ARABIC FIRST CONJUNCT AGREEMENT: AGAINST LATE OPERATIONS*

Phil Crone  Stanford University

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1 OVERVIEW

The main data I aim to explain are related to the phenomenon of First Conjunct Agreement (FCA) in non-standard varieties of Arabic, for which I use Lebanese Arabic (LA) as a representative example. In LA, pre-verbal subjects trigger full agreement (1a). Post-verbal subjects optionally trigger FCA (1b).

(1) a. kariim w marwan raah-o/*-∅. (LA)
   Kareem and Marwan leave.PST-3P/*-3MS
   ‘Kareem and Marwan left.’ (S VPL/*FCA)

   b. raah-o/-∅ kariim w marwan. (LA)
     leave.PST-3P-3MS Kareem and Marwan
     ‘Kareem and Marwan left.’ (VPL/FCA S)

Auxiliaries precede main verbs. Subjects may precede the auxiliary (2a) or appear medially between the auxiliary and the main verb (2b). Subjects optionally trigger FCA on the auxiliary in clause-medial position.

(2) a. kariim w marwan keen-o/*-∅ ʕam ydr-us-o/*-∅. (LA)
    Kareem and Marwan be.PST-3P/-3MS PROG 3M-study-P/-S
    ‘Kareem and Marwan were studying.’ (S AuxPL/*FCA VPL/*FCA)

   b. keen-o/-∅ kariim w marwan ʕam ydr-us-o/*-∅. (LA)
     be.PST-3P/-3MS Kareem and Marwan PROG 3M-study-P/*-S
     ‘Kareem and Marwan were studying.’ (AuxPL/FCA S VPL/*FCA)

Mixed agreement refers to cases in which both FCA and full agreement co-occur in the same clause on distinct agreement-bearing elements (McCloskey 1986, Munn 1999). In LA, mixed agreement occurs when the auxiliary realizes FCA and the main verb realizes full agreement (2b).

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1See Appendix A for discussion of cases in which the subject follows both the auxiliary and main verb.
I argue that Arabic FCA can be explained via the interaction of the following constraints:

(i) Locality constraints on Agree
(ii) Constraints on movement to specifier positions
(iii) Coordinate Structure Constraint (CSC)

This contrasts with recent accounts that explain Arabic FCA via novel “late” syntactic operations. The proposal offered here relies on independently motivated constraints and has greater empirical coverage than alternatives by correctly accounting for mixed agreement cases.

**Agenda:**

(i) FCA in LA
(ii) Theoretical Preliminaries
(iii) The Proposal
(iv) “Late Operations” Approaches
(v) FCA & Partial Agreement in Standard Arabic (SA)

## 2 Preliminaries

Arabic clause structure from TP down (Tucker 2011):

(3) \[ \begin{array}{c}
\text{TP} \\
\text{DP} \\
\text{Subject} \\
\text{T} \\
\text{Verb} \\
\text{AspP} \\
\text{vP} \\
\text{VP} \\
\text{V} \\
\text{\ldots} \\
\end{array} \]

---

2See van Koppen (2012) for a similar account of FCA in Dutch dialects that relies on these constraints.

3The most controversial assumption of this clause structure is that pre-verbal subjects raise to their surface position from a lower position. The leading alternative proposal claims that pre-verbal subjects are base generated above T and are coreferential with a null pronoun below T. Although I adopt Tucker’s clause structure, my analysis is compatible with the alternative. See Fassi Fehri (1993), Benmamoun (2000), Mohammad (2000), Aoun et al. (2010), and Soltan (2011) for discussion of pre-verbal subjects.
Verbs move from V to T when no auxiliary is present and to Asp when an auxiliary is present. Auxiliaries occupy T. Subjects are initially merged in Spec, vP and raise at least to Spec, AspP. Subjects optionally raise to Spec, TP.

