Subject Verb Agreement Asymmetries and the Distribution of Labor between Syntax and Morphology*

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1 Agreement Asymmetries in Modern Standard Arabic

1.1 The Positional Asymmetry (PA)

- Preverbal full NP subjects control verbal agreement in number (NUM) and gender (GEND): (1a) (full agreement).
- Postverbal full DP subjects control verbal agreement only in GEND, (1b) (partial agreement).

(1) a. ?al-ʔaulā:d-u qadim(-a/-u): DEF-boys-NOM came(-3SG.MA/-3PL.MA)
   ‘The boys came.’

b. qadim(-a/-u) ?al-ʔaulā:d-u came(-3SG.MA/-3PL.MA) DEF-boys-NOM
   ‘The boys came.’

(2) Topic Verb Subject
   ?al-ʔaulā:d-u qadim-u: came-3PL.MA 3PL.MA
   e.g. Fassi Fehri (1988, 2009), Plunkett (1993), Soltan (2007) (see Plunkett, 1993, 241, for references to earlier accounts in this tradition).

• MSA independently has a construction topic construction, (3), where...
  – there is a resumptive pronoun in the clause, -hu in (3a).
  – the sentence initial noun phrase is always in nominative case, (3a), leading to case mismatch between it and the pronoun in the clause.
  – the sentence initial noun phrases cannot be indefinite, (3b).

(3) a. ?al-ktɑː:b-u qaraʔa -hu zayd-un
   DEF-book-NOM read.3SG.MA -3SG.MA.ACC Zayd-NOM-IND
   ‘The book, Zayd read it.’

b. * ktɑː:b-un qaraʔa -hu zayd-un
   book-NOM.IND read.3SG.MA -3SG.MA.ACC Zayd-NOM.IND
   ‘The book, Zayd read it.’

(4) * walad-un kasara l-baab-a
   boy-NOM.IND broke.3S.MA DEF-door-ACC
   ‘A boy broke the door.’

1.1.1 The Status of Preverbal Subjects

- A popular Idea: preverbal subjects are topics related to pronouns that are the grammatical subjects of the clause and give rise to full agreement.

Example (1a) would receive the analysis in (2).

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2 I use the term topic here for convenience, other terms have been used for this construction. Moutaouakil (1989) calls them theme, Soltan (2007) left dislocated.
• An example where that seems right: NPs to the left of wh-phrases in (5), bind a resumptive in the position they associate with (e.g. Moutaouakil, 1989; Plunkett, 1993).

(5) ?a$tul:ab-u ?emn ya-drus-una
DEF.students-NOM where 3-studying-MA.PL
‘The students where are (they) studying?’ (Plunkett, 1993, 243)

• The Topic proposal in summary:
  – Syntax: silent pronoun in subject position controls full agreement.
    The major motivation for this comes from the fact that we (i) can observe that pronoun in sentences like (3a), and (ii) pronominal subjects can go unpronounced.
  – Discourse function: Preverbal subjects have a particular discourse status (for a discussion see Moutaouakil, 1989, Chapter 3). Beyond the specifics, one might relate preverbal subjects to givenness, and givenness to pronoun like behavior of agreement.

To serve as a general explanation for PA on the syntactic side, all preverbal subjects that control agreement have to be related to a lower pronoun.

To serve as an explanation in terms of discourse function, all preverbal subjects would have to have a special discourse status.

• I will argue that neither the syntactic nor the discourse side can be upheld.

1.1.2 Non-Topic Preverbal Subjects

Focus Preposing.

• Contrastively focussed elements can appear in preverbal position (see e.g. Moutaouakil, 1989, Chapter 2). Focus preposed phrases…
  – Do not bind a resumptive pronouns (Moutaouakil, 1989, 96).
  – Retain their case (Moutaouakil, 1989, 52), accusative in (6).
  – Can be indefinite (Moutaouakil, 1989, 87, on nominal sentences), (7).

(6) za?d-an $ safah-tu
Zaid-ACC.IND greeted-1.SG
‘It was Zayd that I greeted.’ (Moutaouakil, 1989, 24)

(7) ?a walad-un $qar:$a
Q boy-NOM.IND came.3SG.MA
‘Did a boy come?’ (Mohammad, 1999, 37)

• Preverbal noun phrases in questions with ?a are contrastively focussed (e.g. Moutaouakil, 1989, 28), (8).

(8) ?a za?d-an $ ta-naqIdtu
Q Zayd-ACC.IND 2MA.S-criticising
‘Are your criticizing Zayd?’ (Moutaouakil, 1989, 30)

• Unlike topics, (9), contrastively focussed constituents cannot precede ?a, (10).

