1 Introduction

- In many languages, the normal pattern of $\phi$-agreement with an argument in a specific position (usually a subject) is disrupted when that argument is involved in an Ā-dependency.

- A canonical example of this effect comes from Tarifit Berber [Ouhalla 1993]:

  (1) \text{t-zra tamghart Mohand} \\
  \text{3sg.f-see woman Mohand} \\
  \text{‘The woman saw Mohand?’}

  (2) a. man tamghart, ay \text{yzrin} \foc Mohand \\
  \text{which woman see.PART Mohand} \\
  \text{‘Which woman saw Mohand?’}

  b. *man tamghart, ay \text{t-zra} \foc Mohand \\
  \text{which woman see.PART Mohand} \\
  \text{‘Which woman saw Mohand?’}

- Since [Ouhalla 1993], this phenomenon has been dubbed the ‘anti-agreement effect’ (I’ll just call it anti-agreement).

- Anti-agreement is found in a wide variety of languages, but there is little consensus about the theoretical principles that rule out agreement in (2a).

  ▷ I’ll have little to say about the principles that determine which argument(s) is affected by anti-agreement in a given language.

- Rather, I’ll be concerned with the patterns of feature neutralization exhibited by anti-agreement cross-linguistically.

- I’ll show that there are only three such patterns attested and that these patterns emerge from the interaction of two principles:

  ▷ Agreement features in anti-agreement contexts are always a proper subset of normal agreement features.

  ▷ There is an implicational hierarchy requiring that PERSON agreement be neutralized before GENDER agreement and before NUMBER agreement.

- I sketch a novel analysis of anti-agreement as agreement with a $\phi$-deficient resumptive pronoun (Adger and Ramchand 2005, Adger 2011).

  ▷ I show that the structural analysis of pronouns in [Adger 2011] immediately derives the limited number of feature neutralization patterns.

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I thank Line Mikkelsen, Peter Jenks, David Pesetsky, Norvin Richards, Kenyon Branan, and Carrie Spadine for their feedback and discussion while working on this analysis. Any mistakes are my own!

1 Abbreviations used in this handout are: 1 = 1st person; 2 = 2nd person; 3 = 3rd person; AAE = anti-agreement; c1 = class 1 (Bantu); c3 = class 3 (Bantu); c7 = class 7 (Bantu); DEM = demonstrative; DEM = determiner; DV = default vowel (Seereer); EXT = extraction (Seereer); FOC = focus; F = feminine; M = masculine; PART = participle; PL = plural; PST = past; REL = relative; SG = singular.
2 Full vs. Partial Anti-Agreement

- Anti-agreement involves the neutralization of (at least some of) the $\phi$-feature contrasts expressed by agreement in declarative contexts.

(3) **Feature Neutralization:**
A feature $X$ has been *neutralized* when $X$ is expressed by a morphological paradigm in some baseline context $\alpha$ but is not expressed in another context $\beta$.

<table>
<thead>
<tr>
<th>SG</th>
<th>PL</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>A</td>
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<tr>
<td>2</td>
<td>C</td>
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<tr>
<td>3</td>
<td>E</td>
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</tbody>
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Table 1: 2 Features

<table>
<thead>
<tr>
<th>SG</th>
<th>PL</th>
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<tbody>
<tr>
<td>1</td>
<td>E</td>
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<tr>
<td>2</td>
<td>E</td>
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<tr>
<td>3</td>
<td>E</td>
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</tbody>
</table>

Table 2: 1 Features

<table>
<thead>
<tr>
<th>SG</th>
<th>PL</th>
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<tbody>
<tr>
<td>1</td>
<td>E</td>
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<tr>
<td>2</td>
<td>E</td>
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<tr>
<td>3</td>
<td>E</td>
</tr>
</tbody>
</table>

Table 3: No features

▷ The paradigm in table 1 expresses two features: PERSON and NUMBER.
▷ The paradigm in table 2 neutralizes one feature: PERSON.
▷ The paradigm in table 3 neutralizes two features: PERSON and NUMBER.

- It has been previously observed in the literature that anti-agreement always neutralizes PERSON agreement, while NUMBER and GENDER agreement may be retained in some languages (Henderson 2009, 2013; Diercks 2010; Ouhalla 2005).