(4) No Auxiliary
   a. VS Order: \([TP\ [T\ \text{Verb}] \ [AspP\ [DP\ \text{Subject}] \ldots]]\)
   b. SV Order: \([TP\ [DP\ \text{Subject}]]\ [T\ \text{Verb}] \ [AspP\ \ldots]]\)

(5) Auxiliary
   a. Aux SV Order: \([TP\ [T\ \text{Aux}] \ [AspP\ [DP\ \text{Subject}]] \ [\text{Verb}] \ [\ldots]]\)
   b. S Aux V Order: \([TP\ [DP\ \text{Subject}]]\ [T\ \text{Aux}] \ [AspP\ \text{Verb}] \ [\ldots]]\)

Subject-verb agreement is realized via Agree (Chomsky 2000, 2001):

(6) A functional head F (the “probe”) Agrees with a node X (the “goal”) iff:
   a. F has unvalued, uninterpretable \(\varphi\) features (\(u\varphi\) features).
   b. X has valued, interpretable \(\varphi\) features.
   c. F c-commands X.
   d. There is no node Y such that F c-commands Y, Y asymmetrically c-commands X, and Y has valued \(\varphi\) features.

(7) a. \[
\begin{array}{c}
\text{FP} \\
F [u\varphi] \\
\cdots \\
XP [\varphi] \\
\cdots
\end{array}
\]

   \(\varphi\)

b. \[
\begin{array}{c}
\text{FP} \\
F [u\varphi] \\
\cdots \\
YP [\varphi] \\
\cdots \\
\varphi \\
\cdots \\
XP [\varphi] \\
\cdots
\end{array}
\]

Both T and Asp enter the syntactic derivation with \([u\varphi]\) features. Movement of DP to subject position Spec, FP requires Agree relationship between F and the moved DP (Chomsky 2000, 2001; Preminger 2011). Movement of a DP to Spec, TP or Spec, AspP requires Agree relationship between the DP and either T or Asp.

In coordinated DPs the first conjunct asymmetrically c-commands the second conjunct (Munn (1993), Kayne (1994), Zoerner (1995)).

\(^4\)I do not adopt the activity condition (Chomsky 2000, 2001), which requires both the probe and the goal to have unvalued, uninterpretable features. For subject-verb agreement, it is generally assumed that probes have unvalued \(\varphi\) features and valued Case features, whereas goals have valued \(\varphi\) features and unvalued Case features. Relaxing this assumption is necessary for my proposal, as I assume that a single goal may be Agreed with by multiple probes. Assuming the activity condition would require that the goal possess two types of unvalued features. See Nevins (2004), Bošković (2007), Pesetsky and Torrego (2007), Bobaljik (2008), Zeijlstra (2010), Merchant (2011) and Preminger (2011) for theories of agreement that do not assume the activity condition.

\(^5\)I reject the proposal that only one functional head Agrees with a subject DP and the second head’s agreement morphology is parasitic on the first Agree relationship. This analysis can be ruled out by considering mixed agreement cases (2b), since in these cases the auxiliary in T and verb in Asp mismatch in their agreement morphology.
3 FCA IN LA

3.1 VS Clauses

Consider VS clause with no auxiliary (repeated from (1b)).

(9) raah-o/-∅ kariim w marwan (LA)
leave.PST-3P/-3MS Kareem and Marwan
‘Kareem and Marwan left.’ (Vpl/fca S)

Verb occupies T; the relevant Agree relationship is with T. Assume subject has raised to Spec, AspP.

(10)

Both the first conjunct and the full conjunction are potential goals for Agree:

(i) Neither asymmetrically c-commands the other.

(ii) Second conjunct is not potential goal, since it is asymmetrically c-commanded by the first conjunct.

Either FCA or full agreement is realized, depending on which DP T Agrees with.

3.2 SV Clauses

Now consider SV clause with no auxiliary (repeated from (1a)).

(11) kariim w marwan raah-o/*-∅ (LA)
Kareem and Marwan leave.PST-3P/*-3MS
‘Kareem and Marwan left.’ (S Vpl/*fca)

As above, verb occupies T. Assume subject has raised to Spec, AspP.
Both the first conjunct and full conjunction are potential goals for Agree. However, T may only licitly Agree with the full conjunction:

(i) T’s EPP feature requires that Spec, TP be occupied by a DP. This ensures SV word order.

(ii) Movement of DP to Spec, TP requires Agree relationship between T and moved DP.

(iii) Agreement with first conjunct would force movement of first conjunct alone to Spec, TP. This would incur a CSC violation.

(iv) Agreement with full conjunction followed by movement of full conjunction to Spec, TP incurs no violation.

Thus, only full agreement may be realized on T.

3.3 AUX S V CLAUSES

Now consider clauses containing an auxiliary in which the subject appears medially between the auxiliary and the main verb (repeated from (2b)).

