Long-distance agreement
LING 252 · Ethan Poole · 3 March 2022

1 Bhatt and Keine (2017) [an overview paper]

- Basic facts about LDA (in Hindi)\(^1\)
  - LDA is optional in most cases.
  - In the presence of LDA, infinitival agreement is required.
  - The matrix predicate may agree with an embedded object, but an embedded predicate may not agree with a matrix object. LDA is asymmetric.
  - Subject clauses are systematically opaque for LDA.

* Analyses in the literature

(1) **Long movement**

```
    agreement
    [ … PROBE … DP … [embedded clause … t … ]] 

    movement
```

(2) **Edge movement**

```
    Agree
    … PROBE … [embedded clause DP [ … t … ] inaccessible ] 

    movement
```

(3) **Restructuring via clause union**

```
    Agree
    [ … DP_{SUBJ} … DP_{OBJ} … [V_{INFIN} V_{FIN}] ]
```

(4) **Restructuring via small clauses**

```
    Agree
    [ … PROBE … [pruned clause … DP_{GOAL} … ] ]
```

(5) **Cyclic Agree**

```
    Agree
    [ … β … α … DP … ]
```

(6) **Proxy agreement**

```
    agreement
    PROBE … pro_i … [ … DP_i … ]
```

\(^1\) We’ve already seen most of these facts, so I won’t dwell on them.
• **Evidence for an in-situ dependency**
  - As we have already seen, an object that is part of an idiom may control LDA:
    \[ \text{(7) } \begin{array}{llllllllll}
        & \text{Ram-ne } & \text{Prataap-kii} & \text{khuub} & \text{marammat} & \text{kar-ni}/-\text{naa} \\
        \text{Ram-ERG} & \text{Pratap-GEN} & \text{lot} & \text{repair} & \text{do-INF} & \text{-INF.M.SG} \\
        & \text{caah-i}/\text{-aa.} \\
    \end{array} \]
    \[
    \text{want-PERF.F.SG/-PERF.M.SG} \\
    \text{‘Ram wanted to give Pratap a good beating.’} \\
    \]
  - Such idiomatic objects are barred from movement:
    \[ \text{(8) } \begin{array}{llllllllll}
        & \#\text{Prataap-kii} & \text{khuub} & \text{marammat} & \text{Ram-ne} & \text{t} & \text{kii.} \\
        \text{Pratap-GEN} & \text{lot} & \text{repair} & \text{Ram-ERG} & \text{do.PERF.F.SG} \\
    \end{array} \]
    \[
    \text{‘Ram gave Pratap a good beating.’} \\
    \]
  - On a movement analysis, it is unexpected that movement of an idiomatic object decreases the availability of the idiomatic reading, while LDA has no such impact.
  - This fact follows straightforwardly on (most of) the other analyses.

• **Scope**
  - Under LDA, the embedded object may take scope above or below the matrix predicate, but under default agreement, it is confined to narrow scope:
    \[ \text{(9) a. } \begin{array}{llllllllll}
        & \text{Naim-ne} & \text{[har kitaab pa}rh-\text{nii]} & \text{caah-i}/\text{thii.} \\
        \text{Naim-ERG} & \text{every book.F} & \text{read-INF.F} & \text{want-PERF.F be.PST.F.SG} \\
        \text{every} & \text{want} & \text{‘For every book, Naim wanted to read it.’} \\
        \text{want} & \text{every} & \text{‘Naim’s desire: to read every book’} \\
    \end{array} \]
    \[
    \text{b. } \begin{array}{llllllllll}
        & \text{Naim-ne} & \text{[har kitaab pa}rh-\text{naa]} & \text{caah-aa} & \text{thaa.} \\
        \text{Naim-ERG} & \text{every book.F} & \text{read-INF.M.SG} & \text{want-PERF.M.SG be.PST.M.SG} \\
        \text{*every} & \text{want} & \text{‘For every book, Naim wanted to read it.’} \\
        \text{want} & \text{every} & \text{‘Naim’s desire: to read every book’} \quad \text{[Bhatt 2005: 799]} \\
    \end{array} \]
  - This fact follows straightforwardly on a movement analysis, assuming the moved agreement controller can reconstruct.
  - Other analyses, though, require additional stipulations.

