Demonstratives and the Restrictive/Appositive Distinction in Mandarin Relative Clauses

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Mandarin relative clauses (RC) can co-occur with demonstratives (Dem):

\[
\langle \text{RC} \rangle \text{ Dem Num CL} \langle \text{RC} \rangle \text{ N}
\]

- **pre-Dem position:**

  (1) \[ \langle \text{RC} \rangle \text{ ying-le bisai de} \text{ zhe/na (yi) wei xuesheng} \text{ win-PERF game DE this/that one CL student} \]

- **post-Dem position:**

  (2) \[ \text{ zhe/na (yi) wei } \langle \text{RC} \rangle \text{ ying-le bisai de} \text{ xuesheng} \text{ this/that one CL win-PERF game DE student} \]

Question: ‘this/that student (,) who won the game’ (restrictive or appositive)?
Different conclusions were reached about the correlation (Chao 1968; Huang 1982; Lin 2003; Constant 2011; Lin&Tsai 2014; Del Gobbo 2010, 2017 a.o.)

<table>
<thead>
<tr>
<th></th>
<th>Chao, Huang</th>
<th>Lv, Tsai</th>
<th>Lin</th>
<th>Constant</th>
</tr>
</thead>
<tbody>
<tr>
<td>pre-Dem RC</td>
<td>restrictive</td>
<td>appositive</td>
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</tr>
<tr>
<td>post-Dem RC</td>
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<td>restrictive/appositive</td>
</tr>
</tbody>
</table>

→ The restrictive/appositive (R/A) distinction correlates with RC’s pre/post-Dem position.

*Why is it so difficult to diagnose the distinction?*
Tests for R/A distinction in English (Jackendoff 1977; Cinque 2008; Potts 2003; Del Gobbo 2003, a.o.):

- QP anchors: *appositive; restrictive

  (3)  a. *John congratulated every student, who won the game.
  b. John congratulated every student that won the game.

- Non-DP anchors: appositive; *restrictive

  (4)  a. Mary is honest, which John will never be.
  b. *Mary is honest that John will never be.
Most of these tests, however, are for non-integrated appositives (Cinque 2008), while Mandarin appositives are integrated (Gobbo 2010, 2017).
Most of these tests, however, are for non-integrated appositives (Cinque 2008), while Mandarin appositives are integrated (Gobbo 2010, 2017).

Tests which tease apart integrated appositives and restrictives in Mandarin (Constant 2011; Lin&Tsai 2014; Del Gobbo 2010, 2017):

- Nondeniability
- Antibackgrounding
- Root-level adverbs
This talk:
- Different uses of demonstrative are ignored in previous research, and they interact with R/A distinction
- No one-to-one correspondence between pre/post-Dem position and R/A distinction
Outline

1. Two uses of demonstrative

2. The central claim and arguments
   - The restrictive/appositive distinction of RCs correlates with the uses of Dem
   - Applying three valid tests

3. Analysis

4. Conclusions
Different uses of Dem are not distinguished

At least two uses of demonstrative:

- Deictic use (Dissel 1999; Roberts 2003)

  (5) ¹⁻² zhe/na  wei xuesheng hen xingyun
       this/that CL student very lucky

     ‘This/that student is very lucky’
Different uses of Dem are not distinguished

At least two uses of demonstrative:

- **Deictic use** (Dissel 1999; Roberts 2003)

  \[(5) \quad zhe/na \quad wei \ xuesheng \ hen \ xingyun \]

  this/that CL student very lucky

  ‘This/that student is very lucky’

- **Anaphoric use** (Wolter 2004; Jenks 2018)

  \[(6) \quad you \ yi \ wei \ xuesheng \ ying-le \ bai. \ zhe/na \ wei \ xuesheng \]

  have one CL student win-PERF game this/that CL student

  hen xingyun

  very lucky

  ‘[A student] won the game. [This/that student] was very lucky’
Outline

1. Two uses of demonstrative

2. The central claim and arguments
   - The restrictive/appositive distinction of RCs correlates with the uses of Dem
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4. Conclusions
The central claim

- $<\text{RC}^\text{restrictive/appositive}>$
- $<\text{RC}^\text{restrictive/appositive}>$

Dem$\text{deictic}$  CL  $<\text{RC}^\text{restrictive/appositive}>$  N

Dem$\text{anaphoric}$  CL  $<\text{RC}^\text{restrictive/appositive}>$  N
Outline

1 Two uses of demonstrative

2 The central claim and arguments
   - The restrictive/appositive distinction of RCs correlates with the uses of Dem
   - Applying three valid tests

3 Analysis

4 Conclusions
Appositives as conventional implicatures are not deniable with epistemic riders (Constant 2011; Potts 2005).

