Quirks of Agreement under Extraction

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1 Introduction

• It is well known that the form of clausal morphology can be sensitive to the presence of Ā-dependencies. In particular, in many languages the form of φ-agreement can be sensitive to these dependencies.¹

(1) Tarifit (Berber, Morocco)

a. t-zra tamghart Mohand
3SG.F-see.PFV woman Mohand
‘The woman saw Mohand.’

b. man tamghart, ay yzrin _i Mohand
which woman C see.PFV.PART Mohand
‘Which woman saw Mohand?’

(2) Selayarese (Austronesian, Indonesia)

a. la-taro=i, doc'-iñjo, i Baso’ ri lamari
3-put(-3) money-def h Ali in cupboard
‘Baso’ put the money in a cupboard’

b. apa la-taro(*=i, _i i Baso’ ri lamari
what 3-put(-3) h Ali in cupboard
‘What did Baso’ put in a cupboard?’

(3) Abaza (Northwest Caucasian, Russia)

a. proj, projk dǝk-1,i-ʃǝd
3SG.F 3SG.ANIM 3SG.ANIM-3SG-kill
‘She killed him/her’

b. s-k’tap dazda, y-na-zǝ-axw
1SG-book who 3SG.I-PFV-ERG.WH-take
‘Who took my book?’

• In Tarifit, (1), Selayarese, (2), and Abaza, (3), a wh phrase cannot control canonical φ-agreement on the verb.

▷ In Tarifit, an invariant form of the verb surfaces.
▷ In Selayarese, the expected agreement morpheme does not surface.
▷ In Abaza, a special form of agreement indexes the wh phrase.

• These effects have been referred to as anti-agreement or wh-agreement in the literature.

¹Abbreviations used include: 1 = first person, 2 = second person, 3 = third person, ABS = absolutive, CL = class (in Bantu examples), DEF = definite, ERG = ergative, F = feminine, I = inanimate, M = masculine, PART = participle, PFV = perfective, PL = plural,PRS = present, PST = past, SG = singular, WH = wh-related morpheme.
• **Core Question:**
  What theoretical principles gives rise to the non-canonical forms in (1)–(3)?

• Two dominant trains of thought in the literature:

  ▶ Syntactic constraints on Ā-movement block extraction of the agreeing DP. Circumvention of these constraints disrupts the normal syntax of agreement (Ouhalla 1993; Richards 1997, 2001; Boeckx 2003; Schneider-Zioga 2007; Diercks 2010; Henderson 2013, a.o.).
    → **anti-agreement**

  ▶ The form of agreement found in Ā-movement contexts is simply the form agreement takes when it has agreed with an Ā-operator.
    → **wh-agreement**

• I argue that wh-agreement and anti-agreement are two instantiations of the same phenomenon.

• The core proposal is that both effects result from a φ-probe agreeing with a DP bearing an Ā-feature.

  ▶ When a φ-probe agrees with a goal bearing an Ā-feature, I propose that the resulting feature bundle on the probe includes both φ-features and an Ā-feature.

(4) **Configuration for anti-agreement**

[ ... \[uφ\] [ ... DP\[φ, Ā\] ... ]]

φ+Ā

• I argue that when an Ā-feature and φ-features cooccur in the same feature bundle, partial or total **impoverishment** of φ-features may take place.

  1. In a language like Abaza, impoverishment may allow for the insertion of a exponent that expresses the remaining Ā-feature.
  2. In languages like Selayarese, impoverishment leads to an apparent lack of φ-agreement.

• Crucially, under this account, it is Ā-features of the DP targeted for agreement, and not Ā-movement of that DP, that derives anti-/wh-agreement.

• This allows us to account for

  ▶ Anti-/wh-agreement with elements that have not undergone Ā-movement.
  ▶ Appearance of anti-/wh-agreement with a wide variety of argument types.

• **Roadmap**

  §2 A featural account of anti-/wh-agreement
  §3 Syntactic accounts of anti-agreement
  §4 Anti-agreement without movement
  §5 (A)symmetricality in the distribution of anti-agreement
  §6 Conclusion
2 A featural theory of anti-agreement

- I develop an analysis in which both ‘anti-agreement’ and ‘wh-agreement’ arise when a φ-probe finds a DP with both φ- and Ā-features.
- Reduced agreement in this configuration arises because of impoverishment (Bonet 1991; Noyer 1992, 1997; Halle and Marantz 1993) of the φ-features in the morphology.
- The difference between ‘anti-agreement’ and ‘wh-agreement’ reduces to variation in the morphology.
  - ‘Wh-agreement’ results from the insertion of a morpheme expressing the Ā-feature that remains after impoverishment
  - ‘Anti-agreement’ results when impoverishment leads to the appearance of default agreement or no agreement at all.