(13) keen-o/-∅ kariim w marwan ʕam yə-drus-o/*-∅. (LA)
    be.PST-3P/-3MS Kareem and Marwan PROG 3M-study-P/*-S
    ‘Kareem and Marwan were studying.’ (AuxPL/FCA S VPL/+FCA)

The auxiliary occupies T; the main verb occupies Asp. Assume the subject is base generated in Spec, vP.
In (14a), both the first conjunct and full conjunction are potential goals for Agree. Asp may only licitly Agree with the full conjunction in order to satisfy its EPP feature. Agreement with the first conjunct followed by movement of the Agreed-with DP would incur a CSC violation.

In (14b), both the first conjunct and full conjunction are potential goals for Agree. Since T does not possess an EPP feature, T may Agree with either goal.

Thus, when the subject appears medially between the auxiliary and main verb, FCA with the auxiliary is optional and full agreement with the main verb is obligatory.

### 3.4 S Aux V Clauses

Finally, consider clauses containing an auxiliary in which the subject precedes both the auxiliary and the main verb (repeated from (2a)).

\[(15)\] kariim w marwan keen-o/*-∅ yam yɔ-drus-o/*-∅. (LA)
\[\text{Kareem and Marwan be.PST-3P/-3MS PROG 3M-study-P/-S}\]

‘Kareem and Marwan were studying.’ (S Aux_{PL/+FCA} V_{PL/+FCA})

The auxiliary occupies T; the main verb occupies Asp. Again assume the subject is base generated in Spec, vP.
In (16a), as in (14a), Asp may only licitly Agree with the full conjunction due to its EPP feature. In (16b), T also may only licitly Agree with the full conjunction due to T’s EPP feature.

Thus, when the subject precedes both the auxiliary and main verb, full agreement must be realized on both the auxiliary and main verb.

4 “Late Operations” Approaches

4.1 Overview of Late Operations

(i) FCA and full agreement result from agreement with different structures of the subject DP.

(ii) Some operation O converts a structure from one that triggers FCA to one that triggers full agreement.

(iii) If O occurs before Agree, full agreement is obligatory. If O occurs after Agree, FCA is obligatory.
I argue against these approaches on the following grounds:

(i) These approaches require additional theoretical assumptions about $O$.

(ii) Data suggest that the realization of FCA or full agreement depends on the position of the subject in the clause structure. In contrast, late operations approaches attribute these agreement patterns to different structures of the conjoined subject.

(iii) These approaches fail to easily account for mixed agreement. In mixed agreement cases, full agreement appears lower in the structure, which is incompatible with operation that converts a structure yielding FCA to one yielding full agreement.

4.2 SOLTAN (2007)

Soltan assumes that adjuncts may be Merged post-cyclically (Lebeaux (1988), Fox and Nissenbaum (1999), Chomsky (1993), Uriagereka (2002)). In coordinated structures, the second conjunct may be Merged late.

For post-verbal subjects, FCA results if the second conjunct undergoes late Merge after Agree has taken place (17a). Full agreement results if the second conjunct is Merged early, before Agree (17b).

\[
\begin{align*}
\text{(17) a.} & \quad \text{TP} \quad \implies \quad \text{Late Merge} \\
& \quad \begin{array}{c}
\text{TP} \\
\text{T} \[u\phi\] \\
\phi \rightarrow \text{DP} \\
\ldots
\end{array} \\
& \quad \begin{array}{c}
\text{DP} \\
\ldots
\end{array}
\end{align*}
\]

\[
\begin{align*}
\text{b.} & \quad \text{TP} \quad \implies \quad \text{Early Merge} \\
& \quad \begin{array}{c}
\text{TP} \\
\text{T} \[u\phi\] \\
\phi \rightarrow \text{DP} \\
\ldots
\end{array} \\
& \quad \begin{array}{c}
\text{DP} \\
\ldots
\end{array}
\end{align*}
\]

SV word order is not derived by movement of subjects to Spec, TP. Pre-verbal subjects are base generated in Spec, TP and are coreferential with a null $pro$ in the c-command domain of T.

\[
\begin{align*}
\text{(18) } & \quad \text{TP} \\
& \quad \begin{array}{c}
\text{DP} \\
\phi \rightarrow \text{pro}_i
\end{array}
\end{align*}
\]
Consider a clause containing an auxiliary with the subject occupying Spec, AspP (19).