(9) za?d-un $a $abu: $hu mari:$d-un
Zayd-NOM.IND Q father.NOM -his ill-MA.NOM.IND
‘Zayd – is his father ill?’ (Moutaouakil, 1989, 30)

(10) *cAmr-an $a $t$a?at-ta
*cAmr-ACC.IND Q saw-2S.MA
‘Was it cAmr you saw?’ (Moutaouakil, 1989, 63)

• Focus preposed noun phrases differ syntactically as well as in their discourse function from topics as discussed above. Most importantly, they do not involve resumption, which underlies syntactic the explanation of PA in (5), and aren’t topical or even given.

• Focus preposing of subjects still gives rise to full agreement, (11).

(11) ?a awalax:d-un $qar:$a{
Q boy-NOM.IND come.PERF { $-a / -u: }
‘Did boys come?’

Questions with ‘?aj’:

• Questions with ?aj:…
  – Do not necessarily involve resumption, (12).
  – Display normal case on ?aj; accusative in (12).
  – Their discourse properties are obviously different from topics.
Preverbal Subjects after *wa* and *fa*.

- Subjects can appear in preverbal position following *wa* and *fa*, (14).

  (14) a. haḍa wahm-unciation *fa*-kaṭir-unciation maḥa rażakal-ỉl-ỉr this fantasy-NOM.IND PRT-3-tell lies-M.A.PL on DEF.men jā-kōbāb-uncia jāla; rażakal-ỉl-ỉr ‘This is pure fantasy, for many men tell lies to other men.’ (Badawi et al., 2004, 552)


- Are these topics?
  - *ʔa* follows topics, (9).
  - *wa* follows *ʔa*, (15).

(15) *ʔa*-wa *dak:ʔa* *ʔal-walad-ỉr* Q-and came.3.SG.MA DEF-boy-NOM ‘And did the boy come?’ (Mohammad, 1999, 36)

Since the preverbal nominatives in (14) follow *wa*, they cannot be topics.

- Discourse prominence: Topics are typically phonologically prominent. The pronouns *lurwa* and *ḥija* can be phonologically reduced after *wa/fa* to *walwa/fahwa* and *wahja/fahja* (Ryding, 2005, 299), (14b).

If the absence of phonological prominence is indicative of discourse prominence, pronominal subjects after *wa/fa* can lack discourse prominence (observed for classical Arabic by Reckendorf, 1895, 379-380). While *wa* and *fa* do mark discourse relations between sentences, the descriptions in Badawi et al. (2004) and Ryding (2005) do not suggest that they are consistently associated with discourse prominence of the subject.

### Preverbal Subjects in Compound Tense Constructions.

- In compound tense constructions two verbs agree with the same subject, each shows agreement according to its position with respect to the subject: (16).

(16) \( V_1 \quad S \quad V_2 \)
\[
\begin{align*}
\text{ klassa} & \quad \text{ al-ʔalæ:d}-u \quad \text{ jā-tara:kīr}-d-unsafe \\
\text{ was.3.SG.MA DEF-children-NOM 3-race around-PL.MA}
\end{align*}
\]
‘The children were racing around.’ (Badawi et al., 2004, 368)

- The interverbal position in (16) is not the base position of the subject. Indefinite subjects, e.g. (17)-(18), can appear below the lower verb. In that position they expectably do not trigger number agreement, (17).

(17) \[. . . \] klassa qadd ma’dā: qarn-ỉnā[. . .] be.PERF.3.SG.MA PRT pass.PERF.3.SG.MA century-DUAL.NOM klassil-ỉnā yala: hamlat-ỉr na:bulju:nma yala mısra whole-DUAL.NOM on attack-GEN Napoleon on Egypt ‘[. . .] two whole centuries had passed over Napoleon’s attack on Egypt.’ (Badawi et al., 2004, 368)

(18) \( V_1 \quad V_2 \quad S \)
\[
\begin{align*}
\text{ lam} & \quad \text{ ja-kun} \quad \text{ qadd ʔakala} \quad [ʔaj-u] \text{ walad-m} \\
\text{ NEG 3.SG.MA-was PRT ate.3.SG.MA any-NOM boy-GEN.IND}
\end{align*}
\]
O tufa:ʔat-an apple-ACC.IND ‘No boy had eaten an apple.’

- The asymmetry between (16) and (17)/(18) mirrors that of (1a) and (1b).

- Intuitively the subject in (16) is not a topic like the one in (5): (i) It appears in a different position, (ii) It does not have the same discourse status.
1.1.3 Summary

• Summing up:
  – Not all preverbal nominatives have the same syntactic status. Not all of them are related to a resumptive pronoun.
  – Not all preverbal subjects have the same discourse status. Subjects assume preverbal positions in a number of different ways giving rise to full agreement. Some of these ways are obviously driven by the discourse function of the subject (focus preposing, questions) others less obviously so (wa/fa and compound tense constructions). There is no consistent association with givenness.

  Even outside constructions like (5), full agreement is a general fact about how agreement interacts with word order and is not tied to any particular discourse function or factor that drives SV-order.