2.1 Abaza wh-agreement

- Verbs in Abaza, (Northwest Caucasian, Russia) display an ergative-absolutive agreement pattern for person/gender/number. Both subjects and objects control agreement in transitive clauses.

\[(5) \ a. \ fʷara_j \ fʷ-yʷʔǝyd
\]
\[\text{2PL run} \quad \text{(O’Herin 2002:64)}\]

\[\text{b. } \text{pro}_i \text{ pro}_k \ y_k-p-s_i-ʔǝd
\]
\[\text{1sg 3sg.1 3sg.1-pfv-1sg-break} \quad \text{I broke it} \quad \text{(O’Herin 2002:16)}\]

- Intransitive subjects and transitive objects control one agreement paradigm; transitive subjects control another.
- Absolutive is distinguished from ergative by position in the verb, (5a)-(5b), and by the form of 3rd person exponents.²

- Following O’Herin (2002), I assume that agreement prefixes spell out φ-features hosted on dedicated Agr-projections. For verbal agreement, there are two AgrPs in the clausal spine flanking TP.³

\[(6) \quad \text{Agr}_{\text{ABS}} \text{ P}
\]
\[\text{Agr}_{\text{ABS}} \text{ TP}
\]
\[\text{T} \quad \text{Agr}_{\text{ERG}} \text{ P}
\]
\[\text{Agr}_{\text{ERG}} \text{ vP}
\]
\[\ldots \text{DP}_{\text{ERG}} \ldots \text{DP}_{\text{ABS}} \ldots
\]

- Each paradigm also includes a morpheme that indexes Ā-operators: y- for absolutives, (7) and z- for ergatives, (8).

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²The ‘ergative’ agreement prefixes are also used to index possessors, objects of postpositions, dative arguments, and arguments of applicatives. See O’Herin (2002) for discussion.

³Alternatively, these φ-probes could be hosted by other heads in the clausal spine, such as T and v. Nothing crucial rests on this alternative. What is crucial is that there are two separate heads in the clausal spine which host agreement.
Absolutive wh-agreement: y-

a. a-čʷwal *dzačʷəya_i yə̣_ta-wa
   DEF-sack what ABS.WH-in-PRS
   ‘What is in the sack?’ (O’Herin 2002:252)

b. Izmir pro *dzačʷəya_i yə̣₃₃-r-bakʷaz
   Izmir 3PL who ABS.WH-3PL-see.PL.PST
   ‘Who did they see in Izmir?’ (O’Herin 2002:252)

Ergative wh-agreement: z-

a. dǝzda_i s-axčʲa za_i-yə̣č
   who 1SG-money ERG.WH-steal
   ‘Who stole my money?’ (O’Herin 2002:252)

b. a-fačʲǝʕʷ def-sugar a-finǰʲan def-cup a-pnǝ 3sg.i-at dǝzda_i who 3sg.i-pfv-ERG.WH-take
   ‘Who took the sugar out of the cup?’ (O’Herin 2002:252)

I argue that wh-agreement in Abaza is the result of an Agr head agreeing with a DP bearing an Ā-movement related feature, [Ā].

<table>
<thead>
<tr>
<th>1</th>
<th>2f</th>
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<th>3f</th>
<th>3m</th>
<th>3i</th>
<th>Ā</th>
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<td>fʷ-</td>
<td>fʷ-</td>
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Table 1: Abaza Ergative Agreement

<table>
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<th>3f</th>
<th>3m</th>
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<th>Ā</th>
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<td>fʷ-</td>
<td>y-</td>
<td>y-</td>
<td>y-</td>
</tr>
</tbody>
</table>

Table 2: Abaza Absolutive Agreement

Two important observations regarding Abaza wh-agreement morphology:

▷ Ergative wh-agreement z- does not occur elsewhere in the paradigm.
▷ Absolutive wh-agreement y- does occur elsewhere in the paradigm.

In fact, examining the distribution of y- in tables 1-2, we come to the following conclusion:

(9) The prefix y- is a morphological default.

▷ Absolutive ‘wh-agreement’ doesn’t spell out an Ā-feature at all.
▷ In fact, it is better described as ‘anti-agreement’.

On the other hand, ergative wh-agreement can be said to spell out an Ā-feature.

▷ The prefix z- only occurs when the ergative agreement probe has targeted an Ā-operator.

Another important observation regarding Abaza wh-agreement is that it is highly syncretic.

▷ Wh-agreement only expresses that a given Agr head has agreed with an Ā-operator.4
▷ No other φ-feature contrasts are expressed.

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4Wh-agreement also occurs in relative clauses in Abaza. The facts are identical to wh-movement examined here. I leave aside a separate treatment of relative clauses for reasons of space.
• Assuming syncretism arises from underspecification, we come to the following conclusion:

(10) The prefixes *z*- and *y*- are highly underspecified. They spell out a very small number of features.