(19) keen-o/-∅ kariim w marwan ſam yeq-drus-o/*-∅. (LA)
    be.PST-3P/-3MS Kareem and Marwan PROG 3M-study-P/*-S
    ‘Kareem and Marwan were studying.’ (AuxPL/FCA S VPL/*FCA)

Suppose the subject has raised from Spec, vP. Either the second conjunct has been Merged before the subject moves or it has not.

(20) a. Second conjunct Merges early:  

   \[
   \begin{array}{ccc}
   \text{AspP} & & \text{TP} \\
   \text{DP} & \Rightarrow \text{Asp [EPP, } u\varphi \text{]} & T [u\varphi] \\
   \varphi & \Rightarrow \text{DP} & \varphi \\
   & \& \text{DP} & \Rightarrow \text{DP} & \Rightarrow \text{VP} \\
   \text{vP} & & \text{Asp [EPP, } u\varphi \text{]} & \Rightarrow \text{vP} \\
   \end{array}
   \]

b. Subject raises:  

(21) a. Second conjunct does not Merge early:  

   \[
   \begin{array}{ccc}
   \text{AspP} & & \text{TP} \\
   \text{DP} & \Rightarrow \text{Asp [EPP, } u\varphi \text{]} & T [u\varphi] \\
   \varphi & \Rightarrow \text{DP} & \varphi \\
   & \& \text{DP} & \Rightarrow \text{DP} & \Rightarrow \text{VP} \\
   \text{vP} & & \text{Asp [EPP, } u\varphi \text{]} & \Rightarrow \text{vP} \\
   \end{array}
   \]

b. Subject raises:  

If second conjunct is Merged before subject raises (20), full agreement with both Asp and T is obligatory. This incorrectly predicts that FCA with an auxiliary should be ungrammatical.

If second conjunct is not Merged before subject raises (21), FCA will be realized on Asp. This incorrectly predicts that FCA will be possible on a main verb when the subject precedes the verb.

**Alternative:** Assume that subject is base generated in Spec, AspP and is coreferential with a null pro in Asp’s c-command domain (Ouali 2014). There are two problems with this analysis:

(i) We must require that the second conjunct is merged late to account for FCA with T and that pro is coreferential with the full conjunction early to account for full agreement with Asp.

(ii) Soltan gives three arguments that subjects in Spec, TP are base generated there, at least in SA:  
(a) only definite or specific indefinite DPs can appear above T;  
(b) A-movement is generally prohibited in SV clauses;  
(c) subjects above T can be assigned case by complementizers or ECM verbs. None of these phenomena occur with subjects in Spec, AspP, so we lack independent evidence that subjects are base generated in Spec, AspP.
See Appendix A for discussion of similar proposal in Larson (2013).

5 **Standard Arabic & Partial Agreement**

5.1 FCA in SA

The only significant distinction between FCA in LA and SA is that FCA is optional with post-verbal subjects in LA, but is obligatory in SA.

(22) a. kariim wa marwan xaraj-aa/*-a (SA)
    Kareem and Marwan leave.pst-3MD/*-3MS
    ‘Kareem and Marwan left.’

   b. xaraj*-aa/-a kariim wa marwan (SA)
    leave.pst-3MD/-3MS Kareem and Marwan
    ‘Kareem and Marwan left.’

(23) a. kariim wa marwan kaan-aa/*-a ya-drus-aani/*-u. (SA)
    Kareem and Marwan be.pst-3MD/-3MS 3M-study-D/-S
    ‘Kareem and Marwan were studying.’

   b. kaan*-aa/-a kariim wa marwan ya-drus-aani/*-u. (SA)
    be.pst-3MD/-3MS Kareem and Marwan 3M-study-D/*-S
    ‘Kareem and Marwan were studying.’

5.2 Partial Agreement in SA

Note that in general, verbs in SA agree with post-verbal, non-singular, non-pronominal subjects in gender only (partial agreement).

(24) a. ?at-ţulaab-u xaraj-uu/*-a (SA)
    the-students-NOM left-3MP/*-3MS
    ‘The students left.’

   b. xaraj*-uu/-a ?at-ţulaab-u (SA)
    left*-3MP/-3MS the-students-NOM
    ‘The students left.’

It is often assumed that FCA and partial agreement have a similar source, since both involve a type of agreement impoverishment when subjects are post-verbal.

However, there are reasons to think that FCA and partial agreement require independent explanations:

(i) The existence of FCA and absence of partial agreement in non-standard varieties like LA suggests that the two phenomena are independent.

