Closest Conjunct Agreement in Marwari

0. Abstract: In this paper, I will argue that closest conjunct agreement (CCA) in Marwari patterns similar to Hindi-Urdu with respect to subject-object asymmetry, and patterns differently from Hindi-Urdu with respect to exhibiting closest conjunct agreement in unaccusATIVE predicates. The split is seen in animacy restrictions with unaccusatives. Unaccusatives [+human] subjects show resolved plural agreement whereas unaccusative [-human, +animate] subjects show CCA with feminine nouns but CCA is not available with masculine nouns. CCA is available irrespective of the gender to unaccusative [-animate] subjects. I will further show that CCA is sensitive to the nature of the unaccusative predicate. I will evaluate Bhatt and Walkow (2011)’s proposal for CCA in Indo-Aryan, which crucially assumes the absence of person agreement as feeding in the CCA asymmetries and show that the model is inadequate in dealing with the unaccusative paradigm in Marwari.

1. Agreement in Marwari

The first observation regarding agreement patterns in Marwari hinges on the presence versus absence of case marking. Case marking bleeds agreement. Intransitive subjects are never case marked and always agree. Transitive subjects can either agree or not agree depending on whether they require case or not in order to be licensed. If they are case marked, they fail to agree and the object then controls the agreement.

Agreement in Marwari is controlled by tense and aspect. Intransitives show subject agreement. In (1), the main verb and the copula change for number (1c) and gender (1a, b). There is an absence of person agreement. This has been noticed for Hindi-Urdu (BW 2011).

\[ (1) \]
\[ \text{a. kale me m\textsuperscript{b}ara j\textsubscript{a}al me g\textsubscript{a}-jo ho-to} \]
\[ \text{yesterday I my school to go-M.SG.PST COP-M.SG.PST} \]
\[ \text{‘Yesterday, I (masc.) went to the school’} \]
\[ \text{b. kale me m\textsuperscript{b}ara j\textsubscript{a}al me g\textsubscript{a}-ji ho-ti} \]
\[ \text{yesterday I my school to go-F.SG.PST COP-F.SG.PST} \]
\[ \text{‘Yesterday, I (fem.) went to the school’} \]
\[ \text{c. kale m\textsuperscript{b}a sak\textsubscript{a}a m\textsuperscript{b}ara j\textsubscript{a}al me g\textsubscript{a}-ja ho-ta} \]
\[ \text{yesterday we all my school to go-3PL.PST COP-3PL.PST} \]
\[ \text{‘Yesterday, we went to the school’} \]

The first asymmetry is an imperfective-perfective asymmetry. Imperfectives show subject agreement whereas perfectives show object agreement similar to Hindi-Urdu.

\[ (2) \]
\[ \text{a. prasad pustak b\textsuperscript{a}-sat ho-to Habitant} \]
\[ \text{prasad book read.HAB.M.SG COP-M.SG.PST} \]
\[ \text{‘Prasad used to read a book’} \]
\[ \text{b. prathna pustak b\textsuperscript{a}-sat ho-ti Habitant} \]
\[ \text{prathna book read-HAB.M.SG COP-M.SG.PST} \]
\[ \text{‘Prathna used to read a book’} \]
(3) a. prasad-ni pustak bha-\textit{tfjo} ho-to \textit{PST}  
prasad-NOM book read-PFV.M.SG COP-M.SG.PST  
‘Prasad had read the book’

b. prathna-ni pustak bha-\textit{tfjo} ho-to \textit{PST}  
prathna-NOM book read-PFV.M.SG COP-M.SG.PST  
‘Prathna had read the book’

This is reminiscent of the Hindi-Urdu facts where subject receives ergative case marking only in the perfective aspect. Potentially, the Marwari facts look similar to the Hindi-Urdu facts of ergative case marking. Note that the main verb in both the imperfective and perfective aspect remains invariant for number and gender (unlike Hindi-Urdu). Only the auxiliary inflects for number and gender in Marwari. Case marking blocks agreement with subject in (2). This receives a principled explanation when we assume a probe-goal system of agreement (Chomsky 2000, 2001). There are two probes: \textit{v} and \textit{T}. \textit{v} is the case assigner and checks the case on the subject. Case checking by the \textit{v}, renders the subject inaccessible to further probes. When \textit{T} probes to check agreement features, the subject DP fails to agree and \textit{T} satisfies its requirements by agreement with the object, which remains unmarked for case.