• PA in MSA differs in important ways from positional asymmetries in other languages, e.g. the Italian dialects discussed in Brandi and Cordin (1989):
  – There is agreement in gender with the postverbal subject (see §1.3), unlike in these Italian dialects where there is no agreement in VS-order at all.
  – All preverbal subjects trigger full agreement in MSA. In the Italian dialects there is no agreement in subject questions where the question word is preverbal.

• Questions:
  – Why are number and gender agreement sensitive to different structural configurations?
  – Why is it number agreement that fails in postverbal position, not gender agreement? And why does gender agreement succeed in postverbal position?

1.2 The Subject-type Asymmetry (SA)

• I follow (Bahloul and Harbert, 1992; Harbert and Bahloul, 2001) in assuming that forms like huwa/hija/hum?antum... are normal pronouns (contra Fassi Fehri, 1993, among others).

• Pronouns, unlike full noun phrases, trigger agreement in NUM and GEND in preverbal as well as postverbal position, (1b) vs. (19).

  (19) ɗaːl{*-a / -u} hum laː xudɑːm-u-hum
  came{*-3SG.MA / -3.PL.MA} they NEG servants-NOM-their
  ‘They came, not their servants.’ (Harbert and Bahloul, 2001, 63)

• Number agreement is sensitive to the syntactic category of the subject.

• The role of person:
  – Third person is the default specification (e.g. in contexts where agreement fails (20)) altogether, so the presence of person agreement is not detectable with third person subjects.
  – With 1/2-pronouns there is agreement with more features anyway, so one can’t tell whether person agreement is possible for the same reason number agreement is possible.

I will not have anything to say about person agreement.

1.3 Absence of Gender Agreement

• GEND agreement can be absent in V...-S order when material like prepositional phrases, (20a-c), or existential there/humɑːka, (20d), are between verb and subject.

  (20) a. kɑːn{*-a / -at} ymɑːd-l?awɑːm-d-1 sajɑːrat-un
  was{-3SG.MA / -3SG.FE} with-DEF-boys-GEN-NOM-IND
  ‘The boys had a car.’ (Soltan, 2007, 111)

  b. leIs{*-a / -at} fi-l-bert-1
  wasn’t{-3SG.MA / -3SG.FE} in-DEF-house-GEN
  ?mɑːl-at-un
  woman-NOM.IND
  ‘There was no woman in the house.’

  c. {ya- / ta-jibū ylɑːal-ɑl-mu?mm-imɑ
  (3SG.MA- / 3SG.FE-)MOD on-DEF-believer-PL.MA.GEN
  ?a’sɑːlɑːt-u
  DEF.prayer-NOM
  ‘The believers have to pray.’ (Lit. Prayer must on the believers)
  (a.-c. Soltan, 2007, 109)
1.4 Agreement with Multiple Verbs

- Multiple verbs can agree in one sentence, (16) and (17)/(18).
- There is no dependency between the agreement features on the two verbs, unlike what as has been argued for complementizer-agreement and verbal agreement in other languages (Zwart, 1997; Chomsky, 2005):
  - The verbs can show different $\phi$-features: (16).
  - In interaction with left-conjunct agreement in VS-order, they can express disjoint sets of agreement features: (21) (not acceptable to all speakers).

\[
\begin{align*}
(21) & \quad \begin{array}{c}
V_1 \ \text{agrees} \ \text{to} \ \text{NP}_1 \ \text{CONJ} \ \text{NP}_J \ \text{agrees} \\
\text{kæ:n-at} \ \text{?uxt-i:} \ \text{wa} \ \text{?andum} \ \text{ta-taraki}\text{t} \ \text{d-una}
\end{array} \\
\text{was-3SG.FE sister.FE-my and you.PL.MA 2-race around-PL.MA}
\end{align*}
\]

- In multiple nominative constructions (Doron and Heycock, 1999), the two verbs can agree with different nominative NPs: (22).

\[
\begin{align*}
(22) & \quad \begin{array}{c}
V_1 \ \text{agrees} \ \text{to} \ \text{NP}_i \ \text{agrees} \ \text{to} \ \text{NP}_j \\
\text{tæl:} \text{a}\text{[hæ:]m-um}]_1 \ \text{ta-taqad:amuu}_2 \ \text{br-hæ:}_i \ [\text{?as:im-}u]_j \\
\text{kept-3S.MA Hashim-NOM 3S.FE-progress on-him DEF.years.FE-NOM}
\end{array} \\
\text{‘Hashim was growing old.’ (Lit. ‘The years keep progressing on Hashim.’)}
\end{align*}
\]

- The masculine on $\text{ kesial}$ in (22) is not default agreement. When NP$_i$ is replaced by a feminine noun, (23), only feminine agreement is possible.

\[
\begin{align*}
(23) & \quad \begin{array}{c}
5\text{ðahl} \text{[*a/-at]} \ \text{zemab-u} \ \text{ta-taqad:amu} \ \text{br-hæ:}_i \\
\text{kept\{ *-3SG.MA/-3SG.FE\} Zainab.FE-NOM 3SG.FE-progressing on-her}
\end{array} \\
\text{DEF.years.FE-NOM}
\end{align*}
\]

‘Zainab was growing old.’