(ii) More generally, FCA and closest conjunct agreement are well-attested cross-linguistically in languages that do not have phenomena resembling partial agreement: Biblical Hebrew (Doron 2000), Brazilian Portuguese (Munn 1999), Dutch (van Koppen 2005), English (Munn
1999), Finnish (van Koppen 2005), Hindi-Urdu (Bhatt and Walkow 2013), Modern Greek (Doron 2000), Modern Irish (McCloskey 1986), Serbo-Croatian (Bošković 2009), Spanish (Doron 2000), Tsez (Benmamoun et al. 2009), . . .

5.3 Divorcing Partial Agreement and FCA

Assume that partial agreement is the result of a process that deletes number information from verbs when subjects are post-verbal and non-pronominal. (Ackema and Neeleman 2003, Benmamoun and Lorimor 2006, Ackema and Neeleman 2012). Further assume that this process is independent of FCA.

Is FCA truly obligatory in SA?

(i) FCA is Obligatory: Post-verbal subjects always trigger FCA. Post-verbal subjects with the composition DP\textsubscript{Fem} & DP\textsubscript{Mas} trigger feminine singular agreement. Post-verbal subjects with the compositions PN\textsubscript{1} & PN\textsubscript{2} trigger agreement with PN\textsubscript{1} only.

(ii) FCA is Optional: Post-verbal subjects trigger FCA or full agreement. In the case of full agreement, the process that accounts for partial agreement deletes number information from the verb when the subject is non-pronominal. Post-verbal subjects with the composition DP\textsubscript{Fem} & DP\textsubscript{Mas} trigger either feminine singular agreement or masculine singular agreement. Post-verbal subjects with the compositions PN\textsubscript{1} & PN\textsubscript{2} trigger agreement with either PN\textsubscript{1} or with PN\textsubscript{1} & PN\textsubscript{2}.

With DP\textsubscript{Fem} & DP\textsubscript{Mas} subjects, feminine singular agreement is attested (Harbert and Bahloul 2002).

(25) xaraj-at al-bint-u wa ?al-walad-u. (SA)
leave.PST-3FS the-girl-NOM and the-boy-NOM
‘The girl and the boy left.’

Consultants have mixed judgments about the equivalents of (25) with singular masculine agreement. However, most find sentences like (26) acceptable, and in some cases preferable to (25).

leave.PST-3MS the-girl-NOM and the-boy-NOM
‘The girl and the boy left.’

Corpus examples from the Penn Arabic Treebank (Maamouri et al. 2010) show that masculine singular agreement with post-verbal conjoined subjects with feminine first conjuncts is attested (27).

attend.PST-3MS the-celebration director.F the-center the-educational
li-l-bahuu0 wa ?al-anmaa? al-duktuura layla mileiha fayaad wa
for-the-research and the-development the-doctor Laila Mileiha Fayyad and
the-director the-sector the-educational in the-north Fawzi Nima . . .
‘The director of the Educational Center of Research and Development Dr. Laila Mileiha Fayyad, North Educational Administration Director Fawzi Nima, . . . attended the celebration.’
b. kaan-a ḳalaa matan al-baaxira ṭaydaan ṭimraataan ṭalif.  
   be.PST-3MS on board the-ship also women.D and child
   ‘Also on board the ship were two women and a child.’

Conjoined, post-verbal pronominal subjects may trigger either FCA or full agreement (Aoun et al. 1994, LeTourneau 2001).

(28) naam-a/-aa huwa wa hiya fi-l-bayt-i.  (SA)  
   sleep.PST-3MS/-3MD he and she in-the-house-GEN
   ‘He and she slept in the house.’

These data are consistent with an analysis in which both FCA and full agreement are options with post-verbal conjoined subjects. In the case of full agreement, number information is deleted from verbs via the same process that yield partial agreement.

6 Conclusion

(i) Patterns of FCA in LA can be explained via independently motivated constraints on Agree and movement.

(ii) Recent late operations approaches to FCA require additional theoretical assumptions and cannot account for clauses with mixed agreement patterns.

(iii) On the assumption that FCA and partial agreement in SA are independent phenomena, the analysis of FCA in LA can be extended to SA.

(iv) This type of analysis also accounts for FCA data in Biblical Hebrew (Doron 2000), dialectal Dutch (van Koppen 2005, 2012), and Finnish (van Koppen 2005).

Appendix A: Other Alternatives

Larson (2013)

Larson follows Hornstein (2009) in assuming that Merge can be decomposed into the sub-operations Concatenate and Label.