When both the argument DPs are case marked, the verb shows default masculine singular agreement:

(4) a. prasad-ni prathna-ne \textit{dkh-jo} \textit{PST}  
prasad-NOM prathna-ACC see-M.SG.PST  
‘Prasad saw Prathna’

b. prathna-ni prasad-ne \textit{dkh-jo} \textit{PST}  
prathna-NOM prasad-ACC see-M.SG.PST  
‘Prathna saw Prasad’

From (4a,b) it is evident that case marking blocks agreement. Simple transitives always require both the arguments to be overtly case marked. Thus, potentially the two arguments fail to agree, and the default agreement (M.SG) shows up\(^1\). Di-transitives seem to agree with the direct object if it is not case marked, or else it defaults to the masculine singular agreement:

(5) a. pud\textit{ja}-ni prasad-ne \textit{d3an-tjh}i me\textit{ja}-jo ho-to \textit{PST}  
‘Puja introduced Prasad to John’

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\(^1\) Even when the subject or the object is in the plural, the agreement on the verb is M.SG.

(i) prasad-ni don tsora-ne \textit{dkh-jo} \textit{PST}  
prasad-NOM two boy-PL-ACC see-M.SG.PST  
‘Prasad saw two boys’

(ii) tiin tsora-ni don tsorija-ne \textit{dkh-jo} \textit{PST}  
three boy-PL-NOM two girl-PL-ACC see-M.SG.PST  
‘Three boys saw two girls’
b. pudʒa-ni prasad-ne don amb-a bhata-ja ho-ta
puja-NOM prasad-ACC two mango-PL show-PL COP-PL
‘Puja showed two mangoes to Prasad’

The verbal agreement patterns can be diagrammatically represented as:

(6)

\[
\begin{array}{c}
\text{S} \quad \text{PP} \quad \text{V}_{\text{INTR}} \quad \text{PAST TENSE} \\
\downarrow \\
\text{S} \quad \text{O} \quad \text{V}_{\text{TR}} \quad \text{IMPERFECTIVE} \\
\downarrow \\
\text{S-ne} \quad \text{O} \quad \text{V}_{\text{TR}} \quad \text{PERFECTIVE} \\
\downarrow \\
\text{S} \quad \text{DO} \quad \text{IO} \quad \text{V}_{\text{DITRV}} \quad \text{PAST TENSE} \\
\downarrow \\
\text{S-ne} \quad \text{O-ne} \quad \text{V}_{\text{TR}} \quad \text{DEFAULT M.SG}
\end{array}
\]

2. The Hindi-Urdu facts

Hindi-Urdu is an SOV language belonging to the same language family as Marwari. It is an Ergative-Absolutive language and displays differential object marking (DOM) with \textit{ko}.

(7) a. rahul kitaab parh-ta thaa thaa
Rahul.M book.F read-HAB.M.SG be.PST.M.SG
‘Rahul used to read (a/the) book’

b. rahul-ne kitaab parh-i thii thii
rahul-ERG book.F read-PFV.F be.PST.F.SG
‘Rahul had read the book’

c. rahul-ne kitaab-ko parh-a thaa thaa
rahul-ERG book-KO read-PFV.M.SG be.PST.M.SG
‘Rahul had read the book’

Marwari patterns the same way as Hindi-Urdu with respect to subject case marking. The subject receives case only if it is transitive and in the perfective aspect. Intransitives and subjects in the perfective aspect do not receive case. Thus, from case patterning it looks like Marwari is an ergative-absolutive language\(^2\) (Andrew Simpson, p.c). One point of

\(^2\) However, the literature claims Marwari is a Nominative-Accusative language (Pritty Patel-Grosz, p.c).
difference with Hindi-Urdu is that Marwari does not have differential object marking. In Table 1, I summarize the properties of Hindi-Urdu and Marwari.