Dissociation of the agreement properties of two agreeing elements is also found in cases of complementizer agreement in Dutch dialects discussed by Haegeman and van Koppen (2009).

- The resumptive bound by $\text{hæ:}fæm$ gives this structure the resemblance of topics like (5). Doron and Heycock (1999) argue that MSA has broad subjects, nominatives that are base generated higher than normal subjects and control resumptives, but are different from topics. They for example do not appear in the left periphery of the sentence. I assume that $\text{hæ:}fæm$ is such a broad subject.

- No split agreement:
  - V$_2$ can agree with a higher S, (16).
  - Both NP$_1$ and NP$_2$ are possible agreement targets, (22).
  - In constructions like (22), V$_2$ (tataqad:amu) cannot agree in gender with NP$_2$ but in number with NP$_1$, schematically (24).

\[
\begin{align*}
(24) & \quad \begin{array}{c}
V_1 \ \text{NP}_i \ \text{agrees} \ \text{to} \ \text{NP}_j \ \text{agrees} \\
\text{[NUM]} \ \text{PP-pro}_1 \ \text{NP}_j \\
\text{[GEND]}
\end{array} \\
\text{The NUM- and GEND-features have to come from the same agreement target. In this respect MSA differs from Georgian (Béjar, 2000), where the same agreement marker can reflect the features of different agreement targets.}
\end{align*}
\]

- The possibility of multiple heads agreeing with the subject is a problem in the face of the Activity Condition on Agree (Chomsky, 2000). Agreement with the lower verb in (16) involves all $\phi$-features. This should deactivate the subject’s $\phi$-features and bar agreement with higher heads.

1.5 Conjunct Agreement

- Preverbal conjoined subjects trigger agreement with the whole conjunction. Mixed gender conjunctions default to masculine, (25).
Hind-u wa Zayd-un .Future{  *-at / *-a / Hind.FE-NOM and Zayd.MA-NOM come.PERF{  *-3SG.FE / *-3SG.MA / *-æ: } -3.DUAL } ‘Hind and Zayd came.’

Postverbal conjoined subjects show agreement with the first conjunct, (26). This is independent of whether the first conjunct is a pronoun or a full noun phrase, (26) a. vs b.

(26) a. Ñæ:P{ come.PERF{  *-at / *-a / *-æ: } Hind-u wa Hind.FE-NOM and Zayd-un Zayd.MA-NOM ‘Hind and Zayd came.’


1.6 The Proposal in Short

The phenomena to be accounted for are summarized in Tab. 1.

Proposal: The asymmetries arise because (i) sharing of \( \phi \)-features can happen in syntax as well as PF, (ii) the relevant processes in syntax and PF are sensitive to different structural relations, and (iii) Agreement processes are sensitive to the internal structure of the agreement target.

- Syntax: AGREE establishes relations between probes and goals.
- PF: matches feature under structural adjacency (Adger, 2000), allowing functional structure inside a specifier to interact with a following head.

| PA: | Number and gender agreement are sensitive to different structural configurations, (1a) vs (1b). |
| SA: | Agreement in VS-order is sensitive to the syntactic structure of the subject, (1b) vs (19). |
| Absence of GEND: | In a limited set of contexts, GEND-agreement is optional under non-adjacency, (20). |
| Multiple Agreement: | The subject can be target of multiple agreement relations, (16). |
| No Split Agreement: | \( \phi \)-Features of one probe always come from the same goal, (24). |
| Conjunct Agreement: | Postverbal conjoined subjects trigger agreement with the leftmost conjunct. Preverbal conjoined subjects trigger full agreement. |

Table 1: Summary of Phenomena.

The proposal here continues work (e.g. Benmamoun, 2000; van Koppen, 2007; Benmamoun et al., 2009) that investigates how syntactic and PF factors contribute to agreement phenomena.

| Lexicon | Morphology |
| Narrow Syntax | Phonological Form (Interpretation) |

Table 2: The Y-model of the grammar.
2 Subject Type Asymmetry

Proposal: $\phi$-agreement has access only to the features in the highest structural layer of the agreement target. Pronouns and full DPs in MSA differ in the $\phi$-features accessible in their highest syntactic layers as a function of differences in internal structure.

- Assumptions about internal structure of DP: Tab. 3. Nouns surface between demonstratives and adjective, (27).

(27) $\text{hæːdə} \; ?\text{al}^3\text{-wæːq}"\, ?\text{al}-\text{mutanaaj}"\,\text{r-u}$
   this DEF-reality-NOM DEF-changing-NOM
   ‘this changing reality’ (Badawi et al., 2004, 127)

- D is not born with either GEND- or NUM-features. It has to acquire them from somewhere in its complement.

