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.' (Ouhalla 1993:479)

b. **man tamghart**$_i$ ay **yzrin** $\_\_i$ Mohand
which woman C see.PFV.PART Mohand
'Which woman saw Mohand?' (Ouhalla 1993:479)

(2) *Selayarese (Austronesian, Indonesia)*

a. la-taro=**i**$_i$ **doe'-iñjo**$_i$ i Baso' ri lamari
3-put(-3) money-def H Ali in cupboard
'Baso' put the money in a cupboard' (Finer 1997:688)

b. **apa**$_i$ la-taro(*=**i**$_i$) $\_\_i$ i Baso' ri lamari
what 3-put(-3) H Ali in cupboard
'What did Baso' put in a cupboard?' (Finer 1997:689)

(3) *Abaza (Northwest Caucasian, Russia)*

a. ***pro***$_i$ *pro*$_k$ də$_k$-**l**$_i$-ʃʲəd
3SG.F 3SG.ANIM 3SG.ANIM-3SG-kill
'She killed him/her' (O'Herin 2002:55)

b. s-kʲtap **dəzda**$_i$ y-na-**z**$_i$-axʷ
1SG-book who 3SG.I-PFV-ERG.WH-take
'Who took my book?' (O'Herin 2002:252)

- 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-agreemnt** or ***wh*-agreement** in the literature.

[1] Abbreviations 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**
[... $H_{[u\varphi]}$ [... $DP_{[\varphi,\bar{A}]}$ ...]
└─ 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.

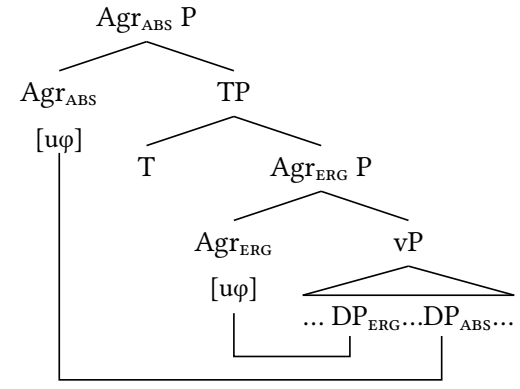
(5) a. **ʃʷara**$_i$ ʃʷ$_i$-ʕʷəyd
2PL 2PL-run
'You(PL) run. (O'Herin 2002:64)

b. ***pro***$_i$ ***pro***$_k$ **y**$_k$-p-**s**$_i$-qəd
1SG 3SG.I 3SG.I-PFV-1SG-break
'I broke it' (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)



- ▷ Each Agr head hosts a φ-probe
- ▷ Lower φ-probe agrees with the external argument.
- ▷ Higher φ-probe agrees with the highest DP inside *v*P.

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

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

[3]Alternatively, 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.

(7) *Absolutive* wh*-agreement: y-*

a. a-č^{w}wal **dzač'^{w}əya**$_i$ **yə**$_i$-ta-wa
DEF-sack what ABS.WH-in-PRS
'What is in the sack?' (O'Herin 2002:252)

b. Izmir *pro* **dzač'^{w}əya**$_i$ **yə**$_i$-r-bak^{w}az
Izmir 3PL who ABS.WH-3PL-see.PL.PST
'Who did they see in Izmir?' (O'Herin 2002:252)

(8) *Ergative* wh*-agreement: z-*

a. **dəzda**$_i$ s-axč^{j}a **zə**$_i$-ɣəč^{j}
who 1SG-money ERG.WH-steal
'Who stole my money?' (O'Herin 2002:252)

b. a-fač^{j}əʕ^{w} a-finǰ^{j}an a-pnə **dəzda**$_i$ y-na-**z**$_i$-ax^{w}
DEF-sugar DEF-cup 3SG.I-at 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].

	1	2F	2M	3F	3M	3I	Ā
SG	*s-*	*b-*	*w-*	*l-*	*y-*	*a-*	*z-*
PL	*h-*	*ʃ^{w}-*	*ʃ^{w}-*	*r-*	*r-*	*r-*	*z-*

Table 1: Abaza Ergative Agreement

	1	2F	2M	3F	3M	3I	Ā
SG	*s-*	*b-*	*w-*	*d-*	*d-*	*y-*	*y-*
PL	*h-*	*ʃ^{w}-*	*ʃ^{w}-*	*y-*	*y-*	*y-*	*y-*

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.

[4] *Wh*-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:

	Features		Vocabulary item
Full agreement	[φ, $\text{Agr}_{(\text{ERG/ABS})}$]	↔	/s-/, /b-/, /ʃʷ-/, etc.
Wh-agreement	[Ā, Agr_{ERG}]	↔	/z-/
Elsewhere	[Agr]	↔	/y-/

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, $\mathcal{F}$.