<table>
<thead>
<tr>
<th></th>
<th>Erg-Abs</th>
<th>Subject agreement-PNG</th>
<th>Imperfective-perfective asymmetry</th>
<th>Object agreement-PNG; *P</th>
<th>Agreement is Case dependent</th>
<th>Differential object marking</th>
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<tr>
<td>Marwari</td>
<td>?</td>
<td>√</td>
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<tr>
<td>Hindi-Urdu</td>
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<td>√</td>
<td>N.A (due to DOM)</td>
<td>√</td>
<td>√</td>
</tr>
</tbody>
</table>

Table 1

3. Closest Conjunct Agreement

Similar to the asymmetry in agreement in intransitives and transitives, there is an apparent asymmetry between subjects and objects in closest conjunct agreement (CCA). Subject agreement is always resolved agreement whereas objects show closest conjunct agreement (CCA).

(8) a. M.SG + M.SG: agreement = PL
   [prasad anį prathameʃ] gaano gav-e hɛ
   prasad and prathamesh song sing-M.PL COP.PL
   ‘Prasad and Prathamesh are singing a song’

   b. M.SG + F.SG: agreement = PL
   [prasad anį pratna] gaano gav-e hɛ
   prasad and prathna song sing-M.PL COP.PL
   ‘Prasad and Prathna are singing a song’

   c. F.SG + M.SG: agreement = PL
   [prathna anį prasad] gaano gav-e hɛ
   prathna and prasad song sing-M.PL COP.PL
   ‘Prathna and Prasad are singing a song’

   d. F.SG + F.SG: agreement = PL
   [prathna anį puja] gaano gav-e hɛ
   prathna and puja song sing-M.PL COP.PL
   ‘Prathna and Puja are singing a song’

The subjects only show number agreement (plural). There is no person agreement. A point of difference between Hindi-Urdu and Marwari is in the agreement pattern of (8d). In Hindi-Urdu, the agreement on the main verb and the copula can be feminine plural agreement, though resolved plural agreement is also admissible\(^3\). Note that the main verb (gaa) and the copula remain invariant across the paradigm.

\[^3\] [puja aur prathna] gaana gaa rahii/rahe hai Hindi-Urdu
   puja and prathna song sing is-F.SG/PL COP
   ‘Puja and Prathna are singing a song’
In objects, agreement is always with the closest conjunct. There is a failure to show resolved plural agreement with objects. In the examples below, the agreement is with the rightmost conjunct so it is rightmost conjunct agreement (RCA).

(9) a. ...M.SG + MSG: agreement = M.SG
   prasad-ni [pustak anį varthamanpatrak] la-jo
   Prasad-NOM book and newspaper buy-M.SG.PST
   ‘Prasad bought a book and a newspaper’

b. ...M.SG + F.SG: agreement = F.SG
   prasad-ni [ek bakso anį ek chothi bag] usl-i
   Prasad-NOM a box and a small bag lift-F.SG.PST
   ‘Prasad lifted a box and a small bag’

c.....F.SG+ M.SG: agreement = M.SG
   prathna-ni [ek ghazal anį ek slok] gaa-jo
   prathna-NOM a ghazal and a sloka sing-M.SG.PST
   ‘Prathna sang a ghazal and a sloka’

d.....F.SG+ F.SG: agreement = F.SG
   prathna-ni [ek purse anį ek saadi] laa-ji
   prathna-NOM a purse and a sari buy-F.SG.PST
   ‘Prathna bought a purse and a sari’

e.....M.PL + F.SG: agreement = F.SG
   prathna-ni [don gaana anį ek kavitha] ga-ji
   prathna-NOM two songs and a poem sing-F.SG.PST
   ‘Prathna sang two songs and a poem’

f.....F.PL + M.SG: agreement = M.SG
   prasad-ni [ghana sara chot-ija bagja anį bakso] usli-jo
   Prasad-NOM a lot many small-PL bag-PL and box lift-M.SG
   ‘Prasad lifted many bags and a box’

g.....M.SG + M/F.PL: agreement = PL
   prasad-ni [ek table anį tiin pustak] la-ja
   Prasad-NOM a table and three book buy-PL
   ‘Prasad bought a table and three books’

When the object is extraposed to the right, the conjunct that agrees is the leftmost conjunct and thus it is leftmost conjunct agreement (LCA).