- Proposal: D in MSA acquires its $\phi$-features in a relation with NP. NP has GEND but no NUM-features. When external agreement triggers access D, they only have access to GEND.

$^3$I treat the definiteness markers as exponents of D, see Table 3, spelled out on all terminals of the appropriate type in its c-command domain. This captures that fact that they don’t appear on nouns that have raised to D, see (35).

Evidence about the relation between D and its complement comes from two sources: morphology and movement. See Appendix A.2 for more detailed discussion.

This analysis assumes that features can be shared between two nodes (i) in the syntax, and (ii) in a way that the the features on D in this case remain accessible for later applications of AGREE. More discussion of this point in Sec. 3 and 5.

- Pronouns: Déchaine and Wiltshcko (2002) argue that pronouns come in three different sizes: DP, $\phi P$ and NP, each with different properties. MSA pronouns have the properties of $\phi P$-pronouns (See Appendix A.1). As $\phi P$ contains NUM and GEND, both are accessible to agreement, giving rise to full agreement.

- In combination with AGREE SA is derived as in Tab. 4:

- Pronouns: $\phi P+V$ consisting of GEND and NUM can access $\phi(P)$ and AGREE in both features.

- Full DPs: A probe on $\phi P+V$ consisting of both NUM and GEND cannot access the features in $\phi P$ due to the intervening GEND features on D, which it AGREES with in stead. Partial agreement follows.
For the AGREE-account to work, checking only GEND has to be sufficient for the probe as well as the goal to be licensed. Failure to check NUM does not lead to a crash in the syntax.

In addition, the $\phi$-features of non-thematic nominatives as in (22) have to be accessible to AGREE.

### 3 Positional Asymmetry

- **AGREE**: If movement is AGREE+EPP, and EPP is an instruction to build structure, there is no reason to expect that AGREE should have access to more features in the presence of EPP than in its absence.

- Adger (2000): Relations between features can be established in the syntax or at PF. Syntax and PF do this in different structural relations:
  - Syntax: I adopt AGREE, departing from Adger (2000) where SpecHead is assumed.
  - PF: Feature matching happens under structural adjacency in Tab. 5.

- When a DP moves into the specifier of a head, the functional structure along the right edge of DP becomes adjacent to that head, compare $\phi P$ in Tab. 6 and SP in Tab. 5. This allows matching between the GEND and NUM features in the subject’s $\phi P$ and those of the verbal probe.

- Movement does not cause NUM-agreement. It creates a syntactic configuration that gives PF access to syntactic structures than AGREE cannot access.

- Disconnecting the mechanics of movement and the mechanics of agreement allows full agreement to be independent of the process that brings about SV-order (see (11) and (13)). This is unlike the Italian dialects discussed in Brandi and Cordin (1989), where some SV-orders feed agreement, but those created by wh-movement don’t.

- Silent copies of moved phrases have to be visible to matching at PF.
  
  - (13): The subject wh-phrase has moved out of the subordinate clause, and controls number agreement on the verb in the subordinate clause.

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$x$ and $y$ are in an adjacency relation iff

(i) either the first right-branching node dominating $x$ is the first left-branching node dominating $y$ (dominance to be understood reflexively) or

(ii) $x=y$

Direction of branching here is to be understood relative to the node from which the adjacency relation is calculated. (Adger, 2000)

---

Table 5: Adjacency.

- For agreement under adjacency to account for this, there has to be a silent copy of the moved subject in preverbal position in the downstairs clause and it has to be a possible matching target at PF.

- Matching targets need to be restricted:
  - Agreement only with nominatives, never with preverbal objects.
    One might restrict matching targets to nominatives.
  - Restricting matching to nominatives is not enough to ban split agreement, (24). Adjacency allows the lower verb to access the number features of the structurally higher nominative. Without additional restrictions, this would allow split agreement in VNP\textsubscript{NOM}VNP\textsubscript{NOM}-order.
Table 6: Full agreement via matching in SV-order (to be revised).

(24) \( V_1 \ NP_i \mathrel{\overset{\text{[GEND]}}{\longleftarrow}} V_2 \ PP\text{-pro} \ NP_j \)

- Observation: Both of these problems disappear once AGREE instead of case serves as a filter on matching targets. If matching only has access to feature bundles that contain a feature that has been the target of AGREE,...
  - Agreement with objects is ruled out by the general mechanisms that make objects inaccessible for agreement in MSA.
  - Split agreement is ruled out, because the \( \phi \)-probe has not AGREEed with the higher nominative.

An example: Tab. 6. \( \phi \text{P} \) has already entered into AGREE with the GEND-features in the DP-layer of the subject when the subject was in postverbal position. Copies of these GEND-features are also present in \( \phi \text{P} \). As a result, \( \phi \text{PR} \) and \( \phi \text{P} \) already share GEND-features, allowing matching of their other features at PF. (see also Tab. 7)

- Proposal: PF uses feature matching under adjacency to resolve the values of features that have not been valued in the syntax, but are part of the same feature complex as the features that syntax has AGREEed with.