• Taking (10) seriously, I assume that there are basically three types of agreement vocabulary items (VIs) in Abaza, shown in table 3:

<table>
<thead>
<tr>
<th>Features</th>
<th>Vocabulary item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full agreement</td>
<td>/s-/, /b-/, /ʃʷ-/, etc.</td>
</tr>
<tr>
<td><em>Wh</em>-agreement</td>
<td>/z-/</td>
</tr>
<tr>
<td>Elsewhere</td>
<td>/y-/</td>
</tr>
</tbody>
</table>

Table 3: Abaza Agreement VIs

- Full agreement VIs spell out some set of φ-features and a categorical Agr feature\(^5\)
- The prefix *z*- spells out a Ā-feature and the ergative Agr feature.
- The prefix *y*- spells out just an Agr feature.
- I argue that *wh*-agreement is an option in the first place because of the syntax of Agree.
- Deal (2015, 2016) argues features transferred to a probe by Agree need not be confined to those for which the probe is specified to search.

- Specifically, she proposes that we must distinguish a probe’s interaction condition(s) and satisfaction condition(s).

(11) A probe H may interact with feature set F even if it may only be satisfied by feature set G, G ⊆ F.

a. **Interaction**: Probe H interacts with feature F by copying F to H.

b. **Satisfaction**: Probe H is satisfied by feature G if copying G to G makes H stop probing.

• Deal further conjectures that there is no variation in interaction conditions for φ-agreement.

(12) **No variation in interaction**

φ-probes always interact with all φ-features. Variation is in satisfaction conditions only.

• Suppose that φ-features and Ā-features belong to a larger set of features, \(F\).

(13) \(F = \{\phi, \tilde{A}\}\)

- If there is no variation in interaction, both φ-probes and Ā-probes will both have the same interaction condition: \(F\).

- When a φ-probe finds a DP with both [φ] and [Ā], the probe will interact with and copy back both of those features. As shown in (14), the resulting probe will have φ-features and a Ā-feature.

(14) **Configuration for anti-agreement**

\[
\begin{array}{c}
... H_{[\phi]} \ [ \ ... \ DP_{[\phi, \tilde{A}]} \ ... ] \\
\phi+\tilde{A}
\end{array}
\]

-H_{[\phi, \tilde{A}]}

- Given (14), an Agr head that enters into an Agree relation with a *wh*-word or relative operator will always have (at least) the features in (15).

---

\(^5\)I assume that the syntactic category of a head is relevant to vocabulary insertion at that head. Here, I model this relevance by including a categorical feature in the features that a VI head spells out. Alternatively, one could assume that the category feature contextually restricts insertion (c.f. Arregi and Nevins 2012.)
(15) **Form of Agr after Agree with operator:**
\[ \varphi, \hat{\mathrm{A}}, \Agr \]

- However, if (15) is the form of an Agr bundle at spell-out, we run into a problem:
  - If vocabulary insertion is constrained by the Subset Principle (Halle and Marantz 1993), \( z^- \) and \( y^- \) should never be inserted.

(16) **Subset Principle (based on Keine 2010)**
A vocabulary item \( V \) is inserted into a terminal node \( N \) iff (i) and (ii) hold:
- (ii) The morphosyntactic features of \( V \) are a subset of the morphosyntactic features of \( N \).
- (iii) \( V \) is the most specific vocabulary item that satisfies (i).

- Full agreement VIs should always be inserted instead of \( z^- \) or \( y^- \) because they will always realize more features of the feature bundle in (15) than \( z^- \) or \( y^- \).

- I argue that this pattern can be derived by appealing to the post-syntactic operation of **impoverishment** (Bonet 1991; Noyer 1992, 1997; Halle and Marantz 1993).
- Specifically, I argue that the impoverishment rule in (17) applies prior to vocabulary insertion.

(17) **Abaza \( \varphi \)-feature impoverishment**
\[ \varphi \rightarrow \emptyset / [ \varphi, \hat{\mathrm{A}}, \Agr ] \]

- This rule deletes all \( \varphi \)-features on an Agr head when there is an \( \hat{A} \)-feature in the same feature bundle (such as the one in 15, above).
- In doing so, it blocks insertion of an otherwise appropriate, more highly specified VI.

- This analysis centers the mechanism that derives wh-agreement in the morphology.
- The same fundamental sequence of operations underlies both wh-agreement and \( \varphi \)-agreement.
  - i. Agree in the syntax
  - ii. Vocabulary insertion in the morphology
- Copying of an \( \hat{A} \)-feature to an Agr head results in a feature bundle subject to impoverishment.
- Impoverishment captures the underspecification of the morphemes that surface in wh-agreement.
- In the next section we will see how this system accounts for anti-agreement in Tarifit.