(10) a. ...M.SG + MSG: agreement = M.SG
   prasad-ni la-jo [pustak anį varthamanpatrak]
   Prasad-NOM buy-M.SG.PST book and newspaper
   ‘Prasad bought a book and a newspaper’

A point to be noted here is that in Hindi-Urdu, the main verb is sensitive to number and gender features. On the contrary, in Marwari when there is plural agreement on the verb, there is only one form –e.
b. .....F.SG+ M.SG: agreement= F.SG
prathna-ni gaa-ji [ek ghazal anį ek slok ]
prathna-NOM sing-F.SG.PST a ghazal and a sloka
‘Prathna sang a ghazal and a sloka’

This asymmetry in Marwari between subjects and objects is similar to that in Hindi-Urdu and Marathi but not in Gujarathi. Gujarathi case marked objects still trigger agreement. Moreover, this patterning is similar to the pattern observed with normal agreement patterns in Marwari. When both the subject and the object are case marked, or when the object alone is marked for case, then the agreement on the verb is default.

(11) a. me [prasad anį prathamesh]-ne dekh-jo
    I Prasad and prathamesh-ACC see-M.SG.PST
    ‘I saw Prasad and Prathamesh’

b. prasad-ni [prathna anį prathamesh]-ne dekh-jo
    Prasad-NOM prathna and prathamesh-ACC see-M.SG.PST
    ‘Prasad saw Prathnav and Prathamesh’

To summarize so far, Marwari shows an asymmetry in subject-object agreement. Conjoined subjects show resolved plural agreement, whereas conjoined objects only show CCA. In the SOV order, they exhibit RCA and in the SVO order, they exhibit LCA. Case marking blocks agreement. When both the arguments are case marked, the agreement defaults to masculine singular. Some questions that need to be answered:
(i) Why can’t conjoined objects show resolved plural agreement?
(ii) What determines the agreement between RCA and LCA?
(iii) Why does case marking block agreement?

In the next section, I will look at some interesting data from the interaction of unaccusative verbs and CCA.

4. The Unaccusative Paradigm

Unaccusative verbs are sensitive to animacy. This patterning is not seen in Hindi-Urdu. Marathi is to an extent similar to the Marwari pattern sketched below.
Unaccusative verbs show CCA with respect to animacy. Unaccusative [+human] subjects show resolved plural agreement:

(11) a.....M.SG + M.SG= PL
    [Prasad anį shubham] aa-ja
    Prasad and shubham came-PL.PST
    ‘Prasad and Shubham came’

b.....M.SG + F.SG = PL
    [Prasad anį prathna] aa-ja
    Prasad and prathna came-PL.PST

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4 In BW (2011), they mention this fact only in the conclusion leaving it for future research. In BW’s GLOW presentation, they discuss widely the data from the unaccusative paradigm. However, animacy patterns are highly restricted in Hindi-Urdu, unlike in Marwari. In Marwari, there seems to be no optionality in these cases.
'Prasad and Prathna came'

Unaccusative [-human, +animate] subjects show CCA with feminine nouns, but CCA is not available when the closest conjunct is masculine\(^5\) (However, see 5.2).

\[(12)\] a. \([\text{kutto an} \text{ minki}] \text{aa-ji} \]
   \(\text{CCA}\)
   dog and cat came-F.SG.PST
   ‘A dog and a cat came’

   b. \([\text{minki an} \text{ kutto}] \text{aa-ja/ *aa-jo} \]
   \(\text{*CCA}\)
   cat and dog came-PL.PST
   ‘A cat and a dog came’

   c. \([\text{ek tsoro} \text{ ek babo an} \text{ ek baji }] \text{aa-ji} \]
   \(\text{CCA}\)
   a boy a man and a woman came-F.SG.PST
   ‘A boy, a man, and a woman came’

   d. \([\text{ek baji} \text{ ek tsoro an} \text{ ek babo }] \text{aa-ja/*aa-jo} \]
   \(\text{*CCA}\)
   a woman a boy and a man came-PL.PST
   ‘A woman, a boy and a man came’