PA arises because PF has access to structure inside DPs that AGREE does not have access to.
  - AGREE in the syntax feeds matching in the morphology.

Table 7: Agreement with two verbs in VSV-order, (16).

- Failure to check features in syntax does not lead to crash, as independently argued by Preminger (2009).
- PF has means of assigning interpretations to features that have been left unchecked in the syntax.

4 Agreement with Multiple Verbs

- The \( \phi \)-features on the several agreeing verbs are independent of each other:
  - They show different agreement features, (16) and (21), depending on their local relation to the subject.
  - Two verbs can agree with different nominatives, (22).

There is a \( \phi \)-probe for each verb.

- The assumptions introduced so far account for agreement with multiple verbs as in Tab. 7.
- \( \phi \)-Features are accessible for multiple instances of AGREE. They must not delete or become inactive after the lowest \( \phi \)-probe has AGREEed with them.
– Number: Valued and interpretable, they shouldn’t delete anyway.
– Gender: Bošković (2009) observes that not all gender features are treated the same in agreement with conjunctions in Serbo-Croatian.
  * Semantically meaningful gender (on nouns like man and woman) behaves as if it does not delete after AGREE.
  * Feminine behaves differently from masculine. He suggests that this is due to the fact that it is potentially semantically meaningful rather than just an arbitrary grammatical feature.

In MSA, only the presence of multiple feminine agreement can be confirmed, as masculine agreement could be default. Feminine agreement is frequently interpretable:
  * On animate nouns it typically indicates feminine sex.
  * Inanimate plurals systematically trigger feminine singular agreement.

There are suggestive parallels between Serbo-Croatian and MSA, but I leave this question for further research.

See Carstens and Diercks (2009) for related argument that φ-features remain active in some Bantu languages.

5 Absence of GEND-Agreement

– Absence of agreement has been occasionally suggested (Ouhalla, 1994; Soltan, 2007) to be due to morphological effects.

Adjacency as in Tab. 5, however, predicts the wrong pattern of absence of agreement:
– Agreement should be absent whenever there is material between the subject and the verb, instead it is optionally possible.
– The possibility of not agreeing seems to be limited.
– Agreement can arise over intervening material (e.g. (20), $V_2$ in (22), (28) is a variant of (22) where $V_1$ agrees with the lower nominative $j$).

(28) \[ V_1 \quad \text{NP}_i \quad V_2 \quad \text{P-pro} \quad \text{NP}_j \]
\[ \text{kept-3SG.FE Hashim-NOM 3SG.FE-progress on-him DEF.years.FE-NOM} \]
\[ \text{‘Hashim was growing old.’ (Lit. ‘The years keep progressing on Hashim.’)} \]

The presence of agreement in V...S-contexts cannot accounted for by assuming that lower, unpronounced copies of the verb access the features of the subject. For transitive verbs, there will always be a copy of the verb in $v$ that has the subject in its specifier, which should give rise to full agreement.

– **AGREE:**
– Possibility of agreement at a distance is expected.
– Absence of agreement could be treated as defective intervention, see Preminger (2009) for a discussion of apparently optional agreement in terms of intervention and ways of evading it in Hebrew.
  * This would be a somewhat unusual form of defective intervention as it would involve PPs as interveners in (20a-c).
  * The absence of agreement in existential constructions, (20d), might indicate that person is covertly involved in gender agreement, as existential there is sometimes assumed to be an intervener for person (e.g. Chomsky, 2000).

A further difficulty from the perspective of intervention comes from the fact that non-thematic nominatives as in (22) can be agreement targets, but don’t prohibit agreement across them with the thematic subject, (28).

6 Conclusions

– Conjunct Agreement: The current proposal does not give an account of the conjunct agreement facts. An account of left conjunct agreement with full DP conjuncts in VS-order can be given with a combination of
  – Marušić et al.’s (2007) argument that gender features cannot be compositionally computed in mixed gender conjunctions.
  – The argument about the distribution of φ-features in DPs from Sec. 2.
  – The assumption that only the features in the highest projections of the conjuncts are accessible for computing the features of CONJP.
  – van Koppen’s (2007) account of left conjunct agreement where AGREE has access to CONJP as well as the first conjunct, and PF chooses which one’s features to express based on which will give a more specific morphology
**CONJP** has neither GEND nor NUM features, because (i) NUM-features are not present in the D-layer of the conjuncts, hence inaccessible for the computation **CONJP**’s φ-features, and (ii) GEND-features are absent in **CONJP** at least in mixed gender conjunction because they cannot be compositionally computed. As a result, in mixed gender conjunctions, spelling out the φ-features of the first conjunct always gives rise to more specific morphology because it has at least GEND-features. In same gender conjunctions, both the D of the first conjunct and the **CONJP** have the same features, only GEND. Spelling out either gives the same result.