- For example, anti-agreement in Tarifit Berber neutralizes PERSON/GENDER/NUMBER agreement, (4a), whereas in Tashlhit Berber, NUMBER is retained, (4b): (4) Tarifit vs. Tashlhit

  a. shek,  ay iuggur-[\text{n}]  \_\_\_
   you.SG.M  C$_\text{FOC}$ leave-PART
   ‘You are the one who left.’
   (Tarifit; Ouhalla 2005:675)

  b. irgazn, nna ffegh-[\text{n}*-\text{in}]  \_\_\_
   men  C$_\text{REL}$ left-PART-PL
   ‘the men who left.’
   (Tashlhit; Chafti 1990:123)

- Feature neutralization under anti-agreement is constrained in two ways, shown in (5) and (6):

(5) **The Feature Subset Generalization:**
The $\phi$-features expressed in an anti-agreement context are always a proper subset of the $\phi$-features expressed in a full agreement context.

(6) **Feature Neutralization Hierarchy:**
There is an implicational hierarchy governing how features are neutralized under anti-agreement:

a. PERSON $\gg$ GENDER $\gg$ NUMBER

- The interaction of these principles yields the three patterns given in table 4.
Agreement Features | Anti-Agreement Features
--- | ---
PERSON | GENDER | NUMBER | PERSON | GENDER | NUMBER
Pattern 1 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓
Pattern 2 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓
Pattern 3 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓

Table 4: Feature Neutralization Patterns

- These patterns are the only ones present in a cross-linguistic survey of 30 languages exhibiting anti-agreement (see Baier 2014 for details). This generalization has not previously been noted in the literature.
  - I refer to pattern 1 as full anti-agreement.
  - I refer to patterns 2 and 3 as partial anti-agreement.
- Any sufficient theory of anti-agreement must be able to explain why the Feature Subset Generalization, (5), and the Feature Neutralization Hierarchy, (6), hold cross-linguistically.

2.1 Pattern 1: Full Anti-Agreement
- The majority of languages in my survey exhibit full anti-agreement: all agreement features are neutralized in anti-agreement contexts.
- For example, in Gawwada (Cushitic; Ethiopia), subject focus forces the verb to appear in a default 3sg masculine form and blocks the appearance of a preverbal subject clitic:

  (7) Gawwada: Subject focus requires default agreement (Tosco 2007)
  a. (áto) ați=ůg-tí
     2sg.pro 2=drink-PFV.2sg
     'You drank.'
  b. áto_foc ůg-i
     2sg.pro drink-PFV.3sg.m
     'You_{foc} drank.'

- Likewise, in the northern Italian dialect Fiorentino, subject extraction requires default subject inflection:

  (8) Fiorentino: No agreement with wh-subjects (Brandi and Cordin 1989)
  a. Quante ragazze gl’ ha parlato con te how.many girls 3sg have.3sg spoken with you
     'How many girls have spoken to you?' ✓ Default agreement
  b. * Quante ragazze l’ hanno parlato con te how.many girls 3pl have.3pl spoken with you
     'How many girls have spoken to you?' X Full agreement

2.2 Patterns 2 and 3: Partial Anti-Agreement
- As we saw in table 4 above, there are two patterns of partial anti-agreement.
  - In pattern 2, PERSON and GENDER agreement (if present) are neutralized; NUMBER remains.
In pattern 3, only person agreement is neutralized; gender and number remain.

- In Seereer (Atlantic; Senegal), anti-agreement leaves number agreement intact, while neutralizing person distinctions (Baier, field notes 2014):

(9) **Seereer: Declarative agreement**

a. (mi) jaw-a-am ñaamel ke
   1SG.PRO cook-DV-1SG food DET
   I cooked the food’

b. (in) nu-njaw-a ñaamel ke
   1PL.PRO 1PL-cook.PL-DV food DET
   We cooked the food’

(10) **Seereer: Subject focus triggers anti-agreement**

a. mi₇ foc jaw-u ñaamel ke
   1SG.PRO cook-EXT food DET
   It’s me who cooked the food’

b. in₇ foc njaw-u / *jaw-u ñaamel ke
   1PL.PRO cook.PL-EXT / cook-EXT food DET
   It’s us who cooked the food’

- Full agreement involves a person/number prefix and consonant mutation of the initial consonant of the verb stem when there is a plural subject, as in (9b).

- When the subject is focused, the agreement prefix disappears, but number mutation remains, as in (10b).

- This pattern is also attested in the following languages:

 ▷ Berber: Tashlhit and Tamazight ([Ouhalla 2005](#))
  ▷ Arawakan: Matsigenka, Caquinte, and Nanti (Lev Michael and Zachary O’Hagan, p.c.)
  ▷ Dogon: Ben Tey ([Heath 2013](#))
  ▷ Yimas ([Phillips 1993](#))

- Pattern 3 partial anti-agreement is attested in at least one Berber language and Bantu languages with anti-agreement.