Unaccusative [-animate] subjects show CCA\(^6\):

\[(13)\] a. \([\text{plane an} \text{ gaadi}] \text{aa-ji} \]
   \(\text{CCA}\)
   Plane and car came-F.SG.PST
   ‘A plane and a car came’

   b. \([\text{gaadi an} \text{ plane}] \text{aa-jo} \]
   \(\text{CCA}\)
   car and plane came-M.SG.PST
   ‘A car and a plane came’

In locatives, overt marking of the numeral ek ‘one’ results in CCA

\[(14)\] a. \([\text{kutto an} \text{ minki}] \text{tsokha me ho-ti} \]
   \(\text{CCA}\)
   Dog and cat kitchen in COP-PL.PST
   ‘The dog and the cat are in the kitchen’

\(^5\) I rechecked the data with Prathamesh three times.

\(^6\) In trying to ascertain whether Marwari has dual agreement (Rajesh Bhatt, p.c), I elicited this paradigm.

(i) \([\text{hath an} \text{ pəә g}] \text{niə hɛ} \]
   hand and leg blue COP
   ‘The hand and the leg are blue’

(ii) \([\text{hath, pəә an} \text{ matho}] \text{niə hɛ} \]
    hand leg and head blue COP
    ‘The hand, the leg and the head are blue’

(i) shows resolved plural agreement, in a DP1 & DP2 configuration. (ii) however shows CCA, and is a DP1, DP2 & DP3 configuration. This is puzzling.
b. [minki aŋi kutto] tsokha me ho-ta
cat and dog kitchen in COP-PL.PST
‘The dog and the cat are in the kitchen’

*CCA

\[ \text{b. [minki aŋi kutto] tsokha me ho-ta} \]
\[ \quad \text{cat and dog kitchen in COP-PL.PST} \]
\[ \quad \text{‘The dog and the cat are in the kitchen’} \]
\[ \quad \text{*CCA} \]

This suggests that overtly marking the D in (14) results in CCA, which is otherwise unavailable. Since Marwari does not have a definite article, it would be useful to check this paradigm further with numerals and other quantifiers that mark definite versus indefinite distinctions. However, I leave this for future research.

5. The Analysis

Similar to Bhatt and Wilkow (2011), I will assume the AGREE model of Chomsky (2000, 2001) where T assigns case to subjects and v assigns case to objects. The locus of agreement resides in various heads inside the functional projection of DP. Following Ritter (1995), DP (the highest node) is the origin of definiteness marking and person features. NumP hosts agreement and NP (the lowest node) is the locus of gender features. This is shown in the tree below:

The basic idea would be to assume that the DP remains invisible to further probes once the v head has checked the case feature. Evidence for this comes from the fact that agreement always lacks person. So, T can only look inside the DP, into the Num P or the NP. A similar logic applied to &Ps will entail that the highest &P cannot agree with the probe, since v has already checked the case features thus making it opaque to agreement. T can however look inside the &P and agree with DP1 or DP2. The difference between agreement with DP1 and DP2 is seen in LCA versus RCA, which is in turn determined by the word order.
5.1. Bhatt and Walkow (2011)

The primary assumption of Bhatt and Walkow’s (BW) analysis rests on the fact that T cannot value person features in conjoined objects. This should cause the derivation to crash, however, the derivation does not crash. They thus use this intuition to argue that CCA is a PF operation that supplies heads, which failed to value their features in syntax. They assume the Late Insertion Model (Embick and Noyer 2006) where phonological material is inserted post syntactically and LCA (Kayne 1994). Only a lower head can value features on T, the highest head remains unaccessible. Thus, crucially, object case assignment bleeds person agreement on T.