This line of analysis makes incorrect predictions for coordinations with pronouns. Since the NUM-features of pronouns are accessible in their highest projections, the **CONJP** of a conjunction of a feminine full DP and a feminine plural pronoun should contain NUM as well as GEND-features and be spelled out qua being more specific that the features of the first conjunct.

Full agreement in SV-order is difficult to derive in the current system.

– A caveat: An account of the conjunct agreement must not be tied too closely to the specifics of MSA.

* Aoun et al. (1994): Levantine and Moroccan Arabic have the same pattern of conjunct agreement, but
  · lack the positional asymmetry,
  · optionally allow full agreement in postverbal position, and
  · show an interaction between the semantics of the verbal predicate and the availability of conjunct agreement.
* van Koppen (2007): Some Dutch and German dialects show the same conjunct agreement pattern as MSA, but again their agreement system is quite different. They lack silent pronominal subjects.

- Agreement asymmetries receive an explanation via the divided and joint labor of syntax and PF.
  - **AGREE** establishes relations between probes and goals, its result is dependent on the structure of the agreement target, accounting for SA.
  - Feature matching at PF is sensitive to different structural relation, but restrained by **AGREE**. It provides morphological expression to features of a probe that core syntax did not have access to.
  - Division of labor between syntax and morphology, and close attention to the structure of agreement targets gives a simpler picture of syntactic operations:

<table>
<thead>
<tr>
<th>Internal Syntax:</th>
<th>Pro-DP: D-syntax; morphologically complex</th>
<th>Pro-φP: Neither D-Syntax, nor N-Syntax</th>
<th>Pro-NP: N syntax</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structure:</td>
<td>DP</td>
<td>φP</td>
<td>NP</td>
</tr>
<tr>
<td></td>
<td>D φP</td>
<td>φ</td>
<td>N</td>
</tr>
<tr>
<td></td>
<td>φ NP</td>
<td></td>
<td>N</td>
</tr>
</tbody>
</table>

**Table 8: Déchaine and Witschko (2002, 410): Typology of Pronoun Types.**

- The result of **AGREE** is independent of whether there also is EPP.
- Differences between pronouns and full DPs follow from differences in their internal structure, not the way the grammar interacts with them (contra previous accounts of SA e.g. Fassi Fehri, 1993; Benmamoun, 2000; Soltan, 2007)

Failing to check φ-features in the syntax does not lead to a crash (also Preminger, 2009), but the grammar will use other mechanisms at PF to provide an expression for features that have gone unchecked.

### A Subject Type Asymmetry in More Detail

#### A.1 Pronouns

- What kind of structure are pronouns in MSA?
  - Different types of pronouns have different maximal projections, which determines their differing properties.
- MSA pronouns are Pro-φP.
– $\phi P$ is an agreement projection hosting number and gender features.
– Pro-$\phi$Ps…
  * Appear in argument position, (19).
  * Appear in predicate position, (29).
  * Are bindable, (30).

(29) Predicate Position:
  a. ha:Da: this pron.3SG.MA
  b. ?ant i hrya you.SG.FE pron.3SG.FE
  ‘This is he.’
  ‘You are she’

(Ryding, 2005, 300)

(30) Binding:
  ?a-tana:fas-a ?ana: wa huwa$_1$ ?ala: nafs-t l-wa?da?if-t 1SG-compete-SUBJ I and he$_1$ for same-GEN DEF-jobs-GEN
  ‘I and every colleague of mine are afraid that I and he will be competing for the same job.’

– Both GEND and NUM are present in the highest projections of Pro-$\phi P$, hence both are accessible to agreement, leading to full agreement.

A.2 Full DPs

– D is not born with either GEND- or NUM-features. It has to acquire them from somewhere in its complement.
– Proposal: D in MSA acquires its $\phi$-features in a relation with NP. NP has GEND but no NUM-features. Partial agreement results.

Evidence about the relation between D and its complement comes from two sources: morphology and movement.

A.2.1 Morphology in D

– Definite and indefinite markers ?al- and -n, show no $\phi$-features (unlike e.g. in German).
– Most quantifiers show no $\phi$-features (e.g. kul: ‘all,’ ba?fi’d ‘some’), at least one has inherent gender specification (kæ:f:at) ‘all’, see (31) for a combination with a masculine noun.

  in front of all-GEN DEF-investor-MA.PL.GEN
  ‘in front of all investors’ (ArabiCorpus, Reference: 070399ECON05)
– Some quantifiers do show $\phi$-morphology:
  – bid?I(at) ‘some, several’ shows the gender opposite of that of its complement, (32). The opposition of gender agreement, also found with low numerals, remains to be explained, but there is definite evidence for $\phi$- morphology on D, determined by the properties of the nominal complement.
  – ?a?jI(at): wh-word which, (33a), free choice item and negative polarity item, (33b). Optionally shows gender concord.

  some-FE-NOM students.MASC-GEN.IND
  ‘some students(masc.)’
  b. bid?I-at-u ?tahlb-æ:t-m
  some-NOM students-PL.FEM-GEN.IND
  ‘some students(fem.)’