(29) Decomposed Merge
   a. Concatenate(X, Y) ⇒ [ XP YP ]
   b. Label(X, [XP, YP]) ⇒ [XP XP YP ]

All constituents must be Labeled by the end of the syntactic derivation, but Label may occur late (e.g. post-cyclically). UnLabeled constituents cannot be targeted by syntactic operations such as Agree and Move (internal Merge).

Suppose a conjoined subject has undergone Concatenate, but not Label. When T probes its c-command domain to Agree, it locates only the first conjunct as a potential goal (30a). In contrast, the conjoined subject has been Labeled, only the full conjunction is a potential goal (30b).
Only a conjunction that has been Labeled, as in (30b) may undergo movement to Spec, TP. This predicts the unavailability of FCA with pre-verbal subjects.

Consider a clause containing an auxiliary in which the subject raises to Spec, AspP. Since the subject has raised to Spec, AspP and we see full agreement with the main verb, the conjoined subject must be Labelled (31a). This forces full agreement with the auxiliary in T (31b).

This incorrectly predicts that FCA with an auxiliary is ungrammatical when the subject follows the auxiliary.

AOUN ET AL. (1994, 1999)

“True” FCA does not exist in Arabic. Purported cases of FCA are the result of clausal conjunction followed by across-the-board movement of subjects to the first clause and right-node raising of objects to the second clause. Example (32a) is analyzed as in (32b).

Munn (1999) argues against the biclausal approach:

(i) Aoun et al. offer no way to rule out across-the-board movement of verbs when subjects are pre-verbal. This incorrectly predicts the acceptability of apparent FCA with pre-verbal subjects (33a).
(ii) FCA is compatible with quantified NPs in the first conjunct binding pronouns in the second conjunct (33b).

(33) a. * fatme w zeina daras-it l-inglizii. (LA)
    Fatima and Zeina study.PST-3FS the-English.
    ‘Fatima and Zeina studied English.’

b. raah-it koll mara w ?obn-a. (LA)
    leave.PST-3FS every woman and child-her.
    ‘Every woman and her child left.’

In addition, Aoun et al. cannot explain mixed agreement cases. Since there is no plural subject in either clause, plural agreement on main verb is unexpected (35).\(^6\)

(35) keen-∅ kariim w marwan ?am yο-drus-o. (LA)
    be.PST-3MS Kareem and Marwan PROG 3M-study-P
    ‘Kareem and Marwan were studying.’

**POST-SYNTACTIC ACCOUNTS**

Bhatt and Walkow (2013) analyze FCA and last conjunct agreement (LCA) in Hindi-Urdu by arguing that Agree matches a probe to a goal in syntax, but that the valuation of the probe’s \(\varphi\) features takes place post-syntactically. This valuation targets the set of \(\varphi\) features in the goal closest to the probe in linear order.

There are difficulties in extending this analysis of either SA or LA:

(i) FCA and LCA in Hindi-Urdu only occur with object agreement. The failure of the probe’s \(\varphi\) features to be valued in the syntax is connected to the fact that the goal is not a subject.

The varieties of Arabic under consideration do not have object agreement, so we can not rely on the same mechanism to explain why the probe’s \(\varphi\) features are not valued in the syntax.

\(^6\)This is addressed in Aoun and Benmamoun (1999), where it is argued that “mixed agreement” cases involve default (i.e. third-person masculine singular) agreement with the auxiliary and full agreement with the main verb. In support of this claim, they offer the following acceptability judgments:

(34) a. * keen-it Nadia w Zayna ?am yi-liab-o. (LA)
    be.PST-3FS Nadia and Zayna PROG 3-play-P.
    ‘Nadia and Zayna were playing.’

b. * keen-it Nadia w Zayna mu?allimat. (LA)
    be.PST-3FS Nadia and Zayna teachers.
    ‘Nadia and Zayna were teachers.’

c. * keen-it Nadia w Zayna te?ben-iin. (LA)
    be.PST-3FS Nadia and Zayna tired-P.
    ‘Nadia and Zayna were tired.’

My consultants judged sentences similar to (34a) acceptable. See Lorimor (2007) for experimental evidence supporting the acceptability of sentences like (34b) and (34c) in LA. Note also that the equivalent of (34a) in SA is unambiguously acceptable.
(ii) If a probe’s \(u\varphi\) features were valued only by the closest set of \(\varphi\) features in the probe, we would incorrectly predict LCA with pre-verbal subjects.

