there receive every-cl letter
       'From a reader, the writer received every letter.'
       \((\exists > \forall, *\forall > \exists)\)

  (14) Zhangsan cong yi-ge pengyou nali jie-le mei-ben shu.
       zhangsan from one-cl friend there borrow-asp every-cl book
       'From a friend, Zhangsan borrowed every book.'
       \((\exists > \forall, *\forall > \exists)\)
2. Data V: Ablatives

- Post-verbal PPs allow flexible scope:

  (15) Zuojia shoudao-le yi-feng xin cong mei-wei duzhe nali.

  writer receive-asp one-cl letter from every-cl reader there

  'the writer received a letter from every reader.'

  \((\exists > \forall, \forall > \exists)\)

  (16) Zhangsan jie-le yi-ben shu cong mei-ge pengyou nali.

  zhangsan borrow-asp one-cl book from every-cl friend there

  'Zhangsan borrowed one book from every friend.'

  \((\exists > \forall, \forall > \exists)\)

- **The Scope Principle:**
  A quantifier A may have scope over a quantifier B iff A c-
  commands a member of the chain containing B.

(17) a. $\text{QP}_1 \ x_1 \ \text{QP}_2 \ x_2$ (active)

  b. $\text{QP}_2 \ x_2 \ \text{QP}_1 \ x_1 \ t_2$ (passive)

- Does it predict asymmetry between post-verbal PP constructions and preverbal PP constructions?

Assume pre-verbal PP position as the base position.
- Derivation of post-verbal PPs plausibly involves rightward extraposition and adjunction
- No c-command between DP and either PP or its trace
- **Prediction**: Post-verbal PPs should have fixed scope.
- Incorrect prediction

- Does it predict asymmetry between post-verbal PP constructions and preverbal PP constructions? Assume post-verbal PP position as the base position.
  - Derivation of pre-verbal PPs plausibly involves leftward raising and adjunction
  - Assuming DPs can c-command out of PPs, then c-command between higher DP and lower DP and between lower DP and the trace of higher DP
  - **Prediction**: Preverbal PPs should allow either scope.
  - **Incorrect prediction**

- **The Scope Freezing Generalization (SFG):**
  Scope freezing results when one QP raises over another to a c-commanding position as a result of a single instance of movement.

- **Underlying assumption:**
  Base order is scope flexible; frozen scope is caused by argument displacement or relocation.

- Does it predict asymmetry between pre-/post-verbal PPs?
- Does it predict asymmetry between PPDs and DOCs?
- Does it predict asymmetry between passives and actives?

- In Mandarin, the base position of all complements is post-verbal (Mulder & Sybesma 1992).

- Thematic Hierarchy: AG>TH>GL>LOC>SRC⋯
  These theta-role-bearing constituents are arguments that have their due positions in the vP complex. (Larson 2014, 2016)

- Post-verbal PP is the base and preverbal PP is derived.

- Does it predict asymmetry between post-verbal PP constructions and preverbal PP constructions?

post-verbal PP position as the base position:
- involve no movement.
- Suppose base order allows ambiguity (as in English).
- **Prediction**: Flexible scope
- **Correct prediction!**

- Does it predict asymmetry between post-verbal PP constructions and preverbal PP constructions?

post-verbal PP position as the base position:
- Derivation of pre-verbal PPs is plausibly left-adjunction.
- Assuming DPs can c-command out of PPs, this raises DP (in PP) over object DP to a c-commanding position.
- **Prediction:** Preverbal PPs should show frozen scope.
- **Correct prediction!**

• **DOCs involve raising**

  Larson (2014), Paul & Whitman (2009) propose respectively that both in English and Mandarin, DOCs involve raising of the indirect object over the direct object.
PPD: no Raising of DO or IO

’Laoshi song-le liang-ben shu gei mei-ge xuesheng.’

Paul & Whitman (2009)
DOC: Raising of IO over DO

"Laoshi song-le liang-ge xuesheng mei-ben shu."

Paul & Whitman (2009)

- In DOCs, the lower DP (goal) raises over the higher DP (theme) from a c-commanded to a c-commanding position.
- In PPDs, the goal DP merges first with the verb, gets its features checked and stays low; hence no movement that inverts the c-command relations between the two DPs.

- **Prediction:** DOC should show scope freezing.
  PPDs should show flexible scope.
- **Correct prediction!**
3. Analysis III: Aoun & Li (1993) again

a. Goal$_2$ x2 Theme x1 t$_2$ (DOC)
b. Theme x1 Goal x2 (PPD)

- **Prediction**: DOCs should show flexible scope; PPDs should show fixed scope.
- **Incorrect prediction**

- Analysis of passives
  Passives are base generated through Null Operator movement and control. (Huang 1999)

- SFG predicts no freezing for passives.
  - Correct prediction!
3. Analysis V: An Unresolved Puzzle!

- **SFG correctly predicts:**
  - Scope in Mandarin pre- and post-posed PPs
  - Scope in Mandarin DOCs and PPDs
  - Scope ambiguity in Mandarin passives

- **SFG does not predict the fixed scope of simple transitives.**
3. Analysis V: An Unresolved Puzzle!

To account for the fixed scope of simple transitives, we may explore the following possibilities in the future:

- Simple transitives involve movements in which subject and object cross.
- Some addition factor is involved in simple transitives, e.g., information structure, favoring a wide scope interpretation of the subject (D-linking, definiteness, specificity, etc.)
4. Conclusions

- Mandarin Chinese is not a strictly scope-rigid language.
- Striking similarities found between Mandarin and English with regard to scope phenomena in ditransitives.
- Parallel analyses can be applied across-linguistically.
5. Selected Reference

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- Analysis of passives (Collins 2005)
  “Smuggling” of object DP within a moved phrase (PartP)
- SFG predicts no freezing since no c-command between DPs