  (13) $\mathcal{F}$ = {φ, Ā}

  ▷ If there is no variation in interaction, both φ-probes and Ā-probes will both have the same interaction condition: $\mathcal{F}$.

- 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**
  $[\ \ldots\ \underset{\llcorner\ \varphi+\bar{A}\ \lrcorner}{H_{[u\varphi]}}\ [\ \ldots\ DP_{[\varphi,\ \bar{A}]}\ \ldots\ ] \longrightarrow H_{[\varphi,\ \bar{A}]}$

  ▷ 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:**
[φ, Ā, 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 φ-feature impoverishment*
  [φ] → Ø / [_, Ā, Agr]

  - ▷ This rule deletes all φ-features on an Agr head when there is an Ā-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 φ-agreement.
    i. Agree in the syntax
    ii. Vocabulary insertion in the morphology
  - ▷ Copying of an Ā-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** $\_\_{}_i$ Mohand
  which woman C see-PFV.PART Mohand
  'Which woman saw Mohand?' (Ouhalla 1993)

  b. ***man tamghart**$_i$ ay **t**-zra $\_\_{}_i$ 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**$_i$ nni **yzrin** $\_\_i$ Mohand
woman C see-PFV.PART Mohand
'the woman who saw Mohand' (Ouhalla 1993)

b. **tamghart-a**$_i$ ay **yzrin** $\_\_i$ 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**$_i$ ay **iuggurn** $\_\_i$
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$_i$ **y**-wʃa/***ywʃin** **Jamal** $\_\_i$ 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.

	SG	PL
1	V-x	n-V
2M	θ-V-ð	θ-V-m
2F	θ-V-ð	θ-V-nt
3M	i-V	V-n
3F	θ-V	V-nt

Table 4: Tarifit φ-agreement (Elouazizi 2012)

	SG	PL
1	y-V-n	y-V-n
2M	y-V-n	y-V-n
2F	y-V-n	y-V-n
3M	y-V-n	y-V-n
3F	y-V-n	y-V-n

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) *Tarifit Berber φ-feature impoverishment*
[φ] → Ø / [__, Ā, Agr]

▷ I take the 'participle' form *y-…-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) *Tarifit participle*
[Ā, Agr] ↔ /y-…-n/

[6]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)**[7]
  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 occuring.

- 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.[8]

(28) **Possessor agreement**

a. **aphas**$_i$ **l**-qas'a
woman 3SG.F.POSS-man
'the woman's husband' (O'Herin 2002:50)

b. (**wara**$_i$) **w**$_i$-nap'ə
2SG.M 2SG.M.POSS-man
'your hand' (O'Herin 2002:50)

- 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***$_i$ **z**-tdzə]$_k$ *pro* —$_k$ yə$_k$-w-x^{w}aʕz] a-qac'a$_i$
[[POSS.AA-house] 2SG.M ABS.AA-2SG.M-buy.PST] DEF-man
'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$_{[uφ]}$-N]$_i$ C [… —$_i$ … V]]
(φ+Ā)

- 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.

[7] See Baier (2017) for further arguments against an anti-locality based approach to anti-agreement not discussed in this talk.
[8] I 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. [$_{DP}$ ***pro***$_i$ **z**$_i$-qk^{w}marga] ayʃa ac'axk^j **dəzda**$_i$ yə-qa-**z**$_i$-chwaxəz
[POSS.AA-toy] table under who 3SG-PV-ERG.AA-hide
'Who$_i$ hid his$_i$ toy under the table?' (O'Herin 2002:272)

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

▷ In (31a), the possessor of 'toy' is bound by the *wh*-subject and triggers anti-agreement *z-* on the noun.

▷ In (31b), the possessor of 'son' is bound by the relative operator and is also cross-referenced with anti-agreement *z-*.

- There are two important observations regarding the Abaza data:
  ① Anti-agreement is triggered by **an element which is not an 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:
  ▷ **Ibibio** (Lower Cross, Nigeria) → Anti-agreement occurs on upward agreeing complementizers when a matrix subject is extracted (Torrence and Duncan 2017).
  ▷ **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 Ā-extracted elements receive *both* [φ] and [Ā] features from their binder, (32a).[9]
  ▷ Anti-agreement on the probe that agrees with bound *pro* is triggered by the [Ā] *on the bound variable*, (32b).