• **NPI licensing**
  - In Hindi, nonfinite object clauses allow an embedded negation to license a matrix NPI.
  - Crucially, if an embedded negation licenses a matrix NPI, LDA becomes obligatory:
    \[ \text{(10) } \begin{array}{llllllllll}
        & \text{Ek-bhiil} & \text{larke-ne} & \text{[Sita-kii kitaab nahi: pa}rh-nii/-\text{naa]} & \text{caah-i}/\text{-aa.} \\
        \text{one-NPI bo}y-\text{ERG} & \text{Sita-GEN book.F} & \text{not read-INF.F/-INF.M.SG want-PERF.F.SG/-PERF.M.SG} \\
        \text{‘Not even a single boy wanted to read Sita’s book.’} \\
    \end{array} \]
  - This fact follows straightforwardly on a restructuring account: the nonfinite clause must have undergone restructuring for NPI licensing and thus is transparent for LDA.


• **Agreement controller**
  
  - The element controlling LDA can be a DP that cannot be referred to by a pronoun:

    \[(11) \text{Mē-ńe } [\text{ek-bhii kitaab} \text{ nahi: pah-nii}] \text{ caah-ii}\]
    \[\text{I-ERG one-NPI book.F NEG read-INF.F want-PERF.F.SG}\]
    \[\text{‘I don’t want to read even a single book.’}\]

  - This fact is very problematic for the proxy-agreement account.

• **Tsez LDA**\(^2\)

  - LDA is sensitive to the topichood of the embedded agreement controller:

    \[(12) a. \text{Long-distance agreement}\]
    \[\text{enir } [\text{uzā magalu} \text{ b-āc’-ru-hi}] \text{ b-jyxo}\]
    \[\text{mother [boy bread.I.IABS III-eat-PSTPRT-NMZ].IV III-know}\]
    \[\text{‘The mother knows that the bread, the boy ate.’}\]

    \[b. \text{Local agreement}\]
    \[\text{enir } [\text{uzā magalu} \text{ b-āc’-ru-hi}] \text{ ũ-jyxo}\]
    \[\text{mother [boy bread.I.IABS III-eat-PSTPRT-NMZ].IV IV-know}\]
    \[\text{‘The mother knows the boy ate the bread.’}\]

  - LDA is impossible out of clauses with a complementizer:

    \[(13) \text{enir } [\text{uzā magalu} \text{ b-āc’-si-\l{a}in}] \text{ b-jyxo}\]
    \[\text{mother [boy bread.I.IABS III-eat-PST.EVID-COMP].IV III-know}\]
    \[\text{‘The mother knows that the bread, the boy ate.’}\]

  - Similar patterns: Innu-aimûn (Branigan and MacKenzie 2002) and Passamaquoddy (Bruening 2001).

• **Basque LDA**\(^3\)

  - In the case-marked construction, the matrix auxiliary may agree in number with an embedded absolutive DP, but how this LDA is reflected depends on the case of the embedded nominalized clause:

    \[(14) \text{Uko egin d-i-Ø [agindu horiæk]} \text{ bete-tze-a-ri ].}\]
    \[\text{refusal(ABS) done 3.ABS-have-ABS-3PL.DAT-3SG.ERG order(s) those.PL(ABS)}\]
    \[\text{obey-NMZ-ART-DAT}\]
    \[\text{‘(S)he has refused to obey those orders.’}\]

  - In the adpositional construction, the matrix auxiliary may agree in person and number with an embedded absolutive DP, and this LDA is always reflected as absolute agreement:

    \[(15) \text{Ni altxa-tze-n } \text{ probatu na-Ø-u-te.}\]
    \[\text{me(ABS) lift-NMZ-LOC attempted 1.ABS-ABS-have-3PL.ERG}\]
    \[\text{‘They attempted to lift me.’}\]
2 Aside: Finite LDA and the WC

* Proposal

In order to maintain the strong WC, Poole (to appear) proposes that finite LDA can be analyzed as follows:4

1. In the matrix clause, the φ-probe agrees with CP, which, by assumption, has unvalued φ-features:5

   \[ (16) \]

   \[ \begin{array}{c}
   \text{vP} \\
   \text{v} \\
   \text{VP} \\
   \text{[⋆φ:□□]} \\
   \text{V} \\
   \text{CP}\llbracket φ:□\rrbracket
   \end{array} \]

2. In the embedded clause, the relevant DP raises to [Spec, CP] and agrees with C. As a result, the CP has the φ-features of the raised DP:

   \[ (17) \]

   \[ \begin{array}{c}
   \text{CP} \\
   \text{DP}\llbracket φ:α\rrbracket \\
   \text{C} \\
   \text{[⋆φ:□□]} \\
   \text{TP} \\
   \text{⋯ ⟨DP⟩ ⋯}
   \end{array} \quad \Rightarrow \quad \begin{array}{c}
   \text{CP} \\
   \text{DP}\llbracket φ:α\rrbracket \\
   \text{C} \\
   \text{[⋆φ:□□]} \\
   \text{TP} \\
   \text{⋯ ⟨DP⟩ ⋯}
   \end{array} \]

3. When the matrix clause has been built up to CP, the embedded CP is substituted in for CP. The φ-features are transmitted to v along the existing Agree-dependencies.6

* This proposal is essentially a retooling of Koopman’s (2006) analysis of Tsez LDA, but using Agree. There is no genuine LDA.