Ackema and Neelman (2003, 2012) analyze partial agreement as a result of the mapping from syntactic structures to prosodic structures and a rule about deleting particular features contained within the same prosodic phrase. First, Ackema and Neelman assume that SA possesses a rule mapping syntax to phonology like the following.

(36) \(\text{Align(} \langle \text{right edge, XP} \rangle, \langle \text{right edge,} \phi \rangle \text{)}\)

Assuming that SA has a rule such as (36), SV and VS word orders will map onto prosodic structures as follows.

(37) SV clauses
   a. Syntactic structure: \([\text{CP} \text{ [TP [DP Subject] Verb } \ldots \text{ [DP Object]]]]\]
   b. Prosodic structure: \(\{\phi \text{ Subject}\}\{\phi \text{ Verb Object}\}\)

(38) VS clauses
   a. Syntactic structure: \([\text{CP [TP Verb [DP Subject] } \ldots \text{ [DP Object]]]}\]
   b. Prosodic structure: \(\{\phi \text{ Verb Subject}\}\{\phi \text{ Object}\}\)

Ackema and Neelman also assume SA possess a rule whereby a feature that appear on two elements within the same prosodic phrase may be deleted from one such element (39).

(39) \(\{\phi \ldots [A \text{ F}_1 \text{ F}_2] \ldots [B \text{ F}_1 \text{ F}_3] \ldots\} \rightarrow \{\phi \ldots [A \text{ F}_2] \ldots [B \text{ F}_1 \text{ F}_3] \ldots\}\)

This analysis cannot account for FCA. Consider the syntactic structure of a sentence with a post-verbal conjoined subject and the prosodic structure (36) would give to it.

(40) VS clause with conjoined subject
   a. Syntactic structure:
      \([\text{CP [TP Verb [DP First Conjunct] } \ldots \text{ [DP Second Conjunct]]} \ldots \text{ [DP Object]}\]
   b. Prosodic structure: \(\{\phi \text{ Verb First Conjunct}\}\{\phi \text{ and Second Conjunct}\}\{\phi \text{ Object}\}\)

Suppose that in the syntax, T agrees with the full conjoined subject. Given (40b), the subject is in the same prosodic phrase as the first conjunct. If both conjuncts are singular, the full conjunction is plural (in LA) or dual (in SA). The rule in (39), since the verb possesses a plural (or dual) feature and the first conjunct possesses a singular feature. There are no matching \(\varphi\) features within this prosodic phrase, and nothing should be deleted.

**APPENDIX B: SUBJECTS IN SPEC, vP**

Above I following Tucker (2011) in assuming that subjects must raise to at least Spec, AspP. Based on the clause structure described above, the following word order suggests the possibility of subjects remaining in Spec, vP:
The acceptability is unclear. Tucker (2011), based on judgments from Sarah Ouwayda (p.c.), claims that sentences like (41) with Aux V S word order receive a reading in which the entire verbal complex receives a contrastive focus reading. Among my consultants, most thought that this word order was unnatural in LA, and I was unable to elicit judgments regarding its possible contrastive focus reading.

One consultant did consider the Aux V S word order acceptable. In the case of conjoined subjects, both FCA and full agreement were deemed acceptable. However, unlike cases of mixed agreement, the auxiliary and main verb must match in the agreement pattern they realize.

If the data in (42) is accurate, I propose the following account. Assume that Asp’s EPP feature is optional, as was previously assumed for T. Assume Asp does not possess an epp feature.

(43) a.  

\[
\text{AspP} \\
\text{Asp} \quad [u\varphi] \\
\text{study} \\
\text{vP} \\
\text{DP} \\
\varphi \\
\text{Kareem} & \text{and} \text{DP} \quad \text{Marwan} \\
\varphi \\
\text{VP}
\]
Asp agrees with either the full conjunction or the first conjunct. Since Asp does not possess an EPP feature, the subject remains in Spec, vP. When T probes its c-command domain to Agree the most local node with valued ϕ features is Asp, since Asp asymmetrically c-commands the entire conjoined subject. Thus, T’s ϕ features are dependent on Asp’s.

If the subject does not raise to Spec, AspP and T possesses an EPP feature, the derivation cannot converge. The EPP feature requires movement of an Agreed-with DP to Spec, TP. However, if the subject remains Spec, vP, T does not directly Agree with any DP.

REFERENCES