### 2.2 Extension to anti-agreement: Tarifit

- Verbs in Tarifit (Berber, Morocco) agree with their subject in person/gender/number, (18):

(18) \( t^-zra \) tamghart Mohand
3SG.F-see.PFV woman Mohand
‘The woman saw Mohand.’ (Ouhalla 1993)

- Ā-extraction of a subject in Tarifit Berber requires the verb to be in a non-agreeing form, known as the ‘participle’, (19a). Full agreement is impossible, (19b):

(19) a. man tamghart\( _i \) ay yzrin
Mohand
which woman C see-PFV.PART Mohand
‘Which woman saw Mohand?’ (Ouhalla 1993)

b. *man tamghart\( _i \) ay t^-zra
Mohand
which woman C 3SG.F-see-PFV Mohand
Intended: ‘Which woman saw Mohand?’ (Ouhalla 1993)
This pattern is also found in subject relative clauses and subject focus constructions, (20):

(20) a. tamghart\textsubscript{t} nni yzrīn \_\_\_\_ Mohand
     woman C see-Pfv.PART Mohand
     ‘the woman who saw Mohand’ (Ouhalla 1993)

b. \textipa{tamghart-a\textsubscript{t}} ay yzrīn \_\_\_\_ Mohand
     woman-dem C see-Pfv.PART Mohand
     ‘It’s this woman that saw Mohand.’ (Ouhalla 1993)

The participle surfaces regardless of the features of the extracted subject, (21):

(21) shek\textsubscript{t} ay iuggurn \_\_\_\_ you.sg.m
     you.sg.m C leave-PART
     ‘You are the one who left.’ (Ouhalla 2005:675)

Non-subject Ā-extraction does not trigger suppression of subject agreement, as seen in (22):

(22) min\textsubscript{t} y-wʃa/*ywʃin Jamal \_\_\_\_ i Mena
     what 3sg.m-give/give.PART 3sg.m Jamal to
     ‘What did Jamal give to Mena?’ (Elouazizi 2005:122)

The Tarifit pattern involves a complete leveling of φ-feature contrasts when the subject has been Ā-extracted.

<table>
<thead>
<tr>
<th></th>
<th>SG</th>
<th>PL</th>
</tr>
</thead>
<tbody>
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<td>V-x</td>
<td>n-V</td>
</tr>
<tr>
<td>2m</td>
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<td>0-V-m</td>
</tr>
<tr>
<td>2f</td>
<td>0-V-δ</td>
<td>0-V-nt</td>
</tr>
<tr>
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<td>i-V</td>
<td>V-n</td>
</tr>
<tr>
<td>3f</td>
<td>i-V</td>
<td>V-nt</td>
</tr>
</tbody>
</table>

Table 4: Tarifit φ-agreement (Elouazizi 2012)

<table>
<thead>
<tr>
<th></th>
<th>SG</th>
<th>PL</th>
</tr>
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<tbody>
<tr>
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<td>y-V-n</td>
<td>y-V-n</td>
</tr>
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<td>3m</td>
<td>y-V-n</td>
<td>y-V-n</td>
</tr>
<tr>
<td>3f</td>
<td>y-V-n</td>
<td>y-V-n</td>
</tr>
</tbody>
</table>

Table 5: Tarifit AA (Elouazizi 2012)

I argue that the Berber pattern can be derived by the same logic employed above to derive Abaza wh-agreement.

▷ I propose that the same impoverishment rule that is active in Abaza is active in Tarifit.

(23) \textit{Tarif Berber φ-feature impoverishment}

\[
[φ] \rightarrow \emptyset / [, Ā, Agr] 
\]

▷ I take the ‘participle’ form $y-\ldots-n$ to be a discontinuous morpheme that spells out an Agr head bearing an Ā-feature but lacking φ-features, much like the $z$-morpheme in Abaza.$^6$

(24) \textit{Tarif participle}

\[
[Ā, Agr] \leftrightarrow /y-\ldots-n/ 
\]

\[^6\text{I leave aside the exact identity of the head that hosts the φ-probe in Tarifit, though see Baier (2017) for discussion.}\]
• Summing up the section
  ① A φ-probe Agrees with a DP bearing both φ-features and an Ā-feature.
  ② Both sets of features are copied to the probe.
  ③ In the morphology, the Ā-feature may trigger an impoverishment rule which deletes all φ-features on the probe.
  ④ The remaining feature bundle is spelled out via the normal process of vocabulary insertion.

• The difference between anti-agreement and wh-agreement is superficial – it rests in the nature of agreement VIs available at step ④.
  ▷ Wh-agreement → a morpheme spelling out [Ā] is inserted.
  ▷ Anti-agreement → a default morpheme is inserted or no morpheme surfaces at all.

3 Syntactic accounts of anti-agreement

• There is little theoretical consensus in the literature on how anti-agreement should be derived, but existing accounts are predominantly syntactic.

• The core idea of these accounts is that anti-agreement results from syntactic constraints on movement. The logic is generally as follows:
  ① Agreement with a DP requires a certain structural configuration.
  ② This structural configuration blocks Ā-movement of that DP.
  ③ For such a DP to be extracted, it must not enter into the structural configuration required for φ-agreement.
  ④ Because the DP does not enter into this configuration no φ-agreement occurs.