⇒ Prediction

Finite LDA should always be associated with edgehood in some fashion. To the best of my knowledge, this is generally true.

3 Deal (2017)

* Background on Nez Perce

– Nez Perce is a highly endangered Sahaptian language spoken in present-day Idaho, Washington, and Oregon.

– It has a tripartite case system: transitive clauses have ergative subjects and accusative objects, whereas intransitive clauses have nominative subjects.

– Agreement on the verb encodes the person and number of both the subject and the object:

   \[ (18) \]

   \begin{array}{c}
   \text{Agreement prefixes on verbs} \\
   \text{hi-} 3\text{rd person subject} \\
   \text{'e-} 3\text{rd person object} \\
   \text{pee-} 3\text{rd person subject and 3rd person object} \\
   \text{pe-} \text{plural subject} \\
   \text{nees-} \text{plural object}
   \end{array} \]
Transitivity is thus realized in terms of both case and agreement.

- There is both A-scrambling and A-scrambling (diagnosed by WCO and superiority). Only A-scrambling may cross a finite-clause boundary.\(^7\)

* Types of attitude complementation

\(\text{DP}^\oplus = \text{additional DP argument}\)

(19) Canonical pattern: Intransitive matrix clause, no \(\text{DP}^\oplus\)

Taamsas hi-neki-se \([\text{CP}\ Angel-nim hi-naas-wapayata-ca Taamsas.NOM 3\text{SUBJ-}\text{think-IMPERF [ Angel-ERG}\ 3\text{SUBJ-}\text{O.PL-help-IMPERF mamay’as-na ]}.\]

children-ACC ]

Taamsas thinks Angel is helping the children.

(20) Prolepsis: Transitive matrix clause, \(\text{DP}^\oplus\) bears accusative

Taamsas-nim pee-nek-se \(\text{Angel-ne}^\oplus [\text{CP pro}\ hi-naas-wapayata-ca Taamsas-ERG 3/3-think-IMPERF Angel-ACC [ 3SG 3\text{SUBJ-}\text{O.PL-help-IMPERF mamay’as-na ]}.\]

children-ACC ]

Taamsas thinks Angel is helping the children.

(21) LDA: Transitive matrix clause, \(\text{DP}^\oplus\) bears embedded case\(^8\)

a. Harold-nim hi-nees-nek-se \([\text{CP hitemenew’ee}\text{t}^\oplus hi-wsiix Harold-ERG 3\text{SUBJ-}\text{O.PL-think-IMPERF [ student.NOM 3\text{SUBJ-be.PRES.PL wiwepcux ]}.\]

smart ]

Harold thinks the students are smart.

b. Taamsas-nim hi-nees-nek-se \([\text{CP mamay’as-nim}^\oplus\text{poo-payata-six}\text{ Angel-ne }] Taamsas-ERG 3\text{SUBJ-}\text{O.PL-think-IMPERF [ children-ERG}\ 3/3-\text{help-IMPERF.S.PL Angel-ACC }].\]

Taamsas thinks the children are helping Angel.

- Prolepsis construction

- \(\text{DP}^\oplus\) is in the matrix clause. It can surface anywhere in the matrix clause, and it cannot surface in an unambiguously-embedded position:

(22) *’Aayat-onm mamay’as-na\(^\oplus\text{hi-nees-nek-se} [\text{CP watiix}\text{ pro woman-ERG children-ACC 3\text{SUBJ-}\text{O.PL-think-IMPERF [ 1\text{day.away 3SG hi-pa-paay-no’} ]}.\]

3\text{SUBJ-S.PL-arrive-FUT }]

The woman thinks the children will arrive tomorrow.

(23) *’Aayat-onm hi-nees-nek-se \([\text{CP watiix}\text{ mamay’as-na}^\oplus\text{woman-ERG 3\text{SUBJ-}\text{O.PL-think-IMPERF [ 1\text{day.away children-ACC hi-pa-paay-no’} ]}.\]

3\text{SUBJ-S.PL-arrive-FUT }]

Intended: the woman thinks the children will arrive tomorrow.

\({}^7\) This is essentially the same pattern as Hindi (Mahajan 1990).