- In Tahaggart Berber, the participle is inflected for gender and number of the extracted subject. For example, the Tahaggart participle of ‘steal’ has three forms:

(11) **Tahaggart participial inflection** ([Reesink 1979:277](#))

a. y-ukǝr-ǝn SG.M-steal-PART

b. t-ukǝr-ǝt SG.F-steal-PART.F

c. ukǝr-n-in steal-PART-PL

- [Henderson 2009, 2013](#) and [Diercks 2009, 2010](#) have argued that anti-agreement in Bantu suppresses the feature person, while leaving other φ-features, gender and number, intact.

- In Lubukusu, extraction of a class 1 subject requires replacement of the normal subject marker a- with the morpheme o- (here realized as [w]):
Lubukusu: Cl1 triggers alternative agreement prefix

a. o-mwa-ana c1-c1-child c1sbj-pst-run-fv
   'The child ran.'

b. naanu o-a-tim-a c1who c1rel-aae-pst-run-fv
   'The child ran.'

Lubukusu: Person distinctions leveled

a. Nise o-w-onak-e c1rel-aae-damage-pst c3-c3-door c3-dem
   It is I who damaged the door

b. Niwe o-w-onak-e c3-aae-damage-pst c3-c3-door c3-dem
   It is you(sg) who damaged the door

Lubukusu: Cl7 subjects don’t change

a. si-si-indu sy-a-kwa c7-sbj-pst-fall
   'The thing fell.'

b. si-si-indu sy-a-kwa c7-rel-7sbj-pst-fall
   'the thing which fell'

Diercks (2010) argues that anti-agreement in Lubukusu prevents agreement for person, while leaving gender and number agreement intact.

▷ This neutralizes the difference between class 1 subjects and participants, while leaving other classes intact.

If this analysis of Bantu anti-agreement is on the right track, then this is an example of pattern 3 feature neutralization: only person is affected.

3 Sketching an Analysis

- Recall that there are two principles that constrain $\phi$-feature neutralization in anti-agreement contexts.

   The Feature Subset Generalization:
   The $\phi$-features expressed in an anti-agreement context are always a proper subset of the $\phi$-features expressed in a full agreement context.

   Feature Neutralization Hierarchy:
   Person $\gg$ Gender $\gg$ Number

- In this section, I will sketch an analysis that derives these two principles from the mechanism underlying anti-agreement.
3.1 **Adger and Ramchand (2005)**

- My analysis builds off work by **Adger and Ramchand (2005)** (henceforth A&R), who develop a theory of Ā-dependencies in which they may be formed by movement or by base generation.
  
  - In the later case, a resumptive pronoun occupies the base position of the dependency.
  
- Contra traditional wisdom, A&R argue that locality effects are not the crucial diagnostic as to whether an Ā-dependency is derived by movement.
  
- A&R develop a theory in which base generated dependencies are mediated by the operation **Agree** (**Chomsky** 2000, 2001).
  
  - They argue that Merge and Agree are subject to the same locality conditions.
  - Therefore, there should be no difference in the locality effects exhibited by the movement-based and resumptive-based Ā-strategies.

- Instead, they argue that *identity effects* are the key indicator of movement.
  
  - Such effects arise in a movement derived dependency; movement leaves an *exact copy* of the displaced constituent in the apparent gap (**Corver and Nunes** 2007, **Nunes** 1995).
  - Obligatory differences between the apparent gap position and the displaced constituent indicate that the gap cannot be occupied by an exact copy.
  - In these cases, A&R argue, the base position is occupied by a resumptive pronoun.

- The core intuition of my account of anti-agreement builds off this line of thought:

  ![Core Intuition]

  Anti-agreement is an *anti-identity* effect. Anti-agreement occurs when the base position of an Ā-dependency is occupied by a resumptive pronoun lacking some or all ϕ-features.

3.2 **Adger's (2011) Bare Resumptive Pronouns**

- **Adger** (2011) discusses a class of resumptive pronouns that lack at least the ϕ-feature *person*, and that may also lack *gender* and *number*.

  - Adger dubs these items *bare resumptive pronouns*.
  - He shows that they may be null or overt.

- Adger shows that bare resumptive pronouns are subject to island constraints that resumptive pronouns with a full ϕ-feature specification are not.