• Syntactic accounts of anti-agreement differ on the specifics of the nature of the constraint employed.

(25) Criterial Freezing (Rizzi and Shlonsky 2007; Diercks 2010; Shlonsky 2014)
  a. Canonical φ-agreement requires that the DP move to a ‘criterial position’, from which further movement is blocked (Rizzi 2006, 2007).
  b. In order for such a DP to undergo Ā-movement, it must never move to the criterial position, blocking the possibility of agreement.

(26) Feature Strength (Richards 1997, 2001; Boeckx 2003; Henderson 2013)
  a. Features may be ‘strong’ or ‘weak’. A chain may not contain more than one ‘strong’ feature.
  b. Ā-movement and φ-agreement both involve strong features.
  c. In order for that normally controls φ-agreement to undergo Ā-movement, the φ-features must be ‘weakened’, which results in no morphological agreement.

(27) Anti-locality (Bošković 1997; Cheng 2006; Schneider-Zioga 2007; Erlewine 2016; Pesetsky 2016)
  a. Phrasal movement must not be too short/local.
  b. Canonical φ-agreement brings a DP into a position from which Ā-movement will qualify as too short.
  c. In order for a DP that normally controls agreement to undergo Ā-movement, it must move from a different position. This blocks φ-agreement from occurring.
At their core, all these accounts share Ā-movement as a prerequisite for anti-agreement.  
▷ There is no direct connection between the appearance of a non-canonical agreement form and the featural content of the DP targeted for agreement.  
▷ In the next section, I present data that are challenging for this aspect of syntactic accounts.

4  Anti-agreement without movement

• Prediction of the featural account:
   It should, in principle, be possible to see anti-agreement even when an agreement controller has not itself moved, as long as that controller bears an Ā-feature.
• In this section, I present data from Abaza that confirm this prediction.

• In addition to argument-verb agreement, Abaza has possessor agreement.  

(28) **Possessor agreement**

a. *aphas* _l-qas’a*
   *woman 3SG.F.Poss-man*
   ‘the woman’s husband’  

b. *(wara)* _wɨ-nap’ə*
   *2SG.M 2SG.M.Poss-man*
   ‘your hand’

• When a possessor serves as the head of a relative clause, the agreement prefix that cross-references that possessor on the possessed noun must be the anti-agreement prefix z-.

(29)  

```
[CP [DP Op] z-tdzǝ _k pro ___k yǝk-w-xʷaʕz ] a-qac’a l
```

‘the man whose house you bought’

• I follow O’Herin (2002) and assume that relativization in Abaza involves null operator movement to Spec-CP.
  
▷ The Relative operator pied-pipes the DP that contains it to Spec-CP.
▷ Possessor anti-agreement arises from agreement with the null operator, as shown in (30).
▷ The possessor φ-probe copies both φ- and Ā-features, and impoverishment occurs.

(30) **Structure of Abaza possessor relativization**

```
[CP [DP Op_[φ, Ā] AGR[φ]-N ] C [ ... ] V ]
```

• Strikingly, we also find cases of possessor anti-agreement where the possessor is *not* an operator.
• When a possessor acts as a variable bound by an Ā-operator, the bound possessor obligatorily triggers anti-agreement.

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7See Baier (2017) for further arguments against an anti-locality based approach to anti-agreement not discussed in this talk.

8I assume that possessor agreement originates as a φ-probe on a possessor D, which agrees a with the possessor in its specifier.
(31) Anti-agreement with bound variables

a. [\text{DP}] \text{pro} \text{zi}-qkʷmarga \text{ayʃa} \text{ac'}axkʲ \text{dazda}_i \text{yə-qa-zi}-chwaxaz
   [ \text{POSS.AA-toy} \text{table under who 3SG-PV-ERG.AA-hide}]
   'Who\textsubscript{i} hid his\textsubscript{i} toy under the table?'
   (O’Herin 2002:272)

b. [\text{CP}] [\text{Op}_i [\text{DP}] \text{pro} \text{zi}-pa \text{bzəy} \text{də-zi}-bawa \text{a-qac’a}_i
   [ \text{POSS.AA-son} \text{good 3SG-ERG.AA-see.PRS} \text{DEF-man}]
   'The man\textsubscript{i} who\textsubscript{i} loves his\textsubscript{i} son.'
   (O’Herin 2002:274)

▷ In (31a), the possessor of ‘toy’ is bound by the wh-subject and triggers anti-agreement \text{z}- on the noun.
▷ In (31b), the possessor of ‘son’ is bound by the relative operator and is also cross-referenced with anti-agreement \text{z}.

• There are two important observations regarding the Abaza data:
  
  1. Anti-agreement is triggered by an element which is not an \text{Ā}-operator.
  2. Anti-agreement is triggered by an element which does not move.

• Similar patterns of indirect anti-agreement is also found in the following languages:
  
  ▷ \text{Ibibio} (Lower Cross, Nigeria) → Anti-agreement occurs on upward agreeing complementizers when a matrix subject is extracted (Torrence and Duncan 2017).
  