\({}^8\) I am using the term ‘LDA’ to refer to this construction pretheoretically. On Deal’s analysis, the agreement is actually local, fed by covert A-movement, and thus is not long-distance.
The relationship between DP\(^{\oplus}\) and the embedded bound element is \textit{not} sensitive to islands:

\[(24)\]  
\[\text{'Aayat-nm mamay'as-na}^{\oplus} \ 	ext{hi-nees-nek-se} \]  
\[\text{woman-ERG children-ACC} \quad \text{3SUBJ-O.PL-think-IMPERF} \]  
\[\text{[CP } \text{ke kaa pro} \text{ hi-pa-paay-no', hi-lloy-no'} \quad \text{qiwn }] \]  
\[\text{[ when 3PL 3SUBJ-S.PL-arrive-FUT, 3SUBJ-be.happy-FUT old.man.NOM]} \]

The woman thinks that when the kids arrive, the old man will be happy.  
\text{lit. } \approx \text{The woman thinks the kids that when they arrive, the old man will be happy.}

\* \textit{LDA}

- DP\(^{\oplus}\) may not surface in an unambiguously-matrix position:

\[(25)\]  
\[\text{'Aayat-onm mamay'ac}^{\oplus} \ 	ext{hi-nees-nek-se} \quad [\text{CP watiisx} \]  
\[\text{woman-ERG children.NOM} \quad \text{3SUBJ-O.PL-think-IMPERF [ 1.day.away} \]  
\[\text{hi-pa-paay-no'} \quad \text{]} \]  
\[\text{3SUBJ-S.PL-arrive-FUT } \]\n
Intended: the woman thinks the children will arrive tomorrow.

- DP\(^{\oplus}\) may surface to the right of embedded material:

\[(26)\]  
\[\text{'Aayat-onm hi-nees-nek-se} \quad [\text{CP watiisx mamay'ac}^{\oplus} \]  
\[\text{woman-ERG 3SUBJ-O.PL-think-IMPERF [ 1.day.away} \]  
\[\text{children.NOM} \quad \text{hi-pa-paay-no'} \quad \text{]} \]  
\[\text{3SUBJ-S.PL-arrive-FUT } \]

The woman thinks the children will arrive tomorrow.

\[(27)\]  
\[\text{Angel-nim hi-nees-nek-se} \quad [CP watiisx Tatlo-na} \]  
\[\text{Angel-ERG 3SUBJ-O.PL-think-IMPERF [CP 1.day.away Tatlo-ACC} \]  
\[\text{mamay'as-nim}^{\oplus} \text{ poo-payata-si-no'} \quad \text{]} \]  
\[\text{children-ERG 3/3-help-IMPERF,S.PL-FUT } \]

Angel thinks the children will help Tatlo tomorrow.

\[\Rightarrow\] Thus, unlike prolepsis, DP\(^{\oplus}\) is in the embedded clause in the LDA construction.

- DP\(^{\oplus}\) cannot be embedded inside an island:

\[(28)\]  
\[\text{'Aayato-nm hi-nees-nek-se} \quad [CP } \text{adjunct ke kaa mamay'ac}^{\oplus} \]  
\[\text{woman-ERG 3SUBJ-O.PL-think-IMPERF [ [ when children.NOM} \]  
\[\text{hi-pa-paay-no'} \quad \text{]} \quad \text{hi-lloy-no'} \quad \text{qiwn }] \]  
\[\text{3SUBJ-S.PL-arrive-FUT, 3SUBJ-be.happy-FUT old.man.NOM } \]

Intended: the woman thinks that when the kids arrive, the old man will be happy.

- DP\(^{\oplus}\) may be an embedded object, but only if it is preverbal:

\[(29)\]  
\[\text{a. 'Aayat-onm hi-nees-nek-se} \quad [CP watiisx mamay'as-na}^{\oplus} \]  
\[\text{woman-ERG 3SUBJ-O.PL-think-IMPERF [CP 1.day.away children-ACC} \]  
\[\text{Angel-nim hi-naas-wapayata-ya }] \]  
\[\text{Angel-ERG 3SUBJ-O.PL-help-PERF } \]

The woman thinks Angel helped the children yesterday.

\[\text{b. * Taamsas-nim hi-nees-nek-se} \quad [CP Angel-nim} \]  
\[\text{Taamsas-ERG 3SUBJ-O.PL-think-IMPERF [CP Angel-ERG} \]  
\[\text{hi-naas-wapayata-ya mamay'as-na}^{\oplus} \quad ] \]  
\[\text{3SUBJ-O.PL-help-PERF children-ACC } \]