(7) 
   a. #If John did win, then John, who won the game, was lucky.
   b. If a student did win, then the student that won the game was lucky.

If the result is # → RC can only be appositive;
If the result is ok → RC can be restrictive.
Test 1: Nondeniability

- Deictic use of Dem

(8) ruguo .setImage(zhe) zhe setImage(wei) xuesheng queshi ying-le, ......  
if this CL student indeed win-PERF  
‘If this student indeed won,...

a. #[RC ying-le  Image(bisai) de] setImage(zhe) zhe setImage(wei) xuesheng hen xingyun  
   win-PERF game DE this CL student very lucky  
   ‘this student, who won the game, was very lucky’

b. setImage(zhe) zhe setImage(wei) [RC ying-le  Image(bisai) de] xuesheng hen xingyun  
   this CL win-PERF game DE student very lucky  
   ‘this student who won the game, was very lucky’
Deictic use of Dem

(8) ruguo zhe wei xuesheng queshi ying-le, ...... if this CL student indeed win-PERF
‘If this student indeed won,...

a. #\text{\begin{rc}ying-le\end{rc}bisai\ de\ \text{\begin{pre-dem}zhe\ wei\ xuesheng\ hen\ xingyun win-PERF\ game\ DE\ \text{\begin{post-dem}this\ CL\ student\ very\ lucky\end{post-dem}}\end{pre-dem}\end{rc}}\
‘this student, who won the game, was very lucky’

b. \text{\begin{pre-dem}zhe\ wei\ \text{\begin{rc}ying-le\end{rc}bisai\ de\ \text{\begin{post-dem}xuesheng\ hen\ xingyun win-PERF\ game\ DE\ \text{\begin{post-dem}student\ very\ lucky\end{post-dem}}\end{post-dem}}\end{pre-dem}}\end{pre-dem}
‘this student who won the game, was very lucky’

→ This shows:

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Test 1: Nondeniability

- Anaphoric use of Dem

(9) ruguo you yi wei xuesheng qeshi ying-le, ...... if have one CL student indeed win-PERF
    ‘If a student indeed won,...

  a. \([RC \text{ ying-le } \text{ bisai de}] \text{ zhe} \text{ wei} \text{ xuesheng} \text{ hen} \text{ xingyun}\)
     win-PERF game DE this CL student very lucky

  b. \(\text{ zhe} \text{ wei} [RC \text{ ying-le } \text{ bisai de}] \text{ xuesheng} \text{ hen} \text{ xingyun}\)
     this CL win-PERF game DE student very lucky
     this student who won the game, was very lucky’
Test 1: Nondeniability

- Anaphoric use of Dem

(9) ruguo you yi wei xuesheng queshi ying-le, ....
    if have one CL student indeed win-PERF
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b. zhe wei \([RC\ ying-le\ bisai\ de]\ xuesheng\ hen\ xingyun\ this\ CL\ win-PERF\ game\ DE\ student\ very\ lucky\]
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Test 2: Antibackgrounding

The content of appositives cannot be backgrounded (Potts 2005) while the content of restrictives are often presupposed (Comrie 1981; Constant 2011).

(10)  
   a. Bill loves reading. \#When reporters interview Bill, who loves reading, he often talks about his books.  
   b. A student loves reading. When reporters interview the student that loves reading, he often talks about his books.

If the result is \# \rightarrow RC can only be appositive;  
If the result is ok \rightarrow RC can be restrictive.
Test 2: Antibackgrounding

- Deictic use of Dem

(11) \[\text{zhe wei xuesheng ai dushu, ... zuotian mai-le xuduo shu} \]
\[\text{this CL student love reading ... yesterday buy-PERF many book} \]

‘This student loves reading. ...... bought many books yesterday’

a. \#[RC ai dushu de] \[\text{zhe wei xuesheng} \]
\[\text{love reading DE this CL student} \]

‘This student, who loves reading’

b. \[\text{zhe wei [RC ai dushu de] xuesheng} \]
\[\text{this CL love reading DE student} \]