  ▷ \text{Abo} (Bantu, Cameroon) → Anti-agreement is triggered by PRO when the matrix subject is focused (Burns 2011).

• Baier and Yuan (2017) show that a featural theory provides a way of explaining how these bound variables trigger anti-agreement.

▷ Following Kratzer (2009), they assume that bound variables enter the derivation as minimal pronouns lacking φ-features and that they receives features from their binder.

Baier and Yuan propose that in Abaza, variables bound by \text{Ā}-extracted elements receive both [φ] and [Ā] features from their binder, (32a).\footnote{Baier and Yuan adopt Kratzer’s (2009) analysis in which minimal pronouns receive their features from an intermediate λ-introducing head (e.g. v/C). I abstract away from details of this analysis here.}

▷ Anti-agreement on the probe that agrees with bound pro is triggered by the [Ā] on the bound variable, (32b).

(32) a. \text{Minimal pro receives [φ+Ā] from binder}
   [ \text{DP}_i[φ,Ā] \ldots [ \text{pro}_i[φ,Ā] [ \ldots H[φ] \ldots ]] ]
   \text{Binding}

b. \text{Probe on H finds [φ+Ā] on pro}
   [ \text{DP}_i[φ,Ā] \ldots [ \text{pro}_i[φ,Ā] [ \ldots H[φ] \ldots ]] ]
   \text{Agree}

• Transfer of [Ā] to a minimal pronoun is obligatory. Compare (31a) with (33), below.

(33) Full agreement blocks bound variable reading

[\text{CP} \text{pro}_{k/i} \text{zi}-qkʷmarga \text{ayʃa} \text{ac'}axkʲ \text{dazda}_i \text{yə-qa-zi}-chwaxaz
   [ \text{POSS.3SG-toy} \text{table under who 3SG-PV-ERG.AA-hide}]
   'Who\textsubscript{j} hid his\textsubscript{j} toy under the table?'
   (B. O’Herin, p.c.)
The absence of anti-agreement on the possessee (i.e. regular 3rd person agreement) blocks the bound variable reading – only the referential reading is available.

In such cases, Baier and Yuan assume the pro is generated with \([\varphi]\), blocking transmission of the \(\tilde{A}\)-feature.

These data are challenging for accounts that derive anti-agreement through constraints on \(\tilde{A}\)-movement, precisely because the element that triggers anti-agreement does not move.

Anti-agreement on triggered by a bound possessor in Abaza would have to be treated separately from anti-agreement triggered by direct movement.

The featural view of anti-agreement provides a uniform account.

All instances of anti-agreement in Abaza arise from the same configuration – a \(\varphi\)-probe agreeing with a phrase that bears an \(\tilde{A}\)-feature.

5 (A)symmetricality in the distribution of anti-agreement

Recall that anti-agreement in Berber is asymmetrical. Subject extraction triggers the effect, while object extraction does not.

\[(34)\] Tarifit anti-agreement is asymmetrical

\[a. \quad \text{man tamghart}_i \quad \text{ay yzrin} / *t-zra \quad \_i \quad \text{Mohand}\]

which woman \quad C \quad \text{see-PART / 3SG.F-see} \quad \text{Mohand}

Intended: ‘Which woman saw Mohand?’ (Ouhalla 1993:479)

\[b. \quad \text{min}_i \quad y-wʃa / *yʃin \quad \text{Jamal} \quad \_i \quad \text{Mena}\]

what \quad \text{3SG.M-give / give-PART} \quad \text{Jamal} \quad \_i \quad \text{to Mena}

‘What did Jamal give to Mena?’ (Elouazizi 2005:122)

Data like those in (34) makes anti-agreement in Berber look very similar to classic subject/non-subject extraction asymmetries such as the that-\(t\) effect.

The current analysis developed here recasts this subject/non-subject asymmetry as a agreeing/non-agreeing asymmetry.

\[(35)\] Anti-agreement on a \(\varphi\)-probe can only be triggered by of a DP that has agreed with that \(\varphi\)-probe.

Anti-agreement in Tarifit cannot be triggered by objects because objects never interact with the relevant agreement probe:

\[(36)\] Subject \([\tilde{A}]\): probe finds \([\varphi, \tilde{A}]\) \(\rightarrow\) anti-agreement

\[
[ ... H_{[up]} [ ... [\varphi \text{DP}_{[\varphi, \tilde{A}]} v [vp V \text{DP}_{[\varphi]}] ]]]
\]

\[(37)\] Object \([\tilde{A}]\): probe finds only \([\varphi]\) \(\rightarrow\) no anti-agreement

\[
[ ... H_{[up]} [ ... [\varphi \text{DP}_{[\varphi]} v [vp V \text{DP}_{[\varphi, \tilde{A}]}] ]]]
\]

The lack of anti-agreement with object extraction in Tarifit simply falls out from the nature Agree.