(Kremers, 2003, 64)

(33) a. ?a?jI-at-u ra:?th-at-m hæ:ðlu
  which.FE-NOM smell-FE-GEN.IND this.FE
  ‘What smell is this?’ (Badawi et al., 2004, 698)
  b. læ: tu-ðjad-u ?a?jI-at-u ðuru’?d-m min tutmha?m
  NEG 3S.FE-exists-IND any.FE-NOM goals-GEN from Tottenham
  ‘There are no goals from Tottenham.’

(http://vb.alsultaan.com/175494.html)

Importantly: There is concord in gender, but not in number, despite bidI(at) and ?a?jI(at) taking plural noun complements, (32) and (33b).

A notable exception: kul: ‘all,’ has a dual form kul:-æ: meaning ‘both.’ This dual form also reflects for gender and has a feminine alternate kul:-t-æ:.
• Demonstratives agree in number as well as gender with their head nouns. Bernstein (1997) argues that demonstratives are not exponents of D, but originate in a lower projection, see Tab. 3. In this lower position, they can inherit their features from $\phi P$. Their morphology is this no evidence about the relation between D and its complement.

MSA internal evidence for $[\phi P \text{DEM...}]$-order comes from the combinations of pronouns and demonstratives. If pronouns like $huwa$ and $hiya$ occupy $\phi P$, as argued in Sec. A.1, demonstratives should follow them, as they do, (34).

(34) a. $huwa$ $\delta:\alpha$; he that.MA 'that one'
   b. $hiya$ $\delta:\alpha$; she that.FE 'that one'

(Wehr, 1979, 354)

• The morphological evidence suggests that the exponents of D have access to $\text{GEND}$ but not $\text{NUM}$-features.
In order to have access to $\text{GEN}$ to the exclusion of $\text{NUM}$, D has to access NP, rather than $\phi P$.

A.2.2 Movement into D

• Construct states:
  – Possessive constructions where the head noun appears to the left of the possessor, (35).
  – The head noun appears without definiteness marking, ?ar'akæ:n-u as opposed to definite ?al-?ar'akæ:n-u or indefinite ?ar'akæ:n-u in (35).
  – These constructions are widely assumed to involve movement of the head noun into the D-domain (see Shlonsky, 2004, for an overview).
  – In some languages this movement results in overt $\phi$-morphology reflecting the $\phi$-features of the possessum (e.g. Carstens, 2001, for Bantu)
Since the head noun appears before the possessor, the possessor serves as a gauge for how much of the functional structure between D and N moves into D together with the head noun.

  – (35): Adjectives are stranded by movement into D.
  – (36): Demonstratives are stranded by movement into D.


(36) na$\delta$ârîjat-u ?ata'a'tauw:ur-i tilka theory.FE-NOM DEF.evolution.MA that.FE 'that theory of evolution' (Badawi et al., 2004, 128)

Movement into D strands the functional structure below $\phi P$, DEMP and adjectives, and therefore $\phi P$ itself. The movement target therefore does not contain NUM-features.

• Names: Longobardi (1994) argues that names move into D.
  – (37): Names appear to the left of demonstratives

(37) sam'æ:n-un hæ:Da
    Sam'an-NUM.IND that.MA
    'this Sam'an' (Badawi et al., 2004, 128)

Movement of names into D strands DEMP, and by transitivity $\phi P$. The movement target therefore does not contain NUM-features.

A.2.3 Putting the Pieces Together

• Morphology on D shows $\text{GEND}$, but never $\text{NUM}$ features.
• Movement into D targets constituents that contain $\text{GEND}$-, but not $\text{NUM}$-features.

Proposal: D acquires its $\phi$-features in a relation with NP. The connection to movement in Sec. A.2.2 suggests that this might be $\text{AGREE}$.

• If so the $\phi$-features on D must not delete after being checked, but must remain present be accessed by agreement targets. This issue is related to the persistent presence of $\phi$-features discussed in Sec. 4.

• If the probe on D was a normal $\phi$-probe comprising $\text{GEND}$ and $\text{NUM}$, $\phi P$ should intervene between D and NP. I suggest instead that the feature on D is a categorical N-feature, a syntactic expression of the relation between D and its complement. The sharing of $\phi$-features between D and N is a byproduct of D checking the N-feature.
If on $\text{GEND}$ is present on D, DP external agreement controllers only have access to $\text{GEN}$, resulting in partial agreement.
References


Preminger, O. (2009). Failure to Agree is not a Failure: φ-Greement with Post-Verbal Subjects in Hebrew. Ms. MIT.