‘This student who loves reading’
Deictic use of Dem

(11)  

\[ \text{zhe wei xuesheng ai dushu, ... zuotian mai-le xuduo shu} \]
\[ \text{this CL student love reading ... yesterday buy-PERF many book} \]

‘This student loves reading. ... bought many books yesterday’

a. \(#[RC \text{ ai dushu de}] \text{ zhe wei xuesheng}\]
\[ \text{love reading DE this CL student} \]

‘This student, who loves reading’

b. \[\text{zhe wei } [RC \text{ ai dushu de} \text{ xuesheng}\]
\[ \text{this CL love reading DE student} \]

‘This student who loves reading’

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Test 2: Antibackgrounding

- Anaphoric use of Dem

(12) mou weixueshengai dushu, ...... zuotian mai-le xuduo shu

some CL student love reading ...... yesterday buy-PERF many book

‘Some student loves reading. ...... bought many books yesterday.’

a. \( [RC \, ai \, dushu \, de] \, zhe \, weixuesheng \)
   love reading DE this CL student

b. zhe weixuesheng\( [RC \, ai \, dushu \, de] \, xuesheng \)
   this CL love reading DE student

‘This student who loves reading’
Test 2: Antibackgrounding

- Anaphoric use of Dem

(12) mou wei xuesheng ai dushu, ....... zuotian mai-le xuduo shu
    some CL student love reading ....... yesterday buy-PERF many book
    ‘Some student loves reading. ....... bought many books yesterday.’

    a. \[RC\ ai dushu de\] zhe wei xuesheng
       love reading DE this CL student

    b. zhe wei \[RC\ ai dushu de\] xuesheng
       this CL love reading DE student
       ‘This student who loves reading’

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Test 3: Root-level adverbs

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Excerpt pre-Dem RCs for deictic Dem, the question remains for the other three cases: can it only be restrictive or also be appositive?
Test 3: Root-level adverbs

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Excerpt pre-Dem RCs for deictic Dem, the question remains for the other three cases: can it only be restrictive or also be appositive?

We need a test to rule out restrictive RCs!

Applying Test 3: Only appositives can host root-level adverbs (Emonds 1979).

(13)  a. The student, who frankly has much time, should help you.
     b. #The student that frankly has much time should help you.
Deictic use of Dem

(14) ...... yinggai bang ni
    should help you
    ‘…… should help you’

a. \[[RC \text{ laoshishuo you henduo shijian de}] \text{ zhe wei xuesheng} \]
   frankly have much time DE this CL student

b. \[\text{ zhe wei [RC laoshishuo you henduo shijian de]} \text{ xuesheng} \]
   this CL frankly have much time DE student
   ‘This student, who frankly has much time, ’

→ This shows:

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</table>
Test 3: Root-level adverbials

- Anaphoric use of Dem

(15)  mou wei xuesheng ying-le  bisai. wo hen xinshang ......  
some CL student win-PERF game I very admire  
‘Some student won the game. I admire ......’

a. \([RC \text{laoishishuo congbu songxie de}] \text{zhe wei xuesheng}  
\text{frankly never slack DE this CL student}

b. \text{zhe wei [RC laoshishuo congbu songxie de] xuesheng} 
\text{this CL frankly never slack DE student} 
‘this student, who frankly never slacks off’

→ This shows:

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Generalizations

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→ How to capture the generalization?
We adopt the matching analysis for the syntax of RCs such that a null operator moves within RCs.

(16)  \[ RC \ Op_i [t_i \ ying-le \ bisai] \]-de
\[
\begin{array}{c}
\text{win-PERF} \\
\text{game \ MOD}
\end{array}
\]

\[[RC \ Op_i [t_i \ ying-le \ bisai] \]-de\] = \(\lambda x.\text{win.the.game}(x)\)
Demonstratives have an extra argument slot (Elbourne 2005; Schwarz 2009; Jenks 2018).