- For example, in São Tomense Creole, a plural relativized noun is resumed by a singular pronoun; a plural pronoun is impossible (**Hagemeijer** 2000):

  (17) Inen faka se ku n va mpon ku-[\[e]] / "ku-[\[inen]]
  
  3PL knife DEM CREL 1SG cut bread with-3SG / with-3PL
  
  ‘these knives that I cut the bread with’

  - The pattern is reversed when the resumptive pronoun is found within an adjunct island. (18):
While bare resumptives are always invariant with regard to person, in some languages they vary for number. One such language is Nupe (Kandybowicz 2007).

\( \Delta \) \( \Delta \) -extraction from subject position in Nupe requires a resumptive pronoun that matches its antecedent in number but not person:

\[ \text{(19) Nupe: 1sg/2sg subject resumed by 3sg} \]
\[ \text{\hspace{1em} a. Mi Musa gàn \text{\text{[CP gànán \text{\text{[u/*mi: pa eci] o.}}}}}} \]
\[ \text{\hspace{1em} 1sg Musa say \text{\text{C 3sg/1sg pound yam FOC}}} \]
\[ \text{\hspace{1em} ‘Musa said that I pounded the yam.’} \]
\[ \text{\hspace{1em} b. Wo: Musa gàn \text{\text{[CP gànán \text{\text{[u/*wo: pa eci] o.}}}}}} \]
\[ \text{\hspace{1em} 2sg Musa say \text{\text{C 3sg/2sg pound yam FOC}}} \]
\[ \text{\hspace{1em} ‘Musa said that YOU pounded the yam.’} \]

\[ \text{(20) Nupe: 1pl/2pl subject resumed by 3pl} \]
\[ \text{\hspace{1em} a. Yi: Musa gàn \text{\text{[CP gànán \text{\text{[a/*yi/*u: pa eci] o.}}}}}} \]
\[ \text{\hspace{1em} 1pl Musa say \text{\text{C 3pl/1pl/3sg pound yam FOC}}} \]
\[ \text{\hspace{1em} ‘Musa said that WE pounded the yam.’} \]
\[ \text{\hspace{1em} b. Ye: Musa gàn \text{\text{[CP gànán \text{\text{[a/*ye/*u: pa eci] o.}}}}}} \]
\[ \text{\hspace{1em} 2sg Musa say \text{\text{C 3pl/2pl/3sg pound yam FOC}}} \]
\[ \text{\hspace{1em} ‘Musa said that YOU pounded the yam.’} \]

\( \Delta \) Nupe bare resumptive pronouns are island sensitive, like those in São Tomense:

\[ \text{(21) Nupe: Bare resumptive cannot occur inside an island} \]
\[ \text{\hspace{1em} a. *Zë Musa kpe \text{\text{[CP ké \text{\text{[u: si] o.}}}}}} \]
\[ \text{\hspace{1em} who Musa know what 3sg buy FOC} \]
\[ \text{\hspace{1em} ‘Who does Musa know what bought?’} \]

Adger argues that bare resumptive pronouns are the same as the resumptive pronouns discussed in Adger and Ramchand (2005).

There is a key similarity between bare resumptives and anti-agreement:

Bare Resumptives and Anti-Agreement

The implicational relationship between person and number is the same for bare resumptives and anti-agreement: number cannot be neutralized to the exclusion of person.

I now build on this similarity, showing that the structure that Adger (2011) adopts for pronouns (and bare resumptives) derives the two constraints on feature neutralization under anti-agreement.
3.3 Deriving the Patterns

- Adger (2011) assumes that pronouns are not simply D-heads, but decompose into several projections (cf. Déchaine and Wiltshko 2002, Moskal 2015).
- Specifically, he proposes that a referential pronoun has the structure in (25):

(22) Referential Pronoun:

\[
\text{DP} \quad \text{D} \quad \text{PersP} \\
\quad \text{Pers} \quad \text{GenP} \\
\quad \quad \text{Gen} \quad \text{NumP} \\
\quad \quad \quad \text{Num} \quad \text{idP} \\
\quad \quad \quad \quad \text{id} \quad \text{id}
\]