Beyond (35), there should be no other syntactic precondition on which arguments can trigger anti-agreement.

A crosslinguistic study confirms this. There is no asymmetry in which arguments can potentially trigger anti-agreement in languages with multi-argument agreement.\(^{10}\)

\(^{10}\)I use the labels nominative-accusative and ergative-absolutive in tables 6-7 to refer to the alignment of agreement markers
In languages with a single argument φ-agreement, like Tarifit and Karitiana, there is only a single φ-probe, and therefore only the argument that interacts with that φ-probe should be able to trigger anti-agreement.

In languages with multi-argument agreement, in which I assume there are multiple φ-probes, variation in which arguments trigger anti-agreement derives from which φ-probes are affected by impoverishment.

Consider the difference between Zulu, (38), and Ndebele, (39), two closely related Bantu languages:

\(\text{Zulu: symmetrical nominative/accusative}\)

- Subject cleft
  \[\text{yi-}\text{mina}_i \ [ \_i \ o/*\text{ngi},-\text{khuluma-yo} ] \]
  \[\text{cop-1sg} \ [ \_ ] \text{cl1.s.rel/1sg.s-like-rel} \]
  'I am the one who is speaking.'
  \[\text{(C. Halpert, p.c.)}\]

- Object cleft
  \[\text{yi-}\text{mina}_i \ [ \text{umfana} \ a-\text{mi},/*\text{ngi},-\text{thanda-yo} \ _i ] \]
  \[\text{cop-1sg} \ [ \text{boy cl1.s-cl1.o/1sg.o-like-rel} ] \]
  'It’s me who the boy likes.'
  \[\text{(J. Zeller, p.c.)}\]

\(\text{Ndebele: asymmetrical, nominative/accusative}\)

- Subject cleft
  \[\text{yi-}\text{mi}_i \ [ \_i \text{engi},-\text{dlile-yo} ] \]
  \[\text{cop-1sg} \ [ \text{1sg.s.rel-eat-rel} ] \]
  'It’s me who ate.'
  \[\text{(A. Pietraszko, p.c.)}\]

- Object cleft
  \[\text{yi-}\text{mi}_i \ [ \text{umama} \ a-\text{mi},/*\text{ngi},-\text{thanda-yo} \ _i ] \]
  \[\text{cop-1sg} \ [ \text{mom cl1.s.rel-cl1.o/1sg.o-lik-rel} ] \]
  'It’s me who mom likes.'
  \[\text{(A. Pietraszko, p.c.)}\]

Under the morphological account, this difference is derived without positing a syntactic difference between subject clefts in the two languages.
Subject ϕ-impoverishment (active in Zulu)

\[ \text{[PERSON]} \rightarrow \emptyset / [\_\_, \hat{A}, T] \]

b. Object ϕ-impoverishment (active in Zulu, Ndebele)

\[ \text{[PERSON]} \rightarrow \emptyset / [\_\_, \hat{A}, v] \]

Selayarese and Makassarese present a parallel case for an ergative-absolutive agreement alignment.

- Selayarese → Absolutive suffix is lost under extraction. Ergative prefix is retained.

Makassarese: symmetrical, ergative/absolutive

a. Intransitive subject focus

\[ \text{i } \text{Ali}_i \text{ tinroi}(\text{*-i}) \rightarrow i \text{ Ali} \text{ sleep(\text{*-3ABS})} \]

Ali is asleep (Jukes 2013:118)

b. Transitive object focus

\[ \text{mionga}_i \text{ na}_k \text{-buno-(\text{*-i})} \rightarrow i \text{ kongkonga}_k \]

\[ \text{cat.DEF} \text{ 3ERG-kill(\text{*-3ABS}) dog.DEF} \]

The dog killed the cat (Jukes 2013:118)

c. Transitive subject focus

\[ \text{kongkonga}_k \text{ an}_k/\text{na}_k \text{-buno-i} \rightarrow _k \text{ mionga}_i \rightarrow_k \]

\[ \text{dog.DEF} \text{ ERG.AA/3ERG-kill-3ABS cat.DEF} \]

The dog killed the cat (Jukes 2013:118)

I follow Finer (1997, 1999) in assuming that the absolutive suffix spells out T and the ergative prefix spells out v. Again, the difference between the two languages derives from which heads are affected by ϕ-impoverishment.
Absolutive anti-agreement in Selayarese cannot be attributed to the syntactic height of the absolutive DP or movement of that DP to Spec-TP.

Object extraction induces weak crossover.

(44) **Selayarese object focus induces WCO**

\[
\begin{align*}
\text{i } & \text{Ali, la-jañjang(}^{*}\text{i}_1) & \rightsquigarrow & \text{i } \text{ando’-na}_i/j \\
\text{h } & \text{Ali } & \text{3ERG-see(}^{*}\text{3ABS}) & \text{mother-3POSS} \\
\text{’His}_i/j \text{ mother saw Ali}_{FOC}. & & (\text{Finer } 1997)
\end{align*}
\]

I take this to indicate that the object extracts from a position below the transitive subject.