(32) a. *Minimal pro receives [φ+Ā] from binder*
[DP$_{i[\varphi,\bar{A}]}$ … [*pro*$_{i[\ ]}$ [… H$_{[u\varphi]}$ …]]]
Binding

b. *Probe on H finds [φ+Ā] on pro*
[DP$_{i[\varphi,\bar{A}]}$ … [*pro*$_{i[\varphi,\bar{A}]}$ [… H$_{[u\varphi]}$ …]]]
Agree

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

(33) **Full agreement blocks bound variable reading**
[$_{DP}$ ***pro***$_{k/*i}$ **y**$_{k/*i}$-qk^{w}marga] ayʃa ac'axk^j **dəzda**$_i$ yə-qa-**z**$_i$-chwaxəz
[POSS.3SG-toy] table under who 3SG-PV-ERG.AA-hide
'Who$_i$ hid his$_{k/*i}$ toy under the table?' (B. O'Herin, p.c.)

[9] 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.

- ▷ 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 [φ], blocking transmission of the Ā-feature.

- These data are challenging for accounts that derive anti-agreement through constraints on Ā-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 φ-probe agreeing with a phrase that bears an Ā-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. **man tamghart**$_i$ ay **yzrin** / ***t**-zra $\_\__i$ Mohand
which woman C see-PART / 3SG.F-see Mohand
Intended: 'Which woman saw Mohand?' (Ouhalla 1993:479)

b. min$_i$ **y**-wʃa / ***ywʃin** **Jamal** $\_\__i$ i Mena
what 3SG.M-give / give.PART Jamal 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 φ-probe can only be triggered by of a DP that has agreed with that φ-probe.

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

(36) *Subject [Ā]: probe finds [φ, Ā] → anti-agreement*
[... $H_{[u\varphi]}$ [... [$_{vP}$ $DP_{[\varphi,\,\bar{A}]}$ v [$_{VP}$ V $DP_{[\varphi]}$]]]]
$H_{[u\varphi]}$ ... φ+Ā ... $DP_{[\varphi,\,\bar{A}]}$

(37) *Object [Ā]: probe finds only [φ] → no anti-agreement*
[... $H_{[u\varphi]}$ [... [$_{vP}$ $DP_{[\varphi]}$ v [$_{VP}$ V $DP_{[\varphi,\bar{A}]}$]]]]
$H_{[u\varphi]}$ ... φ- ... $DP_{[\varphi,\bar{A}]}$

- 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

Agreement	AA trigger(s)	Language
Nom	Nom	Tarifit (Ouhalla 1993)
Nom + Acc	Nom	Palauan (Georgopoulos 1991)
Nom + Acc	Nom + Acc	Zulu (C. Halpert, p.c.; J. Zeller, p.c.)
Nom + Acc	Acc	Ndebele (A. Pietraszko, p.c.)

Table 6: Impoverishment triggers in NOM-ACC languages

Agreement	AA trigger(s)	Language
Abs	Abs	Karitiana (Storto 1999)
Erg + Abs	Erg	Kaqchikel (Erlewine 2016)
Erg + Abs	Erg + Abs	Abaza (O'Herin 2002)
Erg + Abs	Abs	Selayarese (Finer 1997)

Table 7: Impoverishment triggers in ERG-ABS languages

- 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:
  - ▷ Zulu → no person agreement in subject *and* object clefts.

(38) *Zulu: symmetrical nominative/accusative*

a. *Subject cleft*

yi-**mina**$_i$ [$\_\_i$ **o**$_i$/***ngi**$_i$-khuluma-yo]
COP-1SG [____ CL1.S.REL/1SG.S-like-REL]
'I am the one who is speaking.' (C. Halpert, p.c.)

b. *Object cleft*

yi-**mina**$_i$ [umfana a-**m**$_i$/***ngi**$_i$-thanda-yo $\_\_i$]
COP-1SG [boy CL1.S-CL1.O/1SG.O-like-REL]
'It's me who the boy likes.' (J. Zeller, p.c.)

  - ▷ Ndebele → no person agreement in object clefts *only*.

(39) *Ndebele: asymmetrical, nominative/accusative*

a. *Subject cleft*

yi-**mi**$_i$ [$\_\_i$ **engi**$_i$-dlile-yo]
COP-1SG [1SG.S.REL-eat-REL]
'It's me who ate. (A. Pietraszko, p.c.)

b. *Object cleft*

yi-**mi**$_i$ [umama a-**m**$_i$/***ngi**$_i$-thanda-yo $\_\_i$]
COP-1SG [mom CL1.S.REL-CL1.O/1SG.O-lik-REL]
'It's me who mom likes.' (A. Pietraszko, p.c.)

- Under the morphological account, this difference is derived without positing a *syntactic* difference between subject clefts in the two languages.