(17) Anaphoric use:
\[
\begin{align*}
\mathbf{[Pred(1)]}^g &= \lambda x. x = g(1) \\
\end{align*}
\]
\[
\begin{align*}
\mathbf{[that]} &= \lambda P \lambda Q : \exists! x [P(x) & Q(x)]. \iota x [P(x) & Q(x)] \\
\text{DP}_e
\end{align*}
\]
\[
\begin{align*}
\mathbf{Pred(1)/}\delta
\end{align*}
\]
\[
\begin{align*}
\mathbf{indexical\ property}
\end{align*}
\]
\[
\begin{align*}
\mathbf{Dem}_{<et,<et,e>}
\end{align*}
\]

(18) Deictic use:
That student seemed happy.
\[
\begin{align*}
\mathbf{[\delta]} &= \lambda x. L_\delta(x) (L_\delta(x) \text{ is true iff } x \text{ is in a distal location demonstrated by the speaker’s gesture } \delta)
\end{align*}
\]
**Deictic use:** SpecDP is **obligatorily** occupied by the demonstration $\delta$

**Anaphoric use:** SpecDP is **optionally** occupied by the referential index

<table>
<thead>
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<tbody>
<tr>
<td><img src="image1" alt="Deictic Dem Diagram" /></td>
<td><img src="image2" alt="Anaphoric Dem Diagram" /></td>
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</table>

- Pre-Dem RCs adjoin to DP → appositive
- Pre-Dem RCs in SpecDP → restrictive
- Post-Dem RCs adjoin to NP → restrictive/appositive
Analysis (pre-Dem RCs)

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\[
\exists!x[\text{student}(x) \& L_\delta(x)].\iota x[\text{student}(x) \& L_\delta(x)] : e^a
\]

\[
\bullet \quad \text{win.the.game}(s) : t^c
\]

\[
\exists!x[\text{student}(x) \& L_\delta(x)].\iota x[\text{student}(x) \& L_\delta(x)] : e^a \rightarrow s
\]

\[
\text{win.the.game}: \langle e^a, t^c \rangle
\]

The composition of conventional implicatures (CI application, Potts 2005)
### Analysis (pre-Dem RCs)

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#### Diagram:

\[
\begin{align*}
&\exists! x[\text{student}(x) & \text{win.the.game}(x)] \cdot \iota x[\text{student}(x) & \text{win.the.game}(x)] : e^a \\
&\lambda Q : \exists! x[\text{student}(x) & Q(x)] \cdot \iota x[\text{student}(x) & Q(x)] : \langle \langle e^a, t^a \rangle, e^a \rangle \\
&\lambda P \lambda Q : \exists! x[P(x) & Q(x)] \cdot \iota x[P(x) & Q(x)] \\
&\text{RC}_{\text{restrictive-de}} \quad \text{win.the.game: } \langle e^a, t^a \rangle \\
&\text{D} \quad \text{CLP} \\
&\text{D'} \quad \text{Dem} \\
&\text{student} \\
\end{align*}
\]
Analysis (pre-Dem RCs)

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DP
\[\exists! x[\text{student}(x) \& x = g(1)].\iota x[\text{student}(x) \& x = g(1)]: e^a\]

\[\text{win.the.game}(s): t^c\]

\[\exists! x[\text{student}(x) \& x = g(1)].\iota x[\text{student}(x) \& x = g(1)]: e^a \rightarrow s\]

\[\lambda Q: \exists! x[\text{student}(x) \& Q(x)].\iota x[\text{student}(x) \& Q(x)]\]

\[\lambda P \lambda Q: \exists! x[P(x) \& Q(x)].\iota x[P(x) \& Q(x)]\]

\[\text{Dem}\]

\[\text{CLP}\]

\[\text{student}\]
Analysis (post-Dem RCs)

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\[
\lambda P \lambda Q : \exists! x [P(x) \& Q(x)]. \\
\lambda x. \text{student}(x) \& \text{win.the.game}(x): \langle e^a, t^a \rangle
\]
Appositives can be propositional and contain a variable that is saturated by the value of the nearest discourse referent (Potts 2005; Constant 2011).
Conclusions

- Two uses of demonstrative are distinguished:

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<td>SpecDP</td>
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- Different uses of demonstratives interact with the restrictive/appositive distinction of RCs:

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- No one-to-one correspondence between RC’s pre/post-Dem position and its R/A distinction
Conclusions

- Two uses of demonstrative are distinguished:

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- Different uses of demonstratives interact with the restrictive/appositive distinction of RCs:

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- No one-to-one correspondence between RC’s pre/post-Dem position and its R/A distinction

Further questions:

$$<\text{RC}> \begin{cases}
\text{Dem Num CL} \\
\text{Num CL} \\
\text{Quantifier (CL)}
\end{cases} <\text{RC}> \text{ N}$$