Under the current account, as long as the absolutive probe on T agrees with the object, we expect anti-agreement.

These data reinforce the conclusion that crucial configuration for anti-agreement is the one in (45).

(45) **Configuration for anti-agreement**

\[
\begin{align*}
\{ \ldots \text{H}_{[\varphi]} \ldots \text{DP}_{[\varphi, \bar{A}]} \ldots \} \\
\varphi + \bar{A}
\end{align*}
\]

Variation across languages of a given alignment type come down to the following three factors:

(46) **Factors determining distribution of anti-agreement**

a. How many \( \varphi \)-probes are there in a clause?

b. Where are these \( \varphi \)-probes located?

c. Which \( \varphi \)-probes does \( \varphi \)-impoverishment apply to?

Factors (46a) and (46b) are independently necessary. Factor (46c) is the core parameter governing the appearance of reduced agreement.

6 Conclusion

Today’s takeaway messages

1. The distinction between anti-agreement and \( wh \)-agreement is superficial. Both are the result of a \( \varphi \)-probe agreeing with a DP that bears both \( \varphi \)-features and an \( \bar{A} \)-feature.

2. \( \bar{A} \)-movement is not a precondition for anti/\( wh \)-agreement. The feature makeup of the DP targeted for agreement in these \( \bar{A} \)-contexts is the crucial factor.

3. Anti/\( wh \)-agreement is not limited to subjects, but is found with all possible types of arguments.
A1. Anti/\textit{wh}-agreement without impoverishment

- In the account of anti-/\textit{wh}-agreement developed in this talk, $\varphi$-impoverishment and exponence of the Ā-feature are formally distinct – they need not cooccur.
  
  We should in principle find languages in which without $\varphi$-impoverishment in the context of $[\text{op}]$ but where $[\text{op}]$ still has some morphological effect.

- I suggest that one such case comes from Kobiana (Atlantic, Senegal). Verbs in Kobiana agree with their subjects for person and number through a set of subject agreement prefixes.
- Subject focus triggers a second set of subject agreement prefixes on the verb.

(47) **Kobiana subject-verb agreement**

<table>
<thead>
<tr>
<th>No subject focus</th>
<th>Subject focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>á-ndékk-i</td>
<td>áyí ée-ndékk-ǝn-i</td>
</tr>
<tr>
<td>2SG-walk-PFV</td>
<td>2SG.PRO 2SG.FOC-walk-FOC-PFV</td>
</tr>
<tr>
<td>‘You walked.’</td>
<td>‘It’s you who walked.’</td>
</tr>
</tbody>
</table>

- To see the complete set of differences, compare tables 8-9.

<table>
<thead>
<tr>
<th>SG</th>
<th>PL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>má- ngée-</td>
</tr>
<tr>
<td>2</td>
<td>á- káa-</td>
</tr>
<tr>
<td>3</td>
<td>á- náà-</td>
</tr>
</tbody>
</table>

Table 8: Kobiana $\varphi$-agreement (Voisin 2015:368)

<table>
<thead>
<tr>
<th>SG</th>
<th>PL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>mé- ngéena-</td>
</tr>
<tr>
<td>2</td>
<td>ée- káana-</td>
</tr>
<tr>
<td>3</td>
<td>áma- náàná-</td>
</tr>
</tbody>
</table>

Table 9: Kobiana subject focus (Voisin 2015:368)

- Crucially, the subject focus paradigm in table 9 retains both $\varphi$-feature contrasts present in the basic paradigm.
- In the current system, this means that Kobiana possesses two sets of subject agreement prefixes, one which spells out $[\varphi]$ and one which spells out $[\varphi+\text{Ā}]$.

(48) **Kobiana agreement VIs**

|  | a. má-, á-, ngée-, káa-, náà- $\leftrightarrow [\varphi]$ |
| b. mée-, ée-, áma-, ngéena-, káana-, náàná- $\leftrightarrow [\varphi, \text{op}]$ |

The Kobiana facts show that $\varphi$-impoverishment in the context of $[\text{op}]$ is independent of the realization of a feature bundle that includes $[\varphi]$ and $[\text{op}]$. We thus have a typology with four distinctions, as shown in table 10.

<table>
<thead>
<tr>
<th>$\varphi$-impoverishment</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ā-exponence</td>
<td>YES</td>
<td>Abaza</td>
</tr>
<tr>
<td></td>
<td>NO</td>
<td>Fiorentino</td>
</tr>
</tbody>
</table>

Table 10: Typology of Ā-exponence and impoverishment (Version 1)
References


Deal, Amy Rose. 2016. Interaction and satisfaction: a theory of agreement. Handout from talk given at MIT.


Keine, Stefan. 2010. *Case and Agreement from Fringe to Core*. De Gruyter.


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