(40) a. **Subject φ-impoverishment** (active in Zulu)
[PERSON] → Ø / [__, Ā, T]

b. **Object φ-impoverishment** (active in Zulu, Ndebele)
[PERSON] → Ø / [__, Ā, *v*]

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

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

(41) *Selayarese: asymmetrical, ergative/absolutive*

a. *Intransitive subject* wh*-question*

inai$_i$ ak-kelo'(*-**i**$_i$) __$_i$
who INTR-sing(-*3ABS)
'Who sang?' (Finer 1997)

b. *Transitive object* wh*-question*

apa$_i$ la$_k$-'alle(*-**i**$_i$) __$_i$ i Baso'$_k$
what 3ERG-take(-*3ABS) H Baso
'What did Baso take?' (Finer 1997)

c. *Transitive subject* wh*-question*

inai$_i$ *(**la**$_i$-)erang-i loka-ñjo __$_i$
who *(3ERG)-take-3ABS money-DEF
'Who took the money?' (Jukes 2013:118)

▷ Makassarese → Absolutive suffix is lost under extraction. Ergative extraction forces special prefix.

(42) *Makassarese: symmetrical, ergative/absolutive*

a. *Intransitive subject focus*

i **Ali**$_i$ tinroi(*-**i**$_i$) __$_i$
H Ali sleep(-*3ABS)
ALI is asleep (Jukes 2013:118)

b. *Transitive object focus*

mionga$_i$ na$_k$-buno-(*-**i**$_i$) __$_i$ kongkonga$_k$
cat.DEF 3ERG-kill-(-*3ABS) dog.DEF
The dog killed the CAT (Jukes 2013:118)

c. *Transitive subject focus*

kongkonga$_k$ **an**$_k$/***na**$_k$-buno-i$_i$ mionga$_i$ __$_k$
dog.DEF 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.

(43) a. **Absolutive φ-impoverishment** (active in Selayarese, Makassarese)
[φ] → Ø / [__, Ā, T]

b. **Ergative φ-impoverishment** (active in Makassarese)
[φ] → Ø / [__, Ā, *v*]

- 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*
    i **Ali**$_i$ la-jañjang(-***i**$_i$) $\_\_i$ ando'-na$_{*i/j}$
    H Ali 3ERG-see(-*3ABS) mother-3POSS
    'His$_{*i/j}$ mother saw ALI$_{i\,\text{FOC}}$.' (Finer 1997)

  - ▷ 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**
  [… $H_{[u\varphi]}$ [… $DP_{[\varphi,\,\bar{A}]}$ …]
  └ φ+Ā ┘
- 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 φ-probes are there in a clause?
  b. Where are these φ-probes located?
  c. Which φ-probes does φ-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 φ-probe agreeing with a DP that bears both φ-features and an Ā-feature.

  ② Ā-movement is not a precondition for anti/*wh*-agreement. The feature makeup of the DP targeted for agreement in these Ā-contexts is the crucial factor.

  ① Anti/*wh*-agreement is not limited to subjects, but is found with all possible types of arguments.

A1. Anti/*wh*-agreement without impoverishment

- In the account of anti-/*wh*-agreement developed in this talk, φ-impoverishment and exponence of the Āfeature are formally distinct – they need not cooccur.
  - ▷ We should in principle find languages in which without φ-impoverishment in the context of [OP] but where [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*[11]

a. *No subject focus*

á-ndékk-i
2SG-walk-PFV
'You walked.'

b. *Subject focus*

áyì **ée**-ndékk-ən-i
2SG.PRO 2SG.FOC-walk-FOC-PFV
'It's you who walked.'

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

	SG	PL
1	má-	ngée-
2	á-	káa-
3	à-	náà-

Table 8: Kobiana φ-agreement (Voisin 2015:368)

	SG	PL
1	mé-	ngéena-
2	ée-	káana-
3	áma-	náàná-

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

- ▷ Crucially, the subject focus paradigm in table 9 *retains both φ-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 [φ] and one which spells out [φ+Ā]:

(48) *Kobiana agreement VIs*

a. má-, á-, à-, ngée-, káa-, náà- ↔ [φ]
b. mée-, ée-, áma-, ngéena-, káana-, náàná- ↔ [φ, OP]

→ The Kobiana facts show that φ-impoverishment in the context of [OP] is independent of the realization of a feature bundle that includes [φ] and [OP]. We thus have a typology with four distinctions, as shown in table 10

		φ-mpoverishment	
		YES	NO
Ā-exponence	YES	Abaza	Kobiana
	NO	Fiorentino	Spanish

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

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