Taamsas thinks Angel helped the children.
When DP° occupies an $\bar{A}$-position (forced here by scrambling out of a finite clause), the LDA construction is ungrammatical:

\begin{align*}
\text{(30)} \quad \text{a.} & \quad \text{Tatlo hi-neki-se} \quad [\text{CP mamay’ac}_i \text{ Angel-nim pee-∅-ne} \\
& \text{Tatlo.NOM 3SUBJ-think-IMPERF [CP children.NOM Angel-ERG 3/3-tell-PERF} \\
& \text{Harold-ne} \quad [\text{CP - i hi-pa-paay-no’} \\
& \text{Harold-ACC} \quad [\text{CP - 3SUBJ-S.PL-arrive-FUT }]] \\
\text{Tatlo thinks that the children, Angel told Harold -i would arrive.}
\end{align*}

\begin{align*}
\text{b.} & \quad \ast \text{Tatlo-nm hi-nees-nek-se} \quad [\text{CP mamay’ac}^{\circ} \text{ Angel-nim} \\
& \text{Tatlo-ERG 3SUBJ-O.PL-think-IMPERF [CP children.NOM Angel-ERG} \\
& \text{pee-∅-ne Harold-ne} \quad [\text{CP - i hi-pa-paay-no’} \\
& \text{3/3-tell-PERF Harold-ACC} \quad [\text{CP - 3SUBJ-S.PL-arrive-FUT }]]]
\end{align*}

\begin{align*}
\ast \text{Intended: Tatlo thinks that the children, Angel told Harold -i would arrive.}
\end{align*}

\* \text{Analysis}

DP° covertly hyperraises out of the embedded finite clause into the matrix object position, from where $v$ agrees with it in the ordinary local fashion:

\begin{align*}
\text{(31)} \quad \text{covert (hyper)raising} \quad \text{overt A-scrambling}
\quad [v [VP children think [CP [TP ADV [TP children T [vP Angel help children ]]]]])
\end{align*}

\* \text{Semantics of the LDA construction°}

- LDA only allows a transparent (i.e. \textit{de re}) reading of DP° w.r.t. the embedding attitude predicate: 9

\begin{align*}
\text{(32) a.} & \quad \text{Transparent context} \\
& \text{Context: My neighbor Mary sees a cat catching a magpie. It turns out it was my cat, Calvin, but Mary doesn’t know that. She just tells me about the fight and what the cat looked like. When I get home, Calvin is there and he’s all dirty and messed up. To explain what happened I say:} \\
& \text{Mary-nim pee-nek-se } [\text{Calvin-nim}^{\circ} \text{pee-cepequick-e ’ek’eex-ne }]. \\
& \text{Mary-ERG 3/3-think-TAM [Calvin-ERG 3/3-catch-TAM magpie-ACC ]} \\
& \text{Mary thinks Calvin caught a magpie.}
\end{align*}

\begin{align*}
\text{b.} & \quad \text{Opaque context} \\
& \text{Context: John doesn’t know that all ravens are black. He thinks that a white raven was flying around outside.} \\
& \# \text{pro pee-nek-se } [\text{šayšayš qooqoš} \\
& \text{3SG 3/3-think-IMPERF [white.NOM raven.NOM} \\
& \text{hi-weyixnik-sa-qa } ] \\
& \text{3SUBJ-fly.around-IMPERF-REC.PAST } ] \\
& \text{Intended: he thinks [a white raven]\textit{opaque} was flying around.}
\end{align*}

⇒ The LF produced by covert hyperraising is essentially the classical res-movement LF, hence the obligatory \textit{de re} reading.

\* \text{Discussion}

- Poole (to appear) claims that the LDA construction in Nez Perce can be captured in the same manner as Tsez LDA (see above):
  * The matrix predicate agrees with CP.
  * Within the embedded CP, DP° raises to [Spec, CP] and passes its φ-features up to CP.

9 Deal (2018)
10 The same restriction holds of prolepsis.
The embedded CP is substituted in when the matrix clause is built up to CP.

- The features of DP∗ are shared across the existing Agree-dependencies.

- On this analysis, however, movement to embedded [Spec, CP] would need to be limited to A-movement in Nez Perce.11

- Deal rejects a Tsez-style analysis on the grounds that DP∗ cannot be in an A-position, but this assumes that the edge position could not be an A-position.

- Deal does not provide any explicit evidence that DP∗ raises (covertly) into the matrix clause, e.g. Condition B.

- The de re requirement could be handled on an edge-based account if we assume that the modality associated with the attitude predicate is in fact part of the embedded left periphery.12 Movement to the edge would then place DP∗ outside the scope of the modality, thereby forcing a de re reading.

References