▷ The core of a pronoun is a variable introduced by a syntactic feature id (cf. Adger and Ramchand 2005).
▷ This feature merges with \( \phi \)-feature introducing projections: NumP introduces NUMBER; GenP introduces GENDER; and PersP introduces PERSON.
▷ Finally, a DP is merged with PersP.
- Adger contends that D can select only PersP in pronouns and that the island sensitivity of bare resumptives results from the lack of a DP layer.\(^2\)
  ▷ Thus, any pronoun lacking PERSON will be sensitive to islands (i.e. a bare resumptive).
  ▷ Note: This relationship is unidirectional; Adger’s theory predicts that it is possible to have a island sensitive resumptive pronoun with a full \( \phi \)-feature specification.
- I propose that anti-agreement results from agreement with a (bare) resumptive pronoun lacking at least PERSON. The three feature neutralization patterns are derived through agreement with various ‘sizes’ of pronoun:

(23) Pattern 1 (full anti-agreement): \[ \text{idP} \quad \text{id} \]

(24) Pattern 2 (partial anti-agreement): \[ \text{NumP} \quad \text{idP} \quad \text{id} \]

(25) Pattern 3 (partial anti-agreement): \[ \text{GenP} \quad \text{NumP} \quad \text{idP} \quad \text{id} \]

\(^2\)Adger argues that the PERSON-feature introduced by the PersP layer is responsible for mapping the id-feature to a set of individuals and the D is only capable of composing with individuals. See Adger (2011) for details and discussion.
The arrangement of the three $\phi$-feature introducing projections derives both constraints on $\phi$-feature neutralization.

The Feature Neutralization Hierarchy (see 16, above) is derived the containment relationships between PersP, GenP, and NumP.

▷ PersP cannot be merged without merging GenP and NumP.
▷ GenP cannot be merged without merging NumP.
▷ Thus, gender can never be retained when number is deleted. The same goes for person.

The Feature Subset Generalization (see 15, above) is derived by the fact that, in a given language, a bare resumptive pronoun can include only $\phi$-features that full referential pronouns also include.

▷ That is, a bare resumptive can never ‘add’ a feature not already present in a referential pronoun.
▷ This is because bare resumptives under Adger’s theory are simply pronouns lacking a D-layer.

Supporting evidence that anti-agreement results from agreement with a island sensitive resumptive pronoun comes from the fact that in Tarifit Berber, anti-agreement displays island sensitivity:

(26) **Tarifit Berber: no anti-agreement in island**

a. Man tafruxt, ay t-ttu-t [CP mani t-zdegh _i] ?
   which girl CROC 2PL-forgot-2PL where sc 3sg.f-live
   ‘Which girl have you forgotten where she lives?’

▷ In (26), the apparent subject gap is found inside an adjunct island.
▷ Under my analysis, this gap must be a null resumptive pronoun containing a D-layer, and therefore a full specification of $\phi$-features.

The island sensitivity of anti-agreement is confirmed for languages in my sample where I have sufficient data.

Note that this account makes no prediction about which arguments will be affected by anti-agreement in a given language.

▷ Previous literature on anti-agreement has treated the effect as a subject-object extraction asymmetry.
▷ This does not immediately follow from my analysis. This is therefore an area for further study.

4 Conclusion

In this talk, I’ve shown that there are limited number of $\phi$-feature neutralization patterns in anti-agreement contexts attested cross-linguistically, repeated here in table 5:

<table>
<thead>
<tr>
<th>Agreement Features</th>
<th>Anti-Agreement Features</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PERSON</strong></td>
<td><strong>GENDER</strong></td>
</tr>
<tr>
<td>Pattern 1</td>
<td>✓</td>
</tr>
<tr>
<td>Pattern 2</td>
<td>✓</td>
</tr>
<tr>
<td>Pattern 3</td>
<td>✓</td>
</tr>
</tbody>
</table>

Table 5: Feature Neutralization Patterns
I’ve observed that these three patterns emerge from the interaction of two principles:

(27) **The Feature Subset Generalization:**
The $\phi$-features expressed in an anti-agreement context are always a proper subset of the $\phi$-features expressed in a full agreement context.

(28) **Feature Neutralization Hierarchy:**
Person $\gg$ Gender $\gg$ Number

I’ve argued that (27) and (28) follow directly from a theory of anti-agreement in which the effect results from agreement with a $\phi$-deficient resumptive pronoun of the type argued for by Adger and Ramchand (2005) and Adger (2011).

In addition, my proposal adds to the growing literature showing that implicational generalizations/relationships can be derived through hierarchical relationships between syntactic terminals (cf. Bobaljik 2012, Caha 2009, Moskal 2015, a.o.)

**References**


Diericks, Michael. 2009. Subject extraction and (so-called) anti-agreement effects in lubukusu: A criterial freezing approach. In *CLS 45*.