The BW system introduces three elements into the computation, C, A and T. C is the Agreement controller, A is the Anchor, and T is the Target. Syntax determines the connection between C and A. PF determines the link between A and T. Thus, subject agreement is always syntactic whereas object agreement is located in the PF.

The conjoined subjects have a set of resolved features on the root node. The probe on T agrees with the entire conjoined phrase and only resolved agreement is possible. Conjoined object agreement occurs when the subject is case marked. The probe on v renders the &P inaccessible to further probes. When T probes, it fails to check the features of the &P, as the DP is rendered unavailable for checking by the earlier probe. The secondary agree mechanism can only look inside the &P and agree with one of the DPs. Here there are two options available, either the secondary agree can agree with DP1 or it can agree with DP2. Indeed we find that depending on the word order, it’s always the closest conjunct that triggers agreement. When the order is the canonical SOV order, the closest conjunct is the second conjunct or the rightmost conjunct and thus RCA obtains. When the order is SVO, the first conjunct is closest to the secondary agreement operation and thus LCA obtains. This is taken as indicating that the resolution is a PF phenomena, done post-syntactically as a means of obtaining the right agreement patterns given linear considerations.

Table 1, taken from BW (2011) shows the mechanism for object agreement. The DP layer is rendered inactive by the first probe. T agreement with the DP is blocked.
In Table 2, again from BW (2011), it is shown how case assignment blocks T-agreement with &P.

5.2. Potential Problems

It is unclear how BW’s system will capture the Marwari unaccusative paradigm. The CCA seems to be conditioned by the class of unaccusative verb it appears with. In (12) above, I noted that feminine nouns allow CCA whereas masculine nouns don’t. This was the paradigm with the verb ‘to come’. However, when the verb is changed the CCA patterns differently.

(15) a. [kutto anį minki] mari-ja
   dog and cat die-PL.PAST
   ‘The dog and the cat died’

   b. [minki anį kutto] mari-jo
   cat and dog die-M.SG.PST
   ‘The cat and the dog died’

   c. [ minki, kutto, anį hatti] mari-jo
   cat dog and elephant die-M.SG.PST
   ‘The cat, dog and the elephant died’

   Resolved plural agreement

In the paradigm in (15), the feminine noun blocks CCA (15a), this is exactly the opposite pattern given (12). Furthermore, the patterns with this verb also extend to [+human] subjects which is totally unexpected since human subjects have always shown resolved plural agreement till now:

(16) a. tiin tsora mari-ja
   three boy-PL DIE-PL.PST
   ‘Three boys died’

   b. tiin tsori mari-ja
   three girls die-PL.PST
   ‘Three girls died’

   c. [tiin tsorija anį ek babo] mari-jo
   three girl-PL and a man die-M.SG.PST
   ‘Three girls and a man died’
Thus, we have seen that unaccusative verbs differ in whether they allow CCA or not. Even within unaccusative predicates, distinctions need to be made regarding which classes of verbs allow CCA and which ones don’t. The pattern in (16c) is intriguing since we normally would not expect to see CCA here, since subjects show resolved plural agreement (11). This would be a potential problem for BW.

It could be the case that for unaccusative predicates there is no $v$ probe, and thus DP/P&P still remains visible to the T probe. What remains to be explained is the seemingly different behavior of CCA with respect to animacy and the nature of the predicates. Something more needs to be said about BW’s model in order to explain the unaccusative facts in Marwari.

6.0. Conclusion

In this paper, I have looked at closest conjunct agreement in Marwari, a phenomena that has recently interested a lot of research in Indo-Aryan and has proven to be crucial to resolving theories of agreement, namely whether agreement is syntactic or post-syntactic. The new Marwari data I have looked at in this paper adds to this debate by showing that agreement with objects necessarily needs to happen at PF, since it exhibits patterns similar to Hindi-Urdu. Thus, in addition to the asymmetries described in the paper, we find an additional asymmetry in the nature of agreement. Subject agreement is always syntactic whereas object agreement must happen at the PF. We need a mixed model, which will be able to capture these facts adequately.

References:


