

# A Survey of Anti-Agreement Effects

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## Abbreviations

AAE	anti-agreement form
ACC	accusative
AGR	agreement
APPL	applicative
AUX	auxiliary
CL	class/classifier
COMP	comp
DEF	definite
DEM	demonstrative
DET	determiner
DV	default vowel
EXT	extraction
FOC	focus
FUT	future
F	feminine
IMPF	imperfective
INF	infinitive
IRR	irrealis
LER	left edge resumptive
LNK	linker
M	masculine
NEG	neg
NOM	nominative
OBJ	object
PFV	perfective
PL	plural
POSS	possessive
PROG	progressive
PRO	pronoun
PST	past
REAL	realis
REFL	reflexive
REL	relative
SBJ	subject
SG	singular

## 1 Introduction

In many languages, the normal pattern of agreement with an argument in a specific position (usually a subject) is disrupted when that argument undergoes  $\bar{A}$ -movement. An example of this from Berber can be seen (1).

- (1) a.  $\boxed{t}$ -zra tamghart Mohand  
 3SG.F-see woman Mohand  
 ‘The woman saw Mohand?’ (Ouhalla 1993:479)
- b. man tamghart<sub>i</sub> ay  $\boxed{yzrin/*t-zra}$  —<sub>i</sub> Mohand  
 which woman C see.PART/\*3SG.F-see Mohand  
 ‘Which woman saw Mohand?’ (Ouhalla 1993:479)

The finite verb in Berber normally agrees with its subject for person, gender, and number, as in (1a). However, when the subject undergoes *wh*-movement in (1b), the verb must appear in the participial form and normal agreement is blocked. Since Ouhalla (1993), this effect has been known as the ‘Anti-Agreement Effect’, usually abbreviated AAE. In this paper I refer to this phenomenon generally as ‘Anti-Agreement.’ In the time since Ouhalla’s original study, there have been many other cases of Anti-Agreement documented in the literature:

- (2) **Previously Documented Languages with Anti-Agreement:**
- a. **Afro-Asiatic:** Berber (Ouhalla 1993, Ouhalla 2005, Ouali 2008, a.o.)
  - b. **Niger-Congo:** many Bantu languages (Cheng 2006, Schneider-Zioga 2007, Diercks 2010, Henderson 2013, a.o.); Ibibio (Baker 2008b)
  - c. **Romance:** Fiorentino and Trentino (Brandi and Cordin 1989); Piedmontese (Campos 1997)
  - d. **Celtic:** Breton, Welsh (Hendrick 1988)
  - e. **Turkic:** Turkish (Ouhalla 1993)
  - f. **Salish:** Halkomelem (Gerds 1980)
  - g. **Austronesian:** Chamorro (Chung 1998); Palauan (Georgopoulos 1985)
  - h. **Mayan:** Jakaltek (among others; Richards 1997)
  - i. **Ramu-Lower-Sepik (Papua):** Yimas (Phillips 1998)

Obviously, Anti-Agreement is not limited to a specific language family, but is distributed widely around the world in many different language families. This suggests that Anti-Agreement is probably more prevalent than it has already been noted to be in the literature. A core goal of this work is to uncover more languages that exhibit Anti-Agreement, and indeed the survey conducted for this prospectus has found quite a few undocumented cases.

Although Anti-Agreement has been widely discussed in the generative literature, most of the theoretical accounts of Anti-Agreement focus on a single language or a group of related languages. This, in turn, means that there is not a ‘mainstream’ analysis of Anti-Agreement currently on the market. It is not even clear if ‘Anti-Agreement’ is a unitary phenomenon. There has been no large scale comparative project that examines Anti-Agreement effects to date.

My larger thesis project aims to fill this void in the literature. The project has two parts. First, to examine data from as many languages that exhibit apparent Anti-Agreement effects as possible and construction a linguistic typology of these effects. Second, to provide an analysis, or analyses, of Anti-Agreement in the framework of the Minimalist program. This prospectus represents the first step of the first part of this research program. It begins to synthesize the knowledge of the current Anti-Agreement literature and adds new data to the mix from a cross-linguistic survey looking for Anti-Agreement effects.

A central question of this prospectus is whether it is possible to establish definitional criteria for identifying a construction in a given language as exhibiting Anti-Agreement. In this paper, I would like to defend the notion that it is. The core intuition behind Anti-Agreement is that extraction of an argument disrupts an agreement relation between that argument and some other part of the structure. That is, in the languages at hand, we interested in two relevant contexts, shown in (3) and (4):

- |  |  |
|--|--|
| <p>(3) <b>Full Agreement Context</b></p> <p style="text-align: center;">[ ARG ... AGR ... ]</p> <p style="text-align: center;"> </p> | <p>(4) <b>Anti-Agreement Context</b></p> <p style="text-align: center;">ARG<sub>i</sub> [ -<sub>i</sub> ... AGR ... ]</p> <p style="text-align: center;"> </p> |
|--|--|

The context in (3) is where the argument in question has remained in situ in its argument position. Agreement is able to proceed. But when that argument is extracted in (4), the relevant agreement relation is disrupted in some way. To characterize the nature of this ‘disruption’, I put forward the Feature Subset Hypothesis, repeated here in (5):

- (5) **The Feature Subset Hypothesis (FSH):**  
 The  $\phi$ -features expressed by agreement in an Anti-Agreement context are always a proper subset of the  $\phi$ -features expressed by agreement in a Full Agreement context.

The intuition behind the FSH is that Anti-Agreement must always result in a *reduction* of the possible featural contrast made by an agreeing form. This reduction need not be complete to qualify as Anti-Agreement. However, Anti-Agreement never *adds* contrasts to an agreement paradigm.

In the Anti-Agreement literature, it is often assumed that Anti-Agreement displays a subject/object asymmetry: extraction of subjects trigger Anti-Agreement, while extraction of objects does not. While it is true that most cases of documented Anti-Agreement effects target subject agreement, it is an empirical question as to whether this is the only type of argument whose agreement can be affected. However, for this prospectus, I have focused on Anti-Agreement effects that target subject agreement. There are two main reasons for this. Firstly, as noted, the Anti-Agreement literature to date has been focused on subject oriented effects. Therefore, I would like to engage with that literature before expanding the scope of my inquiry. Secondly, based on the time constraints this project was under, and for reasons of space, I think it wiser to start with subject AAE before moving on to see if I can find effects for other argument types.

## 1.1 Road Map

The rest of this prospectus is structured as follows. In section 2, I discuss past approaches to anti-agreement in the literature, focusing on major trends in the analyses currently on the market. Section 3 presents the meat of the paper- the cross-linguistic survey. In it I describe the patterns of anti-agreement for languages that have already been discussed in the anti-agreement literature

and those that are first being discussed in this paper. Then, in section 4, I discuss the larger patterns and results of the survey, focusing on typological patterns and trends. Section 5 briefly offers the next steps in the project.

There are also three of Appendices which summarize the results of the project. Appendix A contains a table comparing the featural changes between regular agreement and AAE contexts. Appendix B contains a table summarizing relevant structural characteristics of the languages in the study and conditioning environments on anti-agreement. Appendix C contains a table summarizing the morphological profile of each anti-agreement pattern examined

## 2 Existing Analyses of Anti-Agreement

Broadly speaking, there are three major styles of analysis for Anti-Agreement effects. These are given in (6), along with the central idea that brand of analysis pursues:

### (6) Styles of Analysis

- a. **Anti-Locality:**  $\bar{A}$ -movement of the subject creates a relation that is ‘too close’ by some relevant metric, be this binding or an actual constraint on movement. This forces the subject to extraction from a position lower than the canonical subject position. Such approaches include Ouhalla (1993), Schneider-Zioga (2000, 2007), Cheng (2006).
- b. **Featural:** Something about the nature of the features involved in  $\bar{A}$ -movement of the subject forces Anti-Agreement, or a process targeting those features derives Anti-Agreement. Such approaches include Ouhalla (2005), Baker (2008b), and Richards (2001).
- c. **C-T Relational:**  $\bar{A}$ -movement of the subject either interrupts the relation between C and T or requires a special relation between C and T. Such approaches include Ouali (2008), Ouali and Pires (2005) and Henderson (2007, 2009, 2013).

In this section, I begin by reviewing the previous approaches to Anti-Agreement that fall into one of the three camps above. I then turn to approaches that do not.

### 2.1 Anti-Locality Approaches

The leading idea behind Anti-locality approaches to Anti-Agreement is that  $\bar{A}$ -movement of the subject creates a dependency that is ‘too short’ in some way or that the movement itself is ‘too short’ by some specific metric. Anti-Agreement is either a way of getting around this problem or is a byproduct of the way that this problem is bypassed. The first such analysis is found in Ouhalla’s (1993) article that coined the term ‘Anti-Agreement Effect’. More recently, anti-locality approaches to the phenomenon are found in the work of Schneider-Zioga (2000, 2007) and Cheng (2006).

#### 2.1.1 Ouhalla 1993

The core intuition behind Ouhalla’s (1993) analysis of Anti-Agreement is that problems arise when the subject is  $\bar{A}$ -moved because of conflicting requirements that are placed upon the empty category that is left in subject position after such movement. Ouhalla observes that languages that manifest Anti-Agreement are pro-drop- that is, their subject agreement is ‘rich’ enough to license

*pro*. According to Ouhalla, when a subject is extracted from Spec-TP in an Anti-Agreement language, the agreement on T is rich enough to identify the empty category in subject position as *pro*, and not as a *wh*-trace. This is shown in (7):

$$(7) \quad [_{CP} XP_i [_{TP} e_i T+AGR_i [ \dots ]]] \quad (e_i = pro_i)$$

Ouhalla goes on to argue that the *pro* in subject position counts as a resumptive pronoun because it is locally bound by a *wh*-operator. This is where the problems start. Pronouns are subject to an anti-locality effect, Condition B of the Binding Theory, which Ouhalla extends to  $\bar{A}$ -binding with the  $\bar{A}$ -Disjointness Requirement in (8):

- (8)  **$\bar{A}$ -Disjointness Requirement (Aoun and Li 1989):**  
 A pronoun must be  $\bar{A}$ -free in the smallest Complete Functional Complex (CFC) which contains it.

Ouhalla takes the relevant CFC in (7) to be CP, meaning that the *pro* in Spec-TP is not  $\bar{A}$ -free. This means that the structure in (7) is ruled out. On the other hand, if rich agreement is suppressed, Ouhalla argues, the empty category in subject position is not identified as *pro*, but instead as a plain *wh*-trace, which has no inherent anti-locality condition associated with it. This makes the resulting structure, shown in (9), licit:

$$(9) \quad [_{CP} XP_i [_{TP} e_i T+AGR [ \dots ]]] \quad (e_i = wh\text{-trace})$$

Ouhalla's approach is designed to capture two facts about the Anti-Agreement effect in Berber: that long distance extraction of a subject does not induce Anti-Agreement and that local clausal negation blocks the requirement for Anti-Agreement. With regards to the first fact, Ouhalla's analysis presents an elegant solution: when a subject is long-distance moved the *pro* in the embedded subject position is sufficiently far from its antecedent, and therefore the  $\bar{A}$ -Disjointness Requirement is met. With regards to negation, Ouhalla argues that negation acts as an Operator which intervenes between the locally  $\bar{A}$ -moved subject and the *pro* in subject position. Because this Op acts as a potential binder, there is a minimality effect and no violation is incurred.

From an empirical standpoint, Ouhalla's generalization that Anti-Agreement languages are pro-drop stands up incredibly well. There are no languages in my survey that do not allow null subjects. On a broader front, however, Ouhalla's observations stand up less well. First, as we will see in section 3, there are many languages in which long movement of the subject still induces Anti-Agreement. Second, there are also many languages in which negation does not interfere with Anti-Agreement. From a theoretical stand point, Ouhalla's analysis is hard to translate to modern Minimalist theory, and therefore faces yet more trouble. With the advent of the Copy Theory of Movement Nunes (1995); Corver and Nunes (2007), it is no longer possible to formulate the difference between the empty categories left by  $\bar{A}$ -movement that Ouhalla's theory demands. These issues combined means that Ouhalla's theory is simply not viable any longer.

### 2.1.2 Schneider-Zioga (2007)

More recently, another strand of anti-locality based approaches to Anti-Agreement have emerged. These are based on Grohmann's (2003) Anti-Locality Hypothesis, in (10), which states that a phrase cannot move from one position in a local domain to another within the same domain. Specifically, Grohmann divides the clause into three 'prolific domains', shown in table 1:

Domain	Projections	Function
$\Theta$ -Domain	$vP/VP$	Part of derivation involving thematic relations
$\Phi$ -Domain	IP/TP (+articulation)	Part of derivation involving involving agreement processes
$\Omega$ -Domain	CP (+articulation)	Part of derivation involving discourse information

Table 1: Grohmann’s (2003) Clausal Domains

As can be seen from the table, each domain is responsible for a different type of relation or process and corresponds to a projection or set of projections along the traditional clausal spine. Movement within a prolific domain is ruled out by the Anti-Locality Hypothesis

(10) **Anti-Locality Hypothesis:** Movement within a prolific domain is banned.

$$[\Omega \text{ XP}_i [\Omega \text{ XP}_T [\Phi \dots [\Theta \dots ]]]]$$

$\uparrow$   $\times$   $\_$

Schneider-Zioga (2007) develops an analysis of Anti-Agreement in the Bantu language Kinande based on (10). She claims that preverbal subjects in Kinande are usually dislocated from Spec-TP into the left periphery of the clause as shown in (11):

$$(11) [_{CP} C [_{TopP} DP_i \text{ Top} [_{TP} pro_i \text{ Agr}_i+T \dots ]]]$$

The subject can be dislocated to Spec-TopP because it is related to a *pro* in Spec-TP. However, when the subject is a *wh*-phrase that needs to extract to Spec-CP, it cannot be base generated in Spec-TopP. This is because such movement would be too local by (10), as shown in (12):

$$(12) *[_{CP} wh_i C [_{TopP} t_i \text{ Top} [_{TP} pro_i \text{ Agr}_i+T \dots ]]]$$

For Schneider-Zioga, this problem is fixed by suppressing agreement on T, because, similar to Uuhalla’s (1993) view, non-agreeing T cannot license *pro*. Therefore, the subject cannot be base generated in Spec-TopP when T does not agree, and, in such cases, the *wh*-subject is generated in Spec-TP and move directly from Spec-TP to Spec-CP<sup>1</sup>. This move is not in violation of Anti-Locality.

One problem in implementing Schneider-Zioga’s (2007) analysis beyond Kinande would be arguing that in all Anti-Agreement languages, overt DP subjects are canonically dislocated. Since her analysis rests upon this basic assumption, fitting it to a language that does not meet this condition would be difficult. Moreover, Schneider-Zioga’s analysis rests upon the assumption that rich agreement *cannot* license an overt DP in Spec-TP, an assumption I find murky at best.

### 2.1.3 Cheng 2006

Cheng (2006) develops another analysis of Anti-Agreement in a Bantu language based on Grohmann’s Anti-Locality Hypothesis. Focusing on Bemba, she argues that Anti-Agreement is the result of the language overcoming Anti-Locality violations that occur in the course of subject extraction. She assumes Grohmann’s (2003) Condition of domain Exclusivity, given in (13):

<sup>1</sup>Schneider-Zioga (2007) seems to assume that subjects are generated in TP, and not VP internally. The later would work in her analysis as long as Anti-Agreement allows movement through Spec-TP.

(13) **Condition on Domain Exclusivity (CDE; Grohmann 2003):**

An object O in a phrase marker must have an exclusive occurrence in each Prolific Domain  $\Pi\Delta$ , unless duplicity yields a drastic effect on the output; that is, a different realization of O in that domain  $\Pi\Delta$  at PF.

The CDE allows violations of the Anti-Locality Hypothesis in (10) but only if all copies of a moved element within a single domain are spelled out in phonologically distinct ways. Cheng observes that relative clauses in Bemba show two subject/object asymmetries. First, object relative clauses involve a relative marker that agrees for class with the head of the RC, and subjects are not. Second, subjects require a relative prefix on the verb and a special Anti-Agreement morpheme instead of canonical subject morphology.

Cheng argues that these different morphological pieces are all remnants of the CDE's effect on spell out. In object relatives, the object first moves to an inner Spec-CP and then to a higher, outer Spec-CP, violating Anti-Locality. To get around this violation, the lower copy of the object is spelled out as the relative marker via the CDE.

In subject relatives, something similar happens. The subject starts in Spec-TP, moves to an inner Spec-CP and then the Spec of a higher CP projection. Cheng assumes that Spec-TP is part of the  $\Omega$ -Domain, relaxing Grohmann's (2003) original delineation. Movement of the subject therefore induces two Anti-Locality violations, since there have been two instances of movement within the same prolific domain. To get around this, the lower copies are spelled out as prefixes on the verb, thereby meeting the needs of the CDE.

Cheng's (2006) analysis cannot fare well outside of Bantu. In most Anti-Agreement languages, subject movement *reduces* the amount of morphology on the verb, so it is unclear how Cheng's morphological account of Anti-Agreement could be extended. Theoretically, her analysis is also problematic. It requires us to come up with a mechanism by which a full DP can be reduced to a prefix or a demonstrative pronoun during spell-out.

## 2.2 Feature Based Approaches

The leading idea behind featural approaches to Anti-Agreement is that there is something about the nature of the features involved in subject-verb agreement or the features involved deriving  $\bar{A}$ -movement themselves that forces agreement to change in subject extraction contexts. In this section I briefly cover two of these approaches: Ouhalla (2005) and Richards (2001).

### 2.2.1 Ouhalla 2005

Ouhalla (2005) returns to Anti-Agreement in Berber and attempts to derive the difference between lexical categories computationally from the nature of  $\phi$ -features. He argues that the feature [PERSON] defines the verbal category while the feature [CLASS] (=GENDER) defines the nominal category. The feature [NUMBER] is category neutral. Ouhalla argues that in clauses with Anti-Agreement effects, the verb lacks a [PERSON] feature, instead having a [CLASS] feature. Therefore, the verb forms in Anti-Agreement contexts are not actually verbs, but instead nominals. This accounts for the participial nature of Berber verbs in Anti-Agreement contexts and some other languages.

Ouhalla's account is not very satisfactory. From an empirical standpoint, his conclusion that verbs in Anti-Agreement contexts are always nominal is far too strong. In many languages AAE verbs still display robust verbal properties; in fact, the majority of languages in this survey are

probably of this type. Thus, connecting Anti-Agreement to nominalization seems off base. Second, Ouhalla's assertion that the feature [CLASS] is not included on verbs seems far too strong as well. In many languages, fully verbal forms can agree for [CLASS] features. Therefore, we should not limit that feature to nouns. From a theoretical standpoint, Ouhalla's account also falls flat. It is not immediately clear what forces the [PERSON] feature to be replaced with a [CLASS] feature in Anti-Agreement languages. It seems to me that in Ouhalla's system this must be a stipulation.

### 2.2.2 Richards 2001

Richards (2001) presents quite a different account of Anti-Agreement effects. The core idea of Richards' account is that movement-causing features are inherently 'strong' and that a chain can have no more than one position with strong features. He argues that strong features are an instruction to PF that requires that the link in the chain in its specifier must be pronounced. When movement  $\bar{A}$ -movement targets Spec-CP, C has a strong feature that induces this movement. However, this causes a problem because Richards assumes that T also has a strong feature that forces movement to its Spec. In the case of subject movement from Spec-TP to Spec-CP, therefore, a violation is incurred: the chain has too many strong features.

The intuition behind Richards' account of Anti-Agreement is that these effects are ways of bypassing this violation. In Anti-Agreement languages, he argues, the nonagreeing T that is found in Anti-Agreement clauses has a weak EPP feature. Movement is still forced to the Spec-TP, but once movement has proceeded to Spec-CP, there will only be one strong link in a chain. Thus, Anti-Agreement allows movement of the subject through Spec-TP on the way to Spec-CP.

On the empirical side, Richards' analysis has a hard time generalizing to a language like Ibibio (section 3.4), where Anti-Agreement effects are found even when a *wh*-subject is in situ, because the feature attracting the *wh*-phrase to Spec-CP must be weak (Baker 2008b). From an empirical standpoint, it is unclear what feature 'strength' is, and this makes the notion seem very stipulative. Crafting a theory of Anti-Agreement that does rely on this notion would be more desirable.

## 2.3 C-T Relational Approaches

The core idea behind the approaches discussed in this section focuses on the relation between C and T and the role this relationship plays in subject extraction. The two approaches differ somewhat, and really, the analysis developed by Henderson (2007, 2009, 2013) could be considered a featural approach to Anti-Agreement as well. I have chosen to include it here because of its crucial use of a C-T Agreement relation.

### 2.3.1 Henderson 2007, 2009, 2013

In a series of papers, Henderson (2007, 2009, 2013) develops an analysis of Bantu Anti-Agreement in which subject extraction is facilitated by an agreement relation between C and T. For Henderson, this relation underlies the Anti-Agreement effect in Bantu. In this section, I will focus on the version of this analysis presented in Henderson's (2013) paper.

Henderson's analysis starts with two key observations about Bantu Anti-Agreement effects. First, that Anti-Agreement in these languages involves a morpheme of a different shape than the canonical subject agreement morphology, rather than default agreement or complete lack of an agreement morpheme. Second, Bantu Anti-Agreement is very limited: with non-pronominal subjects, it only occurs with Class 1 subjects. Henderson takes this to indicate that Anti-Agreement

in Bantu must make reference to specific  $\phi$ -features (Henderson 2013:461). This, in turn, suggests that an account based solely on locality or movement is not possible for Bantu.

The core piece of technology underlying Henderson's account is that when a subject moves from Spec-TP to Spec-CP in a language that has  $\phi$ -features on both C and T, C must agree with T. This process overwrites the  $\phi$ -features of T with the  $\phi$ -features of C, and this is what results in Anti-Agreement. But what forces the agreement relation between C and T? For this, Henderson relies on the idea that having  $\phi$ -features makes C and T both 'strong'. Thus, movement from Spec-TP to Spec-CP violates the ban on multiple strong chain positions (Richards 2001). Following Boeckx (2003), Henderson argues that the C-T agreement relation unifies these features into a single strong position, alleviating the violation.

Henderson's account could be useful for languages where Anti-Agreement is limited to certain  $\phi$ -features values, such as Anti-Agreement effects in Ben Tey, a Dogon language of Mali (see section 3.8). However, it is unclear that we have good evidence for a C-level category having  $\phi$ -features in all Anti-Agreement languages, and therefore Henderson's approach falters. Also, like Richard's 2001 approach, Henderson relies on the notion of feature strength, which may be theoretically dubious.

### 2.3.2 Ouali 2008

Attempting to derive Berber Anti-Agreement facts, Ouali (2008) builds an account based on a different type of relation between C and T. Following Chomsky (2004, 2008), Ouali assumes that T gets its  $\phi$ -features from C via an operation Feature Inheritance. The core idea behind Ouali's account is that there are three ways that C can transfer its  $\phi$ -features to T, listed in (14):

(14) **Ouali's (2008) C-to-T Transfer Operations:**

- a. DONATE: Transfer  $\phi$ -features from C to T without keeping a copy on C.
- b. KEEP: No  $\phi$ -features are transferred from C to T.
- c. SHARE: Transfer  $\phi$ -features from C to T and keep a copy on C.

Ouali argues that all three operations are at work in Berber and that they are employed in different configurations of (non-)extraction.

Ouali's analysis is couched in terms of feature interpretability and the Activity condition. First, he assumes that features are either [+interpretable] or [-interpretable], and that any [-interpretable] features must be valued by the end of the derivation. Second, he assumes that to enter into an Agree relation for valuation, a feature must be [-interpretable]. Without any [-interpretable] features, a head is inactive and can therefore not agree.

The different versions of Feature Inheritance in (14) are all possible, but which operation applies in a given derivation is regulated by economy principles. When there is no extraction from the clause, C is able to DONATE its features to T. This results in subject agreement on the verb. In cases of subject extraction, Ouali assumes that the subject bears an uninterpretable WH-feature which is checked against an interpretable WH-feature on C. In these cases, if C DONATES its  $\phi$ -features to T, the *wh*-subject will never be able to get its WH-feature checked, because C will be inactive for purposes of further agreement. Therefore, the derivation will crash.

Ouali argues that in cases like these, the operation KEEP applies: C keeps its  $\phi$ -features and does not transfer them to T. Thus, the subject can extract directly to Spec-CP, valuing C's  $\phi$ -features and its WH-feature. Since T does not have any  $\phi$ -features features, it will not show any morphological

agreement. These are Anti-Agreement cases. In cases of object extraction, the object has a *wh*-feature. This is when *SHARE* applies. C keeps a copy of its  $\phi$ -features and T gets a copy as well. C agrees with the *wh*-object and T agrees with the subject. Thus, T will always show agreement in object extraction contexts.

Ouali's analysis is extremely interesting from a theoretical standpoint, but, like many of the accounts already discussed, it does not have the desired empirical coverage. The problem is that not all languages, including some Berber languages, erase all agreement on T in Anti-Agreement contexts. As it stands, Ouali's account cannot explain this fact, as there is no way to transfer only a subset of  $\phi$ -features to T from C;  $\phi$ -feature transferral is of the entire bundle or nothing. In addition, the theoretical validity of Feature Inheritance has been called into validity on empirical grounds (Diercks 2011).

## 2.4 Other Approaches

In this section, I summarize four other approaches to Anti-Agreement that deserve attention here but do not fall neatly into one of the categories above.

### 2.4.1 Diercks 2010: Criterial Freezing

Diercks (2010) develops an analysis of Anti-Agreement effects in Lubukusu, a Bantu language, based on the Criterial Freezing framework developed by Rizzi (2006, 2007) and Rizzi and Shlonsky (2007). This framework claims that various freezing effects, where a syntactic object cannot move past a position where it takes its scope, can be subsumed under a general theory of 'Criterial Freezing' whereby a phrase is locked in place once it reaches a 'criterial position.' A Criterion exists when a head bears a criterial feature (usually these features are related to some scope-discourse interpretation) which requires a featurally-matching phrase in its specifier. An example of a Criterion is the *Wh*-Criterion: a CP with a *wh*-feature requires a *wh*-phrase in its Spec.

Dierck's jumping off point is the proposal made by Rizzi and Shlonsky (2007) that there is a dedicated structural projection- that they call a Subject Phrase- which serves as the landing site for subjects. Crucially for Diercks, Spec-SubjP is a Criterial position, meaning that once a subject has reached that position, it is frozen in place. Diercks exploits a suggestion made by Rizzi and Shlonsky that the Subject Criterion can be fulfilled by some element other than the subject, allowing the subject to skip Spec-SubjP altogether when it needs to extract. Specifically, Rizzi and Shlonsky propose that a complementizer merged above SubjP can satisfy the Subject Criterion if that complementizer is nominal in nature. Diercks claims that this is what derives the Anti-Agreement effect in Lubukusu. In order for a subject to skip Spec-SubjP and extract, a nominal C head must be merged above SubjP, satisfying the Subject Criterion.

Diercks observes that in Lubukusu subject extraction involves an agreeing complementizer prefix on the verb, and, if the extracted subject is of Class 1, an Anti-Agreement prefix as well. Diercks argues that the complementizer prefix on the verb is the nominal C head merged above SubjP to allow the subject to extract. Evidence for this being the case comes from the fact that the complementizer prefixes are identical to the nominal pre-prefixes used in the nominal class system. In addition, the Anti-Agreement prefix in Lubukusu is identical to the complementizer prefix in Class 1 subject extraction contexts. Diercks argues that this is because the features of the nominal C value the  $\phi$ -features on Subj<sup>o</sup> via Agree.

Dierck’s analysis is successful in deriving the nominal nature of Anti-Agreement in Bantu in a non-arbitrary way. However, it is not clear how extendable his analysis is. In languages where Anti-Agreement does not seem to be nominal, merger of a nominal C to allow subject extraction seems stipulative. A problem for Henderson’s (2013) account also arises for Diercks: in Bantu, Anti-Agreement results in the change of morphology, not the elimination of it. For languages with subtractive Anti-Agreement, where canonical agreement morphology is lacking, a null C-level head that suppresses agreement features. That is, one would have to posit a non-spelled-out, nominal C-level head, which seems counterintuitive to me

#### 2.4.2 Georgi 2014: Order of Operations

Georgi 2014 attempts to derive Anti-Agreement effects through the timing of syntactic operations. For Georgi, this is part of a larger program of deriving patterns of morphological reflexes of *wh*-movement through the timing of operations. Georgi assumes that all structure building and feature valuation is triggered by features on heads. She assumes that there are two broad types of features: structure building features, signified [ $\bullet F \bullet$ ], and probe features, signified [ $F: \_$ ]. Structure building features are satisfied via Merge, while probe features are satisfied via Agree. Furthermore, there are two types of structure building features: Those specified for a specific type of constituent, for example [ $\bullet WH \bullet$ ], which triggers final *wh*-movement, and [ $\bullet EF \bullet$ ], which triggers generic edge movement. These edge features are also involved in intermediate movement in long distance dependencies

Georgi argues that each language has an ordering statement: a statement that dictates which feature applies first when there are multiple features on the same head. In analyzing Tarifit Berber Anti-Agreement, Georgi proposes the language has the ordering statement shown in (15):

- (15) **Ordering statement in Tarifit Berber (Georgi 2014:190):**  
 $[\bullet WH \bullet] > [\phi: \_] > [\bullet EF \bullet]$

The ordering statement in (15) forces *wh*-phrases in Tarifit Berber to move before the  $\phi$ -probe responsible for subject agreement has had a chance to probe. This means that when there is a subject *wh*-phrase, it will move out of the probe’s c-command domain before it has a chance to value that subject agreement probe. For Georgi, this is what derives the Anti-Agreement effect in cases of local subject extraction. The ordering statement also derives the fact that long distance extraction does not trigger Anti-Agreement in Berber (see section 3.5). This is because the subject agreement  $\phi$ -probe will look for a goal *before* intermediate movement is triggered by [ $\bullet EF \bullet$ ].

Georgi’s system is elegant in that it captures the relationship between types of movement in Berber and an asymmetry in the application of the Anti-Agreement Effect. However, it cannot elegantly capture the cross-linguistic trends in Anti-Agreement. First, there is the hypothesis that all Anti-Agreement languages allow null subjects. This is the case in my survey. Under Georgi’s system, it is a complete coincidence. Second, every Anti-Agreement effect I have found results in the neutralization of person features, but some do not result in the neutralization of gender or number features<sup>2</sup>. Georgi’s analysis does not have a non-stipulative way of deriving this fact. Georgi remarks that one way to do this would be to separate different  $\phi$ -features into independent probes. One would then have to stipulate the the [PERSON] probe always searches *after*  $\bar{A}$ -movement occurs, while [NUMBER] and [GENDER] can search before or after movement. However, this simply

<sup>2</sup>For more extensive discussion of these generalizations, see sections 3 and 4.

moves the goal posts on explanation for the generalization; it is simply another coincidence in her analysis. Since these two generalizations are so robust, it would be desirable to derive them, instead of just stipulating them.

Georgi's analysis also faces several theoretical problems. First, the ordering of features is a significant enrichment to our assumptions about UG. Under the ideals of the minimalist program, such enrichment should be challenged. Second, the existence of features like Georgi's 'edge feature', which exist only to derive intermediate movement, have been challenged on conceptual and empirical grounds by authors like (Bošković 2007). Thirdly, Georgi's analysis of Anti-Agreement relies on the assumption that the *wh*-feature and  $\phi$ -features probe from the same head. It is unclear whether this can actually be claimed for all the languages in the survey. An analysis that clears up these theoretical problems would be more desirable.

### 2.4.3 Phillips 1998: V-to-T Failure

In examining Anti-Agreement in Yimas, a language of Papua New Guinea, Phillips (1998) suggests that the real cause of the Anti-Agreement is the fact that the verb does not have to raise to T in sentences with a *wh*-trace in subject position. He derives this fact by appealing to the licensing of subjects via agreement. Specifically, while a *pro* subject must be licensed by agreement with T, a *wh*-trace does not need to be so licensed. For Phillips, it is agreement on T that forces movement of the verb to T, and therefore when there is a subject *wh*-trace, it does not have to move to T. Phillips argues further that when there is an affixal position *higher* than T which must be hosted, then agreement will surface again, even if there is a *wh*-trace in subject position. This is the case in languages where negation interferes with Anti-Agreement.

Phillips' account fails for languages in which the agreement material suppressed by Anti-Agreement is non-affixal, such as the Omotic language Sheko (see section 3.11). In many languages surveyed here, it also seems hard to make the case that the verb moves to a different position in Anti-Agreement contexts than in non-Anti-Agreement contexts. Therefore, it is not clear that Phillips' analysis is very extensible.

### 2.4.4 Baker 2008b: Feature Deletion

Baker (2008b) shows that in the Niger-Congo language Ibibio, *wh*-subjects trigger an Anti-Agreement effect even though the subject stays in situ in the overt syntax. Baker argues that these *wh*-subjects do actually undergo movement, but that this movement is covert. Taking up suggestions by Bobaljik (2002) and Fox and Nissenbaum (1999) that covert movement is just movement with spell-out of a lower copy, Baker proposes that the operation there is a process of Feature Deletion which deletes features on lower copies in a chain.

More specifically, Baker proposes that when a movement chain is transferred to the interfaces, there is an operation called Feature Deletion that removes the phonological and semantic features of all but one of the copies. In an overt *wh*-movement language, the phonological features are deleted on all but the highest copy in a chain. In a *wh*-in-situ language, the lowest copy's phonological features are kept. Additionally, whenever a *wh*-chain is formed, *wh*-feature on copies below the matrix scope position must be deleted. This process is separate from phonological feature deletion. Thus, in a *wh*-in-situ language like Ibibio, the phonological features of the top copy are deleted, but the semantic features are kept. In the lower position, the phonological features are kept, but the semantic features are deleted.

Baker argues that this is what leads to the Anti-Agreement effect in Ibibio. He proposes that in Anti-Agreement languages like Ibibio, the  $\phi$ -features of a copy are deleted when the semantic features of a copy are deleted. Thus, when the lower copy in a *wh*-chain has its semantic WH-feature deleted, its  $\phi$ -features are deleted as well. This means there are no  $\phi$ -features in the subject position for T to agree with, and Anti-Agreement results<sup>3</sup>. For Baker, this process of  $\phi$ -features deletion on the lower copy is Parameterized. This accounts for why some languages show Anti-Agreement effects and why some do not.

Baker's account is intriguing, but like the other accounts already discussed, problematic in a number of ways. First, it is not clear that Baker's analysis would derive an Anti-Agreement language where long distance extraction of a subject does not trigger Anti-Agreement while local extraction does. Second, the feature deletion parameter that Baker proposes cannot capture that in several Anti-Agreement languages, only PERSON is deleted, while GENDER and NUMBER are left intact. This would have to be stipulated by sub-parameters. Thirdly, the analysis does not derive the correlation between null subjects and Anti-Agreement.

### 3 Survey of Languages

In this section, I present the results of the cross-linguistic survey I conducted for this prospectus. Each subsection describes Anti-Agreement effects in a specific language or language family, where multiple languages are involved. In some cases, I have chosen a single language to be representative of a family where Anti-Agreement effects across that family are very similar. The survey included languages discussed in the Anti-Agreement literature and the following new languages that have never been discussed in the theoretical literature on Anti-Agreement:

- (16) **New Languages:**
- a. **Arawak:** Matsigenka, Bare, Yine
  - b. **Cushitic:** Arbore, Gawwada
  - c. **Dogon:** Ben Tey
  - d. **Nilotic:** Maasai
  - e. **Omotiic:** Sheko
  - f. **Salish:** Halkomelem<sup>4</sup>
  - g. **Atlantic:** Seereer
  - h. **Songhay:** Tadakshak
  - i. **Kwa:** Lelemi

The sections below are not presented in any specific, deliberate order.

#### 3.1 Arawak Languages

The Arawak language is the largest family of South America, and is geographically distributed between four countries in Central America- Belize, Honduras, Guatemala, and Nicaragua- and

<sup>3</sup>For this account to go through, Baker must assume that agreement is post-syntactic.

<sup>4</sup>While Halkomelem has been mentioned in the literature, it has never been discussed in detail.



When the subject is extracted in a *wh*-question, relative clause, or focus construction, the subject prefix is obligatorily absent. Consider first the relative clause in (19)<sup>5</sup>:

- (19) i-oga=ri [ -magenpi-t-i=ri=rira i-itane ]  
 3M-DEM=CNTR [ joke.around.with-EPC-REAL.i=3M.OBJ=REL 3M.POSS-relative ]  
 ‘Those who joke around with their relatives...’

In (19), the head of the relative clause *yogari* ‘those’ precedes the relative clause, which is itself marked with the second position clitic =*rira* (double underlined above). The verb shows no agreement for the person and gender of the subject, in this case 3rd person masculine.

The same suppression of subject prefixes occurs in the case of *wh*-questions, as shown by (20):

- (20) ina, tyani -pok-ankits-i  
 mother.VOC who come-SBJ.FOC-REAL.i  
 ‘Mom, who’s come?’ (ykn23)

In (20), the *wh*-word *tyani* ‘who’ is extracted to the left edge of the clause. Like in the subject relative clause, there is no subject agreement on the verb. In addition, the verb bears the ‘subject focus’ suffix *-ankits*, which I will return to below.

Finally, subject focus constructions also involve the loss of subject agreement prefixes:

- (21) a. viro -kavintsa-ankich-a  
 2.PRO arrive.w/gift-SBJ.FOC-REAL.a  
 ‘You’ve come with a gift?’ (ktr37)  
 b. naro -kog-ankits-i no-a-t-ak-e=ra  
 1.PRO want-SBJ.FOC-REAL.i 1SBJ-go-EPC-PFV-IRR.i=SUB  
 ‘I want to go.’ (puaz2)<sup>6</sup>

Examples (21a) and (21b) are especially important because they show that suppression of subject prefixes is not limited to 3rd person subjects. In (21a), the 2nd person pronoun *viro* is focused and the verb bears no subject prefix. Likewise, in (21b), the 1st person pronoun *naro* is focused with no corresponding subject agreement.

Although subject prefixes are blocked in cases of subject extraction, the plural agreement suffix *-ig* still surfaces when a plural subject is extracted. This is shown in (22):

- (22) a. ironpa i-agatsonku-t-a-i=ra iroso=ri  
 suddenly 3SG.M-reach.summit-EPC-REG-REAL.i=SUB 3M.PRO=CNTR  
-ogonke--ig-apa-a iroso-egi  
 arrive-PL-ALL-REAL.a 3M.PRO-PL

‘He hadn’t even reached the summit and they [the cannibals] were already there [lit. had already arrived].’ (mrn30)

<sup>5</sup>In all the examples where subject prefixes are suppressed, I have indicated this with an empty box in their place.

<sup>6</sup>This example is also significant in that it shows subject extraction does not interfere with agreement on an embedded control predicate.

- b. viro-egi=ratyo [ ]-ag-a-[ig]-i=ri no-patsa-tsi-te  
 2.PRO-PL=REALZ take-EPV-PL-REAL.i=3M.OBJ 1POSS-meat-ALIEN-AP  
 ‘...you.PL took my meat.’ (spn17)

Example (22a) shows extraction of a 3rd person plural subject *iriroegi* ‘they’. There is no subject prefix, but the plural agreement suffix *-ig* still shows up on the verb. Likewise, in (22b) we see the extraction of a 2nd plural subject *viroegi*. Again, there is no prefix, but the plural suffix surfaces.

Like some previously documented Anti-Agreement languages, clausal negation interferes with Anti-Agreement in Matsigenka. This can be seen in (23), where a subject relative clause is negated:

- (23) i-oga=ri [ te=rira [ i ]-n-kematsa-t-ant-e ]  
 3M-DEM=CNTR [ NEG.REAL=REL 3M.SBJ-IRR-obey-EPC-ANTIP-IRR.i ]  
 ‘he who does not obey’

Negation in (23a) is indicated by the particle *te* to which the relative clause marker *=rira* attaches. Importantly, even though the subject is extracted, agreement surfaces on the verb<sup>7</sup>. This is reminiscent of the facts discussed by Ouhalla (1993) for Berber, where clausal negation ‘reverses’ Anti-Agreement, allowing subject agreement to show up even when a subject has been  $\bar{A}$ -moved.

Another important aspect of Matsigenka subject extraction is the suffix *-ankits/-ankich*, which has already been seen in three of the examples above, namely (20), (21a) and (21b). Traditionally, this suffix is called the ‘subject focus’ morpheme (Zachary O’Hagan, p.c.). The suffix can occur in all types of subject extraction contexts, but appears to only be obligatory in cases of subject *wh*-questions<sup>8</sup>. We have already seen examples of subject focus constructions with and without it. An example of a subject relative clause with *-ankits* is given in (24):

- (24) ananeki [ [ ]-mecho-t-[ankits]-i=rira ]  
 child [ be.borneEPC-SBJ.FOC-REAL.i=REL ]  
 ‘a newborn child (a child who is newly born)’ (ima10)

The suffix in question can only occur in cases of subject extraction. The fact that *-ankits* is never required by any of the three subject extraction we have seen suggests that there is a difference between subject extraction contexts with *-ankits* and those without *-ankits*. It is still unclear what this difference is exactly (Zachary O’Hagan, p.c.). Here, I will leave open the question as to what the exact function of this morpheme is.

The subject extraction facts for Matsigenka are summarized in Table 2, below:

	Basic	<i>-ankits</i>
<b>Wh-question</b>	WH <sub>S</sub> [ – <sub>S</sub> V ]	WH <sub>S</sub> [ – <sub>S</sub> V- <i>ankits</i> ]
<b>Focus</b>		FOC <sub>S</sub> [ – <sub>S</sub> V- <i>ankits</i> ]
<b>Relative</b>	REL <sub>S</sub> [ – <sub>S</sub> V= <i>rira</i> ]	REL <sub>S</sub> [ – <sub>S</sub> V- <i>ankits=rira</i> ]

Table 2: Matsigenka Subject Extraction

<sup>7</sup>At this time, it is unclear if subject focus constructions and subject *wh*-questions are also subject to this reversal of Anti-Agreement with clausal negation.

<sup>8</sup>The Matsigenka corpus used for this paper only contains one example of a subject *wh*-question without *-ankits*, but I am told it may be anomalous and therefore I have not counted it here (Zachary O’Hagan, p.c.)

Identical facts have been reported for the two other Campan languages, Nanti (Michael 2008; Lev Michael, p.c.) and Caquinte (Zachary O’Hagan, p.c.). Because the Anti-Agreement facts in these languages are so similar to the facts just examined for Matsigenka, I have chosen not to explicitly discuss them here.

### 3.1.2 Bare

Bare (ISO: bae) is a Northern Arawak language spoken in Amazonas state, Brazil. Data in this section come from Aikhenvald’s (1995a) short grammar of Bare and Aikhenvald (1995b). Bare is an Split-S language, meaning that intransitive subjects are split in how they pattern with respect to A (the most agentive argument of a transitive) and O (the most patient-like argument of a transitive). Those intransitive subjects that pattern with A are here labeled  $S_A$  and those that pattern with O are labeled  $S_O$ .

This split has consequences for both word order and the agreement system of the language. In transitive clauses, Bare has AVO word order. For intransitives, order is split:  $S_A$  precedes the verb, and  $S_O$  follows. Additionally, Bare employs a set of prefixes to cross-reference the person and number of A and  $S_A$  on verbal predicates. In the 3rd person, non-feminine vs. feminine gender distinction is also distinguished. There is no marking for O/ $S_O$  on verbal predicates.

Examples of these word order and agreement facts are given in (25), below.

- (25) a. kuhu      u-barikuda  
           3SG.F.PRO 3SG.F-stand.up  
           ‘She stoop up.’ (Aikhenvald 1995b:156)
- b. idi hwibudi      i-tfereká-sa-ka      kuhũ  
           then electric.eel 3SG.NFEM-shock-CAUS-DECL he  
           ‘Then electric eel shocked him.’ (Aikhenvald 1995b:155)
- c. yawi      nũ      bebi  
           angry 1SG.PRO with+2SG  
           ‘I’m angry with you.’ (Aikhenvald 1995b:156)

Examples (25a-b) show that A/ $S_A$  precede the verb and trigger verbal agreement. Example (25c) shows that  $S_O$  arguments follow the verb and do not trigger agreement. In both ways they pattern with O arguments like *kuhũ* in (25b).

Extraction of an A/ $S_A$  argument in Bare triggers suppression of the normal A/ $S_A$  prefixes<sup>9</sup>. Interestingly, Bare has two suppression strategies, morphologically speaking. The first strategy is complete elimination of the expected subject prefix. This occurs in what Aikhenvald (1995a,b) calls the ‘subject focus’ construction, shown in (26):

- (26) a. wa-kiñaha [    nu-yaka-ŋi-minihi<sub>FOC</sub>        -mudukã kuhũ ]  
           1PL-think    [CP 1SG-father-MASC-LATE.MASC kill.PST      he    ]  
           ‘We thought it was my father who killed him’ (Aikhenvald 1995b:157)

<sup>9</sup>While she gives no specific examples, Aikhenvald (1995b) remarks that no suppression effects emerge with  $S_O$  arguments. This is unsurprising, as these arguments pattern with O arguments in the language in that they do not trigger agreement on the verb. Thus, there is no agreement to suppress in the first place.

- b. idi kwati-ñu<sub>FOC</sub> [ ]-kása-ka wehebíte  
 then jaguar-PL come-DECL 3SG.F.OVER.DIR  
 ‘Then the jaguars came over to her. (Aikhenvald 1995a:30)

In (26a), the subject ‘my father’ is placed in contrastive focus. The only overt marker of this fact in the clause is that there is no subject agreement prefix on the verb *mudukā* ‘kill’. In (26b), the subject ‘jaguars’ is the focus of the discourse and the expected 3rd person plural prefix does not appear on the verb.

The second suppression strategy is replacement of the expected subject agreement prefix with the ‘indefinite’ agreement prefix *a-*. This strategy is found in what Aikhenvald (1995a) calls subject clefts, as in (27a); subject *wh*-questions, as in (27b); and subject relative clauses, as in (27c-d):

- (27) a. teki [a]-dá-ka biku sa wisébene  
 this INDEF-give-DECL 2SG.for DEM fever  
 ‘It is this that is giving you fever.’ Cleft (Aikhenvald 1995a:29)
- b. abadi [a]-diña nu-yaka-w iku  
 who INDEF-speak 1SG-parent-FEM with  
 ‘Who spoke to mother?’ *Wh*-question (Aikhenvald 1995a:29)
- c. hena nu-kathesá-waka [ [a]-d’ekada kahawibe ]  
 NEG 1SG-know-NEG [RC INDEF-make pain ]  
 ‘I don’t know what is giving pain.’ RC (Aikhenvald 1995a:29)
- d. me-bíhitē bakúnaka kwáti duwā [ [a]-d’awíka-na  
 3PL-encounter one jaguar body [RC INDEF-die-PFV  
 ‘They encountered a body of one jaguar which was dead.’ RC (Aikhenvald 1995b:46)

Aikhenvald is unclear in both sources on Bare as to what the exact difference is between the focus construction in (26) and what she calls a ‘cleft’ construction in (27a). Whatever the difference is, we are clearly dealing with two different constructions, in that they have different morphological properties.

Both suppression strategies in Bare should be considered Anti-Agreement in that both result in the reduction of featural contrasts in the subject paradigm used with extraction suffixes. In both types of Anti-Agreement, a person/number/gender contrast is reduced to a no contrast system. A question remains though: why are there two different strategies? Why does the subject focus construction involve deletion of the prefix while subject clefts, *wh*-questions and relative clauses demand the indefinite prefix *a-*?

I suspect that we are really only dealing with a difference between subject focus constructions and subject relative clauses. If we take the name of the subject cleft construction seriously, then we have a headless relative clause acting as the clausal part of a cleft, where the fronted subject acts as the pivot. This same analysis can be extended to subject *wh*-constructions. This analysis is shown in (28):

- (28) [NP/Wh<sub>i</sub>]<sub>PIVOT</sub> [RC —i a-V]<sub>CLEFT CLAUSE</sub>

While it does not directly answer the question as to why there are two strategies of Anti-Agreement in Bare, this analysis does reduce the number of constructions in need of explanation. In other



When the subject precedes the verb, no subject agreement is possible, as seen in (30). Hanson (2010) states that placement of an argument before it has a focusing effect on that argument, though she does not give further explanation of this effect.

- (30) a. mhenokli  $\square$ -hiylata-na-tka-lo n-hninro-ni  
 jaguar kill-CMPV-PFV-3SG.F 1SG-wife.of-AFFECT  
 ‘A jaguar has killed my poor wife.’ (Hanson 2010:294)
- b. pamyo çeçi-ne  $\square$ -homkahita-lo wa knoya  
 five man-PL follow-3SG.F REF tortoise  
 ‘Five males follow the tortoise.’ (Hanson 2010:293)
- c. hita  $\square$ -histaka-yi  
 1SG cut-2SG  
 ‘I cut you.’ (Hanson 2010:50)

All three examples in (30) show that the presence of a preverbal subject results in the suppression of the subject prefixes. The sentence in (30b) shows that 3rd person plural marking with *-na* is also suppressed when the fronted subject is plural. Finally, (30c) shows that a fronted speech act participant also induces this effect.

While the lack of explicit discussion makes it difficult to determine whether preverbal subjects reach their position via some type of extraction/movement, the fact that these subjects receive a ‘focused’ interpretation suggests that movement is involved. Supporting evidence for this conclusion comes from the fact that *wh*-subjects must be preverbal. Like their non-*wh* counterparts, *wh*-subjects do not trigger agreement on the verb, as shown by (31):

- (31) knane hapoka  
 who+PL arrive  
 ‘Who all arrived?’

In (31), we see that the plural *wh*-word *knane* ‘who all’ does not induce 3rd person plural agreement on the verb. Thus, I take there to be an Anti-Agreement effect associated with subject movement to the preverbal subject position. This effect neutralizes person and number:

- (32) **Yine Neutralization Pattern**  
 [PERS, NUM] → [∅]

Interestingly, however, this pattern does *not* surface in relative clauses. Relative clauses in Yine are based on nominalizations, with subject relative clauses with one of two suffixes: syntactic subjects are relativized with the nominalizer *-tʃri* and semantic agents can be relativized with the nominalizer *-çeri*. I give examples of the second below in (33)

- (33) a. wa wale yine-li  $\square$ -hwapa-çeri-tka  
 REF 3SG.M people-SG.M 3-bring-AG.NOM+MASC-PFV  
 ‘that man who had brought him’ (Hanson 2010:145)
- b. wa r-hniri wa  $\square$ -himlalaSa-yehi-ta-jeri  
 REF 3-brother.in.law REF 3-untie-VICIN-VCL-AG.NOM+MASC  
 ‘his brother-in-law who had untied the rope near him’ (Hanson 2010:146)

In both examples in (33) the verbs take the 3rd person singular masculine prefix *r-* to agree with their subjects. This is despite the fact that the verbs are referred to as ‘nominalized’ by Hanson (2010). While it is still unclear what the exact pattern of agreement on verbs in subject relative clauses is, it does seem that relative clauses lack the Anti-Agreement effect triggered by preverbal subjects in Yine, even though RCs involve notional ‘extraction.’ Further investigation will be needed to determine what the split is exactly.

### 3.2 Austronesian languages

In this section, I examine two Austronesian languages that have been previously noted to have Anti-Agreement, namely Chamorro and Palauan. Chamorro is well known for its pattern of *wh*-agreement displayed in clauses from which  $\bar{A}$ -movement has occurred, and Anti-Agreement is one characteristic of this pattern. Palauan also displays Anti-Agreement effects in cases of subject extraction. These two patterns are interesting from a comparative standpoint because they display sensitivity to the mood of the clause, but in different ways, as we will see below.

#### 3.2.1 Chamorro

Chamorro (ISO: *cha*) is a Malayo-Polynesian language spoken in Guam and the northern Mariana islands. Chamorro is VSO and pro-drop. Data in this section come primarily from Chung (1994) and Chung (1998). In clauses with no extraction, verbs display agreement with their subject. Subject agreement varies with the transitivity of the predicate. For transitive verbs in the realis mood, agreement registers person (1st/2nd/3rd) and number (SG/DU/PL) of the subject. Intransitive realis verbs agree with their subject only for singular or plural. In the irrealis, both intransitive and transitive verbs agree for person and number of the subject.

In some contexts, extraction of an argument triggers morphological marking on the verb in Chamorro. When a nominative argument (the subject) is extracted from a realis transitive clause, the verb loses its normal subject agreement and the infix *-um* appears on the verb. Compare the declarative in (34a) to the subject *wh*-question in (34b):

- (34) a.  $\boxed{\text{Ha}}$ -fa'gasi si Juan i kareta  
 3SG-washed UNM Juan DEF car  
 ‘Juan washed the car’ (Chung 1998:236)
- b. Hayi<sub>i</sub> f< $\boxed{\text{um}}$ >a'gasi  $\text{--}_i$  i kareta?  
 who<sub>i</sub> <um>wash DEF car  
 ‘Who washed the car?’ (Chung 1998:236)

In (34a), a normal declarative, the transitive verb is in the realis mood and shows agreement with its subject via the prefix *ha-*. When the subject is extracted in (34b) the verb loses its subject agreement and takes the infix *-um-* to mark that a subject has been extracted.

Subject *wh*-extraction from an intransitive predicate, (35a), and from transitive irrealis predicates do not trigger this morphological marking, and the verb retains its normal subject agreement.

- (35)
- (36) Hayi pära  $\boxed{\text{u}}$ -bendi yu' lepblu?  
 who FUT 3SG.IRR-sell me books

‘Who is going to sell me some books?’ (Chung 1998:386)

The same effect that we saw above for subject *wh*-questions is also found in cases of subject relativization and subject focus constructions. A subject focus construction is shown in (37).

- (37) Si Pedro<sub>i</sub> h<um>atsa <sub>-i</sub> i lamasa  
 UNM Pedro <um>lifted def table  
 ‘It was Pedro who lifted the table’ (Lahne 2008:50)

So, the morphological effect seen in transitive realis subject extraction contexts is general to all cases of local  $\bar{A}$ -movement in Chamorro. Additionally, in long distance subject  $\bar{A}$ -movement triggers the effect in the source clause. Consider (38):

- (38) Hayi<sub>i</sub> si Juan ha-sangan-i ho [ b<um>isita <sub>-i</sub> si Rita? ]  
 who UNM Juan 3SG-say-BEN 2SG [ <um>visit UNM Rita ]  
 ‘Who did Juan tell you visited Rita?’ (Chung 1998:357)

In (38), the subject of the transitive realis verb *bisita* ‘visit’ is extracted from an embedded clause and the verb still shows the appropriate characteristics of subject extraction: no agreement with the subject and the infix *-um-*.

Object extraction triggers different morphological effects. When an object is extracted, the verb takes possessive suffixes to agree with the subject of the clause and optionally takes the infix *-in-*. So, object extraction is distinct from subject extraction. An example of a object *wh*-questions is given in (39):

- (39) Hafa<sub>i</sub> f<in>a’gas ‘ese-nn’a si Juan <sub>-i</sub> pära hagu  
 what <in>wash.CON-3SG.POSS UNM Juan for you  
 ‘What is Juan washing for you?’

In (39), the *wh*-word *hafa* ‘what’ is extracted from the object position of the clause. This triggers possessive subject inflection on the verb and the verb is also marked by the infix *-in-*.

So, we see that the pattern of  $\bar{A}$ -sensitive morphology is different for subjects and objects in Chamorro. Furthermore,  $\bar{A}$ -morphology is only triggered by a small subset of subjects (subjects of transitive realis verbs). Nevertheless, we must analyze Chamorro as having an Anti-Agreement effect in the context of transitive realis subject extraction, as the subject agreement usually displayed by transitive realis verbs is fully neutralized in those contexts.

### 3.2.2 Palauan

Palauan (ISO: pau) is a language of the Malayo-Polynesian subbranch of the Austronesian language family spoken on Palau. Palauan is VSO, pro-drop and displays an Anti-Agreement effect in subject *wh*-questions, subject clefts, and subject relative clauses. This effect has been documented since Georgopoulos (1985). Data in this section comes from that work and Watanabe (1996).

In clauses with no extraction, the verb agrees with both its subject and object for person and number. Subjects agreement is prefixal and object agreement is suffixal. Both morphemes can be seen in (40):

- (40) ke-ʔillebed-ii  
 2SG.REAL-hit.PFV-3SG.OBJ  
 ‘You hit him.’ (Georgopoulos 1985:50)

Subject prefixes distinguished between two moods: realis and irrealis. For example, the 2nd person singular subject prefix in (40) also indicates that the clause is in the realis mood.

*Wh*-questions in Palauan may be in-situ or may involve movement of the *wh*-word to the left edge of the clause. When a subject *wh*-phrase is left in situ, there is no change to agreement, as seen in (41a). However, when the subject *wh*-phrase is fronted to the left edge of the clause, subject agreement cannot appear on the verb, (41b)<sup>10</sup>. When an object is extracted, agreement is retained, as shown in (41c)<sup>11</sup>:

- (41) a. ng-kileld-ii                      a sub a te’ang  
 3SG.REAL-heat.PFV-3SG.OBJ soup who  
 ‘Who heated the soup?’ (Watanabe 1996:171)
- b. ng-te’a<sub>i</sub> [ a  -kileld-ii                      a sub -<sub>i</sub> ]  
 NG-who [ heat.REAL.PFV-3SG.OBJ soup                      ]  
 ‘Who heated the soup?’ (Watanabe 1996:171)
- c. ng-ngerai<sub>i</sub> [ a le-silseb-ii                      -<sub>i</sub> a se’el-il                      ]  
 NG-what [ 3SG.IRR-burn-3SG.OBJ                      friend-3SG.POSS                      ]  
 ‘What did his friend burn?’ (Watanabe 1996:171)

Note in (41c) that the 3SG object agreement suffix *-ii* is maintained under extraction of the object. Another asymmetry between subject and non-subject extraction is shown in (41). When a subject is extracted, as in (41b), the verb must be marked realis; when a non-subject is extracted, as with the object in (41), the verb must be marked irrealis.

In cases of long distance subject extraction, the verb in the embedded clause shows the same Anti-Agreement pattern as in local cases of subject *wh*-movement.

- (42) ng-te’a<sub>i</sub> [ le-dilu                      a sensei [ el kmo ng-milsa                      [ el  
 NG-what [ 3SG.IRR-say.PFV teacher [ COMP 3SG.REAL-see.PFV [ COMP  
 -mesk-ak                      a buk -<sub>i</sub> ]]]  
 give.REAL.PFV-1SG.OBJ book                      ]]]  
 ‘Who did the teacher say that he saw give me the book?’ (Georgopoulos 1985:63)

In (42), the *wh*-word is extracted from the subject position of an embedded clause. The verb in that clause, *mesk* ‘read’ takes no subject prefix and is in the realis mood, just as we have seen for cases of local subject extraction, above.

Notice that in the examples of *wh*-fronting above the *wh*-question word bears the prefix *ng*-. Both Georgopoulos (1985) and Watanabe (1996) dub this prefix the ‘cleft’ prefix and analyze cases

<sup>10</sup>In the examples below, the reader will notice that the morpheme *a* is never glossed, as neither Georgopoulos (1985) or Watanabe (1996) explicitly gloss it or explain what it is. From its distribution, I suspect it is a determiner or DP level particle, but I am not sure. I leave it unglossed here for that reason.

<sup>11</sup>In the Palauan examples in this section, there is an recurring unglossed free-standing morpheme *a*. This morpheme is left unglossed because neither Georgopoulos (1985) nor Watanabe (1996) glosses it. I have stuck to the sources glossing conventions where in these examples.

of *wh*-fronting as clefting. Evidence for this analysis comes from the fact that the prefix is also present in clefts that are not cases of *wh*-fronting. Compare the subject *wh*-question in (41b), above, to the subject cleft in (43):

- (43) [ng]-ngalek<sub>i</sub> [ a [ ]-comes er a bilis \_i ]  
 NG-child [ see.REAL.IMPFV PREP dog ]  
 ‘It’s the child who is looking at the dog’ (Georgopoulos 1985:67)

The subject cleft in (43) looks identical to the subject *wh*-questions we have seen except for the fact that the fronted element is not a *wh*-word. Again, the verb in the clause must be in the realis mood, and there is no subject agreement prefix.

Finally, subject relative clauses in Palauan also display this Anti-Agreement effect. The relative clause follows the head noun and is introduced by the complementizer *el*. Consider the subject relative clause in (44):

- (44) ak-medengel-ii a ?ad<sub>i</sub> [ el [ ]-mil?er-ar tia el buk \_i  
 1SG.REAL-know.PFV-3SG.OBJ man [rc COMP but.REAL.PFV-3SG.OBJ DEM LNK book ]  
 ]  
 ‘I know the person who bought that book.’ (Georgopoulos 1985:69)

In the subject relative clause in the above example we see the same markers of subject extraction that we do in subject clefts and subject *wh*-questions. There is no subject prefix and the verb in the relative clause has realis morphology.

So, Palauan has an Anti-Agreement effect that neutralizes subject agreement fully in the context of subject  $\bar{A}$ -movement. Interestingly, like in Chamorro, subject extraction also interacts with the mood of the clause: verbs in subject extraction contexts must be marked as realis<sup>12</sup>. Thus, subject extraction has a direct effect on what the mood of the clause must be. This is slightly different than Chamorro (or at least the way that the Chamorro pattern is analyzed by (Chung 1994, 1998) and (Lahne 2008)), where subject extract can occur out of irrealis contexts, but  $\bar{A}$ -sensitive morphological effects like Anti-Agreement only surface in realis contexts. While I do not have anything to say about this right now, sensitivity/interaction with mood will be tracked in the larger survey for the dissertation because I now know this is a possibility.

### 3.2.3 Elsewhere in Austronesian

For reasons of space and time I have decided to limit my discussion of Anti-Agreement effects in Austronesian to Palauan and Chamorro. However, it is definitely the case that there are other languages that exhibit effects similar to the languages described, and the larger study of the Anti-Agreement in the dissertation will include them. I know of three languages that show what appear to be Anti-Agreement effects in cases of subject focus and relativization: Kambera (ISO: xbr; Klamer 1998), spoken on Sumba in eastern Indonesia; Tukang Besi (ISO: khc/bhq; Donohue 1999),

<sup>12</sup>Georgopoulos (1985) hints that this realis morphology may not have the full semantic force of realis mood in non-extraction contexts, instead being a morphological default mood in subject extraction contexts. She does not go into detail on this point, though.

spoken in southwest Sulawesi; and Konjo (ISO: kjc/kjk; Siewierska 2004 citing Friberg 1996), spoken in south Sulawesi. This suggests that the effects are much more widely spread and therefore Austronesian will be a key place to look for Anti-Agreement effects.

### 3.3 Bantu languages

Bantu languages have received a fair amount of attention in the Anti-Agreement literature. There have been in-depth theoretical treatments given to at least four languages (Lubukusu- Diercks 2009, Diercks 2010; Kinande- Schneider-Zioga 2000, Schneider-Zioga 2007; Ibibio- Baker 2008b; Bemba- Henderson 2007, Henderson 2009, Henderson 2013; Cheng 2006), and other languages have been documented as having AAE (Kikuyu- Richards 1997; Dzamba- Bokamba 1976, Henderson 2013; Luganda- Diercks 2010). Bantu Anti-Agreement effects are significant in that they surface only in a small subset of the morphological agreement space, namely only with class 1 subjects. For reasons of space, I will discuss two bantu languages here: Lubukusu and Abo.

#### 3.3.1 Lubukusu

Lubukusu (ISO: bxx) is Bantu language spoken in Kenya. Lubukusu is SVO, allows null subjects, and shows an Anti-Agreement effect with subject of class 1 when they are extracted for focus, *wh*-questions, or relative clauses. In declarative clauses, the verb takes a prefix which marks the class of the subject, as shown (46), where the subject takes the class 2 subject marker *ba-*. When a subject is extracted,

- (45) ba-ba-ana [ba]-a-tim-a  
 2-2-child 2SBJ-PST-run-FV  
 ‘Children ran.’ (Diercks 2010:86)

When a subject is extracted, an additional prefix surfaces to the left of the regular subject marker. This prefix also agrees with the class of the subject, as shown for a class 2 *wh*-word *naanu* ‘who’ in (46):

- (46) naanu [ba]-ba-a-tim-a?  
 2who 2C-2SBJ-PST-run-FV  
 ‘Who ran?’ (Diercks 2010:86)

Diercks (2010) calls this second prefix the ‘C-prefix’ and it is glossed C in the examples here. When an object is extracted, the C-prefix does not appear. The C-prefix must also appear in subject relative clauses:

- (47) ba-ba-andu [ba]-ba-a-kula ka-ma-tunda likoloba  
 2-2-people 2C-2SBJ-PST-buy 5-5-fruit yesterday  
 ‘The people who bought the fruit yesterday’ (Diercks 2010:84)

Object extraction does not involve the C-prefix. Instead, when an object is relativized, it occurs to the left of a complementizer that agrees with it for class. This in turn appears to the left of the subject:

- (48) ka-ma-tunda \*(ni-ko) ba-ba-andu ba-a-kula likoloba  
 6-6-fruit COMP-6 2-2-person 2SBJ-PST-buy yesterday  
 ‘the fruit that people bought yesterday’ (Diercks 2010:86)

Returning to subject extraction, when a subject of class 1 is extracted, the regular class 1 subject marker *a-* cannot appear. Instead, the C-prefix and the subject marker are both *o-*. Compare (49a) and (49b):

- (49) a. Naliaka a-li mu-nju  
 1Naliaka 1SBJ-be 18-house  
 ‘Naliaka is in the house.’ (Diercks 2010:112)
- b. Naanu o-o-li mu-nju?  
 who 1C-1SBJ.AAE-be 18-house  
 ‘Who is in the house?’ (Diercks 2010:112)

In (49a), we see a normal in situ class 1 subject that triggers the subject marker *a-* on the verb. In (49b), we see an extracted class 1 subject. The verb takes a C-prefix *o-* and the subject marker that comes after is also changed to *o-*. This is also the case for subject relativization and with subject clefts, as seen in (50a) and (50b), respectively<sup>13</sup>:

- (50) a. n-a-bona o-mu-seecha o-w-eba e-ndika  
 1SG-PST-see 1-1-man 1C-1SBJ-stole 9-bicycle  
 ‘I saw the man who stole the bicycle.’ (Diercks 2010:113)
- b. o-mu-ndu o-mu-silu ni-ye o-w-a-kwa  
 1-1-person 1-1-stupid PRED-1 1C-1SBJ-PST-fall  
 ‘It is a stupid person that fell.’ (Diercks 2010:113)

The class 1 subject marker is the only subject marker which shows a morphological variant under subject extraction. We have already seen that class 2 subjects trigger the same agreement in situ or extracted. This is the same for class 7 subject as well:

- (51) a. si-si-indu sy-a-kwa  
 7-7-thing 7SBJ-PST-fall  
 ‘The thing fell.’ (Diercks 2010:117)
- b. si-si-indu si-sy-a-kwa  
 7-7-thing 7C-7SBJ-PST-fall  
 ‘the thing which fell’ (Diercks 2010:117)

For reasons of space, I will not give an example for each class in Lubukus. However, it is true across Bantu that only class 1 subjects trigger these effects.

So, is this change of subject prefix an instance of Anti-Agreement? By the Feature Subset Hypothesis, all the  $\phi$ -features expressed in Anti-Agreement contexts should be a proper subset of the  $\phi$ -features expressed in normal agreement contexts. ? argues that the feature [PERSON]

<sup>13</sup>In (50), the second *o* prefix is turned into [w] between two vowels.

is suppressed in Lubukusu Anti-Agreement contexts, and that this is what leads to the subject marker on the verb being realized as *o-* instead of *a-*. Diercks observes that the *o-* subject marker and C-prefix have the *sae* shape as the pre-prefix found in class 1 nouns.

- (52) o-mu-aana  
 1PP-1-child  
 ‘child’ (Diercks 2010:120)

Diercks argues that in nouns, this prefix only expresses the features [GENDER] and [NUMBER], which are spelled out as one of the class markers (Carstens 2000). On the other hand, Diercks contends, the prefix *a-* is more highly specified, reflecting [PERSON], [GENDER] and [NUMBER].

A prediction of this account is that 1st and 2nd singular subjects should also take the prefix *o-* in cases of being extracted. And this is indeed what we find

- (53) a. Nise o-w-onak-e      kumulyango kuno  
 1sg      1C-1SBJ-damage-PST 3-3-door      3-DEM  
 It is I who damaged the door’ (Diercks 2010:135)
- b. Niwe o-w-onak-e      kumulyango kuno  
 2sg      1C-1SBJ-damage-PST 3-3-door      3-DEM  
 It is you(SG) who damaged the door’ (Diercks 2010:135)

Both examples in (53) are subject focus constructions. Instead of the normal subject prefix in either case, we get the Anti-Agreement prefix *o-*. Thus, there is a leveling of [PERSON] in subject extraction contexts. What’s more, with plural speech act participant subjects, the subject marker and C-prefix show up as *ba-*, the class 2 prefix. Class 2 is the plural equivalent of class 1:

- (54) a. Nifwe ba-b-onak-e      ku-mu-lyango kuno  
 1PL      2C-2SBJ-damage-PST 3-3-door      3-DEM  
 It is us who damaged the door’ (Diercks 2010:133)
- b. Ninywe ba-b-onak-e      ku-mu-lyango kuno  
 2PL      2C-2SBJ-damage-PST 3-3-door      3-DEM  
 It is you(PL) who damaged the door’ (Diercks 2010:133)

Diercks argues that this provides further evidence that [PERSON] is neutralized in cases of subject extraction, but [NUMBER] and [GENDER] are not. This is true across Bantu, as shown by Henderson (2007, 2009, 2013).

Before closing this section, two more facts about Lubukusu Anti-Agreement should be mentioned. First, Anti-Agreement still surfaces when an embedded subject is extracted:

- (55) naanu<sub>i</sub> ni-ye ba-many-ile [ <sub>-i</sub> o-w-a-kula ka-ma-tunda ]  
 1who PRED-1 2PL-know-PST [CP 1C-1SBJ-PST-buy 6-6-fruit ]  
 ‘Who do they know bought fruit?’ (Diercks 2010:188)

Second, and more interestingly, the Anti-Agreement prefix *o-* surfaces in the cases of raising to subject. Consider the pair of sentences in (56):

- (56) a. e-fwana [ oli Tegan a-kwa ]  
 9-seem [CP COMP 1Tegan 1SG-PST-fall ]  
 ‘It seems as if Tegan fell.’ (Diercks 2010:181)
- b. Tegan<sub>i</sub> a-fwana [ \*(oli) <sub>-i</sub> o-w-a-kwa ]  
 1Tegan 1S-seem [CP COMP 1C-1SG-PST-fall ]  
 ‘Tegan seems (as if/like) she fell.’ (Diercks 2010:181)

The example in (56a) shows the verb ‘seem’ taking an expletive prefix with an embedded CP whose verb shows normal inflection. Compare this to example (56b), where the subject has raised to the matrix subject position. In this case, the verb in the complement clause shows extraction morphology: the C-prefix and the Anti-Agreement *o-*. What is important about the example in (56) is that it shows we cannot take all Anti-Agreement effects to follow straightforwardly from the properties of  $\bar{A}$ -movement, as Diercks argues that in such cases, the subject has actually undergone A-movement, not  $\bar{A}$ -extraction. Note, however, that these cases do involve extraction out of a finite, complete CP complement, and this makes them somewhat unusual instances of A-movement. This is something to look out for in the larger survey, especially in greater Bantu.

### 3.3.2 Abo

Abo (ISO: abb) is a Bantu language spoken in southwestern Cameroon. Abo is SVO, pro-drop and, like other Bantu languages discussed in this section, displays Anti-Agreement effects with extracted class 1 subjects. All data here come from Burns (2013), a paper on Anti-Agreement effects in the language. Verbs cross-reference the class of their subjects with a preverbal subject marker (SM). 3rd person singular subjects and class 1 subjects trigger the same SM, *à*:

- (57) a. m-ăn à jè kó  
 1-child 1.SBJ eat.PST 9.chicken  
 ‘The child ate chicken.’ (Burns 2013:132)
- b. (nyé) à jé kó  
 he 3SG.SBJ eat.PST 9.chicken  
 ‘He ate chicken.’ (Burns 2013:132)

When a class 1 subject is extracted, the class SM changes from *à* to *nú*. This can be seen in the subject relative clause in (58a)<sup>14</sup>. Burns (2013) analyses the subject marker *nú* as an Anti-Agreement marker. Evidence for this conclusion comes from the fact that *nú* does not occur in the object relative clause in (58b):

- (58) a. m-ăn<sub>i</sub> (nù là) <sub>-i</sub> nú jé kó  
 1-child (1.REL C) AAE eat.PST 9.chicken  
 ‘The child who ate chicken.’ (Burns 2013:133)
- b. mw-èlé<sub>i</sub> mù là η-kànè à/\*nú jé <sub>-i</sub>  
 3-banana 3.REL C 1-chief 1.SBJ/\*AAE eat.PST  
 ‘The banana that the chief ate.’ (Burns 2013:132)

<sup>14</sup>Abo relative clauses also involve an optional agreeing complementizer. In (58a), C shows agreement with the extracted class 1 subject (*nù là*). In (58b), C shows agreement with the extracted class 3 object (*nmù là*)

It is unclear if Abo generalizes the Anti-Agreement subject marker *nu* to cases of extraction involving 1st person or 2nd person, as we saw for Anti-Agreement in Lubukusu<sup>15</sup>. However, the Anti-Agreement marker *nù* also occurs in subject *wh*-questions with the class 1 interrogative *n-jé*.

- (59) n-jé nú jé kó  
 1-who AAE eat.PST 9.chicken  
 ‘Who ate chicken?’ (Burns 2013:134)

Although *n-jé* is not overtly dislocated in (59), there is evidence that it has indeed moved, thus triggering Anti-Agreement. This evidence comes from multiple *wh*-questions involving subject and object interrogatives. Burns shows that such questions have two variants: the object either stays in situ or fronts to the left edge of the clause, as in (60b). In the first variant, (60a), the Anti-Agreement marker must appear. In the second variant, where the object *wh*-phrase fronts, Anti-Agreement *cannot* appear, (60b):

- (60) a. n-jé nú nó: njâ: mùt  
 1-who AAE kill.PST which 1.person  
 ‘Who killed which person?’ (Burns 2013:134)  
 b. njâ: mùt n-jé à nó:  
 which 1.person<sub>i</sub> 1-who 1.SBJ kill.PST —<sub>i</sub>  
 ‘Who killed which person?’ (Burns 2013:134)

If we assume that the subject stays in situ and does not move in (60b), then we have confirming evidence that movement of the subject is tied to the appearance of the AAE marker *nù*. This is consistent with the facts from relative clauses.

There is a third construction in which Abo displays Anti-Agreement. The subject focus construction involves placing the focus particle *ndi* after the subject. Interestingly, in these cases, Anti-Agreement is optional, not obligatory:

- (61) a. m-ăn ndi á kó  
 1-child FOC 1.SBJ fall  
 ‘THE CHILD fell’ (Burns 2013:136)  
 b. m-ăn ndi nú kó  
 1-child FOC AAE fall  
 ‘THE CHILD fell’ (Burns 2013:136)

As seen in (61), subject focus with *ndi* does not obligatorily require the subject marker *nù*. This is different than what we saw for subject relative clauses and subject *wh*-questions above. One explanation for this may be that *ndi*-focus does not require movement. Under this analysis, movement is not involved in (61a), where focus does not trigger Anti-Agreement, but it is involved in (61b), where focus *does* trigger Anti-Agreement. The *ndi*-focus construction is the only optional case of Anti-Agreement in matrix clauses that I have found in the literature.

Burns also shows that Anti-Agreement can surface in constructions that seem to involve some sort of control. In Abo, the verb ‘want’ takes a finite clausal complement and the downstairs

<sup>15</sup>Burns (2013) does not include such examples in her paper. I am told that this data should be available (Roslyn Burns, p.c.), but have not had access to it at this time.

verb shows full subject agreement that matches the matrix subject, as shown in (62a). When the subject of the matrix clause is focused with an *ndi*-focus construction, either normal agreement or Anti-Agreement show up in the matrix clause. As shown in (62b-c), this has consequence for downstairs agreement:

- (62) a. m-ǎn [á] tóŋ [ là [à] sak ]  
 1-child 3SG want.pres [CP C 3SG dance.pres ]  
 ‘The child wants to dance.’ (Burns 2013:137)
- b. m-ǎn ndi [á] tóŋ [ là [à/\*nú] sak ]  
 1-child FOC 3SG want.pres [CP C 3SG/\*AAE dance.pres ]  
 ‘The child<sub>FOC</sub> wants to dance.’ (Burns 2013:137)
- c. m-ǎn ndi [nú] tóŋ [ là [à/nú] sak ]  
 1-child FOC 3SG want.pres [CP C 3SG/\*AAE dance.pres ]  
 ‘The child<sub>FOC</sub> wants to dance.’ (Burns 2013:137)

When the matrix verb shows regular agreement with a focused subject, as in (62b), the downstairs embedded verb cannot take the Anti-Agreement subject marker *nú*. However, when the matrix verb has the Anti-Agreement subject marker, either regular agreement *or* Anti-Agreement is licit in the complement clause.

Like the Lubukusu raising facts discussed in the previous section, this data is important because it shows that Anti-Agreement can indeed surface in places where normal  $\bar{A}$ -extraction is not implicated. This makes it even more important to look for like effects in the larger survey for the dissertation.

### 3.4 Ibibio (Niger-Congo)

Ibibio (ISO: *ibb*) is a Niger-Congo language spoken in southeastern Nigeria. Ibibio is SVO, pro-drop and exhibits Anti-Agreement in subject *wh*-questions. Ibibio is unique in this survey in that it exhibits these Anti-Agreement effects with *wh*-in-situ subject *wh*-phrases (Baker 2008b). The basic data can be seen in (63):

- (63) a. Okon [á]-ke-dia ekpaŋ  
 Okon 3SG-PST-eat porridge  
 ‘Okon ate porridge.’ (Baker 2008b:616)
- b. Amie [í]-ke-i-dia ekpaŋ?  
 who 1-PST-I-eat porridge  
 ‘Who ate porridge?’ (Baker 2008b:616)

When the subject is a normal 3rd person singular, as in (63a), the verb has the agreement prefix *a-*. When the subject is a *wh*-phrase, normal agreement is impossible, and the verb takes the prefix *í-*, as in (63b). What is interesting about Ibibio is that *wh*-subjects do not overtly move, they remain in situ. This is different than what occurs with object *wh*-phrases, which front to the left edge of the clause and are followed by the focus particle *ke*:

- (64) Anie \*(ke) a-ke-yem?  
 who FOC 3SG-PST-seek

‘Who is it that you looked for?’ (Baker 2008b:617)

Since subject *wh*-phrases in Ibibio are not followed *ke* in Ibibio, Baker argues that they have not moved in the overt syntax. He highlights three other aspects of the Anti-Agreement prefix *í-* in Ibibio. First, the prefix *í-* also occurs when the subject *wh*-phrase is plural:

(65) Owo ifaŋ í-ke-i-di?  
people how.many I-PST-I-come  
‘How many people came?’ (Baker 2008b:618)

For our purposes here, this is crucial data. It shows that a featural contrast, namely, the difference between singular and plural 3rd person subject agreement, is leveled when the subject is a *wh*-phrase. Thus, the features expressed by agreement when the subject is a *wh*-phrase are reduced.

Second, Anti-Agreement appears when the possessor of the subject is a *wh*-phrase:

(66) Ebot anie í-k-i-kpa?  
goat who I-PST-I-die  
‘Whose goat died?’ (Baker 2008b:619)

This is reminiscent of Turkish extraction from subject NPs, which also triggers Anti-Agreement (see section 3.17). Third and finally, Baker shows that Anti-Agreement morphology is found in negative clauses in Ibibio:

(67) Okon ‘í-k-i-yem-me ebot odo.  
Okon I-PST-I-see-NEG goat the  
‘Okon was not looking for the goat.’ (Baker 2008b:628)

Importantly, there is no subject *wh*-word in (67), but the prefix *í-* still surfaces on the verb. It is not clear from Baker’s paper whether this happens for all kinds of subjects. There is no other language in the survey where use of Anti-Agreement is found. While negation in Seereer (see section 3.15) blocks the use of the 3rd subject marker *a*, it does not neutralize 1st and 2nd person person markers like true Anti-Agreement does, so I consider these two cases separate effects.

Baker’s study of Ibibio is important in this survey in that it shows languages without overt movement of the subject must be taken into consideration when looking for Anti-Agreement effects. This expands the empirical scope of inquiry quite a bit for the survey in the dissertation.

### 3.5 Berber

The Berber language family forms a sub-branch of the Afro-Asiatic and consists of 25 languages spoken across north Africa (Pereltsvaig 2012). Berber languages are generally VSO and pro-drop and have formed a core part of Anti-Agreement studies since Ouhalla (1993). The Berber variety discussed in Ouhalla (1993) is Tarifit Berber (ISO: r i f), and therefore most Anti-Agreement studies that mention Berber have focused on this variety as well. Unless otherwise marked, Berber examples here are Tarifit. As far as I can tell, the syntactic conditioning of Anti-Agreement in Berber is rather uniform across the family. Where differences that I know about are present, I note them.

Finite verbs in Berber agree with their subjects for person and number, and if the subject is 3rd person, gender (feminine vs. masculine). However, when the subject is extracted such as for a

*wh*-question, the verb cannot appear in its finite form with subject inflection. Instead, it takes the participle form.

- (68) a.  $\boxed{t}$ -zra tamghart Mohand  
 3SG.F-see woman Mohand  
 ‘The woman saw Mohand?’ (Ouhalla 1993:479)
- b. man tamghart<sub>I</sub> ay  $\boxed{yzrin}$  <sub>-i</sub> Mohand  
 which woman C see.PART Mohand  
 ‘Which woman saw Mohand?’ (Ouhalla 1993:479)
- c. \* man tamghart<sub>i</sub> ay  $\boxed{t}$ -zra <sub>-i</sub> Mohand  
 which woman C 3SG.F-see Mohand  
 ‘Which woman saw Mohand?’ (Ouhalla 1993:479)

In a sentence without subject extraction, (68a), the verb shows agreement for person/number/gender with its subject. When the same subject is extracted, as in (68b), subject agreement is impossible; the verb appears in an invariant participle form. That agreement is impossible is shown in (68c).

This basic pattern is also found in subject relative clauses and subject focus constructions, given in (69a) and (69b), respectively:

- (69) a. tamghart [ nni  $\boxed{yzrin}$  <sub>-i</sub> Mohand ]  
 woman [RC C see.PART Mohand ]  
 ‘the woman who saw Mohand’ (Ouhalla 1993:479)
- b. tamghart-a ay  $\boxed{yzrin}$  <sub>-i</sub> Mohand  
 woman-DEM C see.PART Mohand  
 ‘It’s this woman that saw Mohand.’ (Ouhalla 1993:479)

The examples (69) differ morphosyntactically from the subject *wh*-question in (68b), but both show the Anti-Agreement effect observed in the *wh*-question context. Thus, we can say that Anti-Agreement is generally characteristic of subject local  $\bar{A}$ -movement in Berber.

However, when a subject is extracted from an embedded clause, that clause does *not* exhibit Anti-Agreement. This can be seen in 70 for all three types of  $\bar{A}$ -dependencies that trigger Anti-Agreement in local contexts:

- (70) a. man tamghart ay nna-n [ qa  $\boxed{t}$ -zra <sub>-i</sub> Mohand? ]  
 which woman C said-3PL [ C 3SG.F-saw Mohand ]  
 ‘Which woman did they say saw Mohand?’ (Ouhalla 1993:480)
- b. tamghart [ nni nna-n [ qa  $\boxed{t}$ -zra <sub>-i</sub> Mohand? ] ]  
 woman [RC C.REL said-3PL [ C 3SG.F-saw Mohand ] ]  
 ‘the woman which they said say saw Mohand’ (Ouhalla 1993:480)
- c. tamghart-a ay nna-n [ qa  $\boxed{t}$ -zra <sub>-i</sub> Mohand? ]  
 woman-DEM C said-3PL [ C 3SG.F-saw Mohand ]  
 ‘It’s this woman that they said saw Mohand?’ (Ouhalla 1993:481)

In all three examples in (70), a subject is extracted from an embedded clause and the verb in that clause agrees fully with the moved subject. This is true for *wh*-questions, (70a); relative clauses (70b); and subject focus constructions, ww3(70c).

Ouali and Pires (2005) examine a similar effect with extraction out of complex tense constructions in Tamazight Berber. Complex tenses are formed with an auxiliary verb ‘be’ followed by a lexical verb. Both verbs are inflected for tense, aspect, and with an in situ subject, for full subject agreement. The past perfective complex tense is shown in (72), from Tamazight:

- (71) Ø lan Ø dan  
 PST be.PFV.3PL PST LEAVE.PFV.3PL  
 ‘They had left.’ (Ouali and Pires 2005:256)

When the subject of a clause like (72) is extracted, Ouali and Pires (2005) show that only the auxiliary shows Anti-Agreement. The lower verb retains its full inflection, again from Tamazight:

- (72) Ali<sub>i</sub> ag ilan yedda —<sub>i</sub>  
 Ali C be.PART LEAVE.PFV.3SG.M  
 ‘It was Ali who had left.’ (Ouali and Pires 2005:259)

Ouali and Pires (2005) argue that complex tense constructions are biclausal and that agreement surfaces on the second verb for the same reason that it does in instances of long distance  $\bar{A}$ -movement<sup>16</sup>.

Another context in which expected Anti-Agreement does not surface is in contexts of clausal negation. Consider (73), where a subject is extracted from a negated clause:

- (73) tamghart [ nni ur t-ssn —<sub>i</sub> Mohand ]  
 woman [<sub>RC</sub> C.REL NEG 3SG.F-know Mohand ]  
 ‘the woman who doesn’t know Mohand’ (Ouhalla 1993:499)

In (73), the verb shows full agreement with the extracted subject<sup>17</sup>. This reversal of Anti-Agreement by negation is also found in subject *wh*-questions and subject focus constructions<sup>18</sup>.

In his original study on Tarifit Berber, Ouhalla (1993) shows that Anti-Agreement neutralizes all agreement features of the verb (person/gender/number). The subject focus clause in (74) shows that when a local person pronoun is focused, the verb still shows no features:

- (74) shek ay iuggur-n  
 you.SG.M C leave-PART  
 ‘You are the one who left.’ (Ouhalla 2005:675)

Thus, Tarifit neutralizes person, gender, and number. However, Ouhalla (2005) shows that this is not true for all Berber languages. In Tamazight and Tashlhit, Anti-Agreement particles agree for plurality with an extracted plural subject:

<sup>16</sup>See section 2.2 for details of Oulli’s analysis of Berber AAE.

<sup>17</sup>Ouhalla (1993) notes that the verb in 73 can also take *masculine* agreement, instead of the expected feminine. He does not analyze this effect and does not expand upon this observation.

<sup>18</sup>See ? (? :fn34) for examples.

- (75) a. irgazn [ nna ffegh-n-in ]  
 men [RC C.REL left-PART-PL ]  
 ‘the men who left.’ (Tashlhit; Ouhalla (2005:675))
- b. irgazn [ (illi) ffegh-n-in ]  
 men [RC C.REL left-PART-PL ]  
 ‘the men who left.’ (Tamazight; Ouhalla (2005:676))

Ouhalla (2005:fn5) also mentions that in at least two Berber languages, Ouargli and Tahaggart, the participle inflects for the number *and* gender of the extracted subject. Importantly, however, the person of the extracted subject is never registered in any Berber dialect. I refer to the Tarifit Berber type of Anti-Agreement as ‘Berber 1’, the Tashlhit/Tamazight pattern as ‘Berber 2’, and the Ouargli/Tahaggart pattern as ‘Berber 3’. The facts are summarized in Table ??:

Type	Features Lost	Languages
Berber 1	[PERSON], [GENDER], [NUMBER]	Tarifit, Tamahaqt, Taqbaylit
Berber 2	[PERSON], [GENDER]	Tashlhit, Tamazight
Berber 3	[PERSON]	Ouargli, Tahaggart

Table 4: Berber AAE Patterns

Even with this variation, all these varieties show Anti-Agreement, in that all neutralize at least one feature from their canonical subject agreement paradigm.

### 3.6 Breton and Welsh (Celtic)

The Celtic languages Breton and Welsh have both been analyzed as displaying Anti-Agreement effects in the Anti-Agreement literature (Ouhalla 1993). The facts in the two languages are more or less identical and therefore I will discuss them here as a whole. Welsh is VSO. In My main sources for these data come from Hendrick (1988) for Welsh and Breton and Borsley and Stephens (1989) for Breton.

In Welsh, plain declarative clauses are VSO. When the subject is left unexpressed, the verb shows agreement marking the person and number of the subject, as in (76a-b). When the subject is an overt DP, there is no agreement on the verb and it appears in a 3SG default form, as in (76c-d)

- (76) a. canai *pro* bob dydd  
 sing.COND.3SG every day  
 ‘He would sing every day.’ (Hendrick 1988:38)
- b. canent *pro* bob dydd  
 sing.COND.3PL every day  
 ‘They would sing every day.’ (Hendrick 1988:38)
- c. canai ’r bardd  
 sing.COND.3SG the bard  
 ‘The bard would sing.’ (Hendrick 1988:37)

- d. canai 'r beirdd  
 sing.COND.3SG the bard.PL  
 'The bards would sing.' (Hendrick 1988:37)

The verbs in (76a-b) show agreement with a null subject (above represented as *pro*). However, when the subject is non-null, as in (76c-d), the verb does not show agreement and surfaces in the 3SG form.

For Breton, word order is more complicated. Like other Celtic languages, Breton is VSO. This word order only surfaces in embedded clauses, as shown in example (77a). Schafer (1995) shows that in matrix clauses, Breton shows V2 effects, in that the finite verb must always appear in second position after some other constituent. The example in (77b) shows the object preceding the verb in a matrix clause:

- (77) a. Kredin ran [ en deus aret Yann e bark ]  
 believe do-LSG [<sub>CP</sub> PRT have-3SG plowed Yann his field ]  
 'I believe that Yann has plowed his field.' (Schafer 1995:135)
- b. E bark en deus aret Yann.  
 his field PRT have-3SG plowed Yann  
 'Yann has plowed his field.' (Schafer 1995:141)

The subject may also precede the verb. Like Welsh, however, agreement between an overt subject DP and the verb is always realized as the default. This constraint holds whether the subject precedes or follows the verb. Compare (78), where the subject is null and an adverb is in initial position, and the sentences in (78b-c), where the subject is overt:

- (78) a. bremañ e labouront *pro*  
 now PRT work.PRES.3PL  
 'They are working now.' (Hendrick 1988:28)
- b. bremañ e labour int  
 now PRT work.PRES.3SG they  
 'They are working now.' (Hendrick 1988:29)
- c. int a labour  
 they PRT work.PRES.3SG  
 'They are working' (Hendrick 1988:29)

As can be seen in examples (78b-c), when the subject is overt, the verb is inflected for 3SG, like in Welsh. This is true regardless of whether or not the subject is pre- or post-verbal

A similar constraint on agreement holds in both Welsh and Breton when a subject is extracted for relativization or a *wh*-question. Example (79) shows that when the head of a subject relative clause is plural, the verb must still be marked for 3SG:

- (79) a. y dynion<sub>i</sub> [ a welodd —<sub>i</sub> fi ]  
 the men [<sub>RC</sub> PRT see.PST.3SG me  
 'the men who saw me.' (Hendrick 1988:218)

- b. \*y dynion<sub>i</sub> [ a gwelon <sub>-i</sub> fi ]  
 the men [RC PRT see.PST.3PL me]  
 ‘the men who saw me.’ (Hendrick 1988:219)

The same holds in Breton, as can be seen in from the subject *wh*-question in (80a) and the subject relative clause in (80b):

- (80) a. Petore paotred<sub>i</sub> a lenne/\*lennent <sub>-i</sub> al levrioù?  
 which boys PRT read.PST/\*read:PST.3PL the books  
 Which boys read the books? (Ouhalla 1993:482)
- b. Ar vugale [ a lenne/\*lennent al levrioù ]  
 the children [RC PRT read.PST/\*read:PST.3PL the books ]  
 ‘The children who read the books.’ (Ouhalla 1993:482)

Examples (79) and (80) show that verb does not agree with its locally extracted subject. However, when a subject is extracted from an embedded clause, this effect is reversed:

- (81) a. y dynion<sub>i</sub> [ y dywedodd Siôn [RC y darllennent <sub>-i</sub> y llyfr ]]  
 the men [RC PRT say.PST.3SG Siôn [ PRT read.PST.3PL the book ]]  
 ‘the men that Siôn said read the book.’ (Hendrick 1988:223)
- b. Setu ar mere’hed<sub>i</sub> [ hoc’heus lavaret [ emaint o labourat <sub>-i</sub> e  
 here the women [RC have-2PL said [ be-3PL PRT work in  
 Kemper]]  
 Kemper]]  
 ‘Here are the women you said are working in Kemper.’ (Ouhalla 1993:483)

The example in (81a) is Welsh and the example in (81b) is Breton. In both examples, the plural subject controls agreement on the verb in the clause it was moved from. This is similar to what we have seen for Berber in section 3.5.

Also like Berber, clausal negation interrupts agreement suppression in Welsh and Breton<sup>19</sup>. When the a subject is extracted from a negated clause, the verb in the clause still agrees with the extracted subject:

- (82) a. y dynion<sub>i</sub> [ na ddaethant <sub>-i</sub> ]  
 the men [RC NEG come.PST-3PL ]  
 ‘the men that didn’t come’ (Hendrick 1988:234)
- b. ar vugale<sub>i</sub> [ ne lennent/\*lenne ket <sub>-i</sub> al levrioù ]  
 the children [RC NEG read.PST.3PL/read.PST.3SG NEG the book ]  
 ‘the boys were not readingthe book.’ (Ouhalla 1993:500)

The examples show us that in both languages negation blocks the suppression of subject agreement on the verb. In both examples in (82), a plural subject is extracted from a negated clause, and the verb in that clause still have to agree with the plural subject.

<sup>19</sup>In Breton, clausal negation also blocks the suppression of subject agreement with an overt subject (Hendrick 1988; Ouhalla 1993).

Whether or not this pattern should be considered ‘Anti-Agreement’ is unclear to me at this time. On the one hand, the pattern involves a reduction of the features that are able to be expressed by verbal agreement in contexts with extracted subjects. On the other hand, the fact that the *same* pattern is present in sentences that do not involve subject extraction in either language weakens the tie between extraction/movement and this effect. This later observation opens up another possibility: that ‘agreement’ in Welsh and Celtic is in fact pronominal, and what we are dealing with is a complementarity between a morphologically bound pronoun and overt DP subject. The reappearance of agreement in case of long distance movement would then in fact be resumption<sup>20</sup>. Whatever the eventual analysis turns out to be, I have included it here because these languages are widely cited as having Anti-Agreement, and therefore it is important to discuss these effects.

### 3.7 Cushitic languages

The Cushitic language family forms a branch of Afro-Asiatic. It consists of 45 languages spoken throughout the Horn of Africa (Pereltsvaig 2012). At least two Cushitic languages, Somali (ISO: som) and Afar (ISO: aar), have been mentioned as having Anti-Agreement effects in the existent literature. Apparent Anti-Agreement effects are very common in Eastern Cushitic, the subbranch of the family that Cushitic and Afar belong to. These languages are important because they are some of the only verb final languages found to have Anti-Agreement in the survey (the others being Turkish and Dogon languages, see section 3.17 and section 3.8, respectively). In this section I have chosen to describe the Anti-Agreement patterns of two languages that have never been mentioned in the Anti-Agreement literature, Arbore (ISO: arv) and Gawwada (ISO: gwd).

#### 3.7.1 Arbore

Arbore is an Eastern Cushitic language spoken in southwestern Ethiopia. Arbore has never been discussed in the Anti-Agreement literature. My data come from Hayward’s (1984) grammar of Arbore.

Hayward (1984) identifies three types of clauses in Arbore: neutral focus clauses, non-subject focus sentences, and subject focus sentences. Neutral sentences are SOV, but contain what Hayward calls a PREVERBAL SELECTOR (PVS). This is a particle that comes after the subject which identifies the polarity, mood and primary aspect of the sentence<sup>21</sup>. It also contains subject agreement for person and number. The PVS is boxed in (83)

- (83) a. mo ʔi-y      ɣor ɣúure  
 man INDIC.DEF.AFF-3SG tree cut.3SG.M.PFV  
 ‘The man cut the tree.’ (Hayward 1984:110)
- b. ʔam-ma      ʔonó ɖái  
 2SG-INDIC.NEG 1PL.PRO hit.2SG.PFV.NEG  
 ‘You did not hit him.’ (Hayward 1984:110)

<sup>20</sup>Under this analysis, the reappearance of agreement under negation could be problematic, but this will be left for later.

<sup>21</sup>Generally, subjects come before the PVS and objects come between the PVS and the verb. This basic ordering can be changed. Hayward notes that topicalized objects can be dislocated to before the PVS and that subject can also follow the verb. However, subjects never come between the PVS and the verb.

In addition to the person and number marking that occurs in the PVS, in neutral focus sentences the verb also shows agreement with the person, gender, and number of the subject. In (83a), the verb ‘cut’ shows 3rd person singular masculine agreement, while the verb ‘hit’ in (83b) has 2nd person singular agreement.

The clauses that Hayward identifies as ‘subject focus clauses’ are used for subject *wh*-questions and for focusing of a full subject NP. In comparison to neutral focus clauses, subject focus constructions differ in three important ways. First, they lack a preverbal selector altogether. Second, the verb takes 3rd person singular masculine agreement. Third, the subject takes the same form it has a nominal predicate, not the expected nominative case form. Compare the sentence in (84a), where the subject is not focused, to the sentence in (84b), where the subject is focused.

- (84) a. farawé        ?íy        zahate  
          horse.F.NOM PVS.3SG die.3SG.F.PFV  
          ‘A horse died.’ (Hayward 1984:113)
- b. farawa        zefie  
          horse.F.PRED die.3SG.M.PFV  
          ‘A horse<sub>F<sub>FOC</sub></sub> died.’ (Hayward 1984:113)

The noun *faraw* ‘horse’ is feminine (84a), a neutral focus clause, the verbs inflection reflects this fact. In (84b), the subject focus clause, on the other hand, the verb exhibits masculine agreement, not reflecting the gender feature of the subject. This is an apparent Anti-Agreement effect. Additionally, the focus clause lacks a preverbal selector.

What’s more, the noun appears in what Hayward calls the predicate form. This form of the noun is morphologically distinct from the nominative case, which is used for non-focused subjects, and the absolutive case, which is used in other environments. Importantly, the predicative form of the noun is the one that occurs when it is a nominal predicate:

- (85) wáhalo    farawa  
          this.thing horse.F.PRED  
          ‘This is a horse’ (Hayward 1984:114)

Clearly, the form of the noun when it is a nominal predicate in (85) is the same as the form of the noun in (84b) when the noun is focused. ? does not take this as a coincidence. He takes predicative nouns to be underlying a VP with containing a copula which is realized on the noun as predicative morphology. With regards to subject focus constructions, he proposes that they are a type of cleft in which the copular VP is fronted past a relative clause that is headed by a null 3SG masculine noun:

- (86) **Hayward’s (1984) analysis of focus constructions:**  
       [ N-COP ]<sub>PRED</sub> [ Ø<sub>3SG.M</sub> V ]<sub>RC</sub>

Further evidence for the analysis in (86) comes from the fact that there is a second cleft construction that can be used for subject *wh*-questions and subject focus. In this second construction, the focused element is sentence final, in the normal place of a nominal predicate. Preceding it is a relative clause that contains the lexical verb headed by a demonstrative with which the verb agrees. This demonstrative is always masculine singular.

- (87) a. [ wáña zeñe ] méhete  
 [RC this.thing die.3SG.M.PFV ] what.PRED  
 ‘What died?’ (lit. ‘the thing that died was what?’) (Hayward 1984:116)
- b. [ móña yééčče ] máh  
 [RC this.one come.3SG.M.PFV ] who.PRED  
 ‘Who came?’ (lit. ‘the one who came was who?’) (Hayward 1984:116)

Hayward treats the clefts in (87) as derivationally underlying subject focus constructions. If this analysis is on the right track, then the Anti-Agreement effect observed in subject focus clauses (including *wh*-questions) actually emerge from the fact that the verb in the relative clause always agrees with a 3SG masculine noun, and not because there is some restriction on agreement with extracted subjects per se.

In fact, if Hayward’s analysis is correct there is *no* Anti-Agreement effect in Arbore, because verbs in subject relative clauses undergo *full agreement* with the head of the relative clause. Evidence that this is really the case comes from the fact that verbs in relative clauses *do* fully agree with their subjects. Consider, where the head of the relative clause is the feminine noun *sáalta* ‘woman’<sup>22</sup>:

- (88) *sáalta* [ heeli sáñaj-t-e ] ?íy čeečče  
 woman [RC yesterday work-3SG.F-PFV ] PVS come.PFV.3SG.F  
 ‘The woman who worked yesterday has come’ (Hayward 1984:317)

In (88), the head of the subject relative clause is a feminine noun and the verb bears feminine agreement. Thus, we see that subject-verb agreement *does* occur in subject relative clauses.

Although it turns out Arbore does not have an Anti-Agreement effect in that there is no reduction of agreement features triggered specifically by extraction, it holds an important place in this study. This is because it shows that apparent Anti-Agreement effects can emerge from a structure that involves full agreement. This will make it especially important to closely examine languages in which Anti-Agreement seems to be related to clefts.

### 3.7.2 Gawwada

Gawwada (ISO: gwd) is an eastern Cushitic language spoken in southwestern Ethiopia. The verb in Gawwada is inflected for person, gender and number of the subject in the positive paradigms. Subject agreement involves both a proclitic and suffixes.

Like many other eastern Cushitic languages, Gawwada shows Anti-Agreement in cases of subject focus. According to Tosco (2010), subject focus results in two morphological changes to the basic subject-verb agreement pattern: there is no subject proclitic and the verb appears in a default 3rd person singular masculine form, regardless of the gender or number of the subject. This can be seen in (89):

- (89) a. k’a-e to?-ott-e [karm-o]<sub>FOC</sub> ?aak-e mul=n-u mal-i=pa  
 day-F one-SING-F lion-M animal-PL all=MOV-IN cheat-PFV.3M=LINK  
 ‘One day the lion cheated all the animals, and...’ (Tosco 2010, ex. 22)

<sup>22</sup>Relative clauses follow their head noun in Arbore.

- b. kuyaŋ-k-o toʔ-okk-o [xašarr-itt-e=pa=n-a karr-att-akk-o]<sub>FOC</sub>  
 day-SING-M one-SING-M francolin-SING-F=LINK=MOVE-OUT squirrel-SING-SING-M  
 ʔille-tta-í ʔand-e ʔuk-a  
 REC=INSTR=SPEC water-PL drink-IPFV.3M  
 ‘One day the Francolin and the Squirrel were drinking water together. (Tosco 2010, ex. 21)

In (89a), the focused subject *karmo* ‘lion’ is masculine singular. The verb also has a 3SG.M form, but there is no 3rd person proclitic *i=* as would be expected in a fully agreeing form. In (89b), the subject is conjoined and therefore plural. However, the verb again shows 3rd person singular masculine agreement, and there is no 3rd person subject proclitic.

While data is incomplete, it appears that subject focus of non-3rd person subject also triggers Anti-Agreement in Gawwada. Tosco (2007) provides the following pairs of examples with 2nd person singular subjects. Compare the examples in (90a), with non-focused subjects, to those in (91a), with focused subjects:

- |  |  |
|--|--|
| <p>(90) a. (áto) aŋ=ʔúg-tí<br/>         2SG.PRO 2=drink-PFV.2SG<br/>         ‘You drank.’</p> <p>b. (áto) ay=yíʔ-tí<br/>         2SG.PRO 2=eat-pfv.2SG<br/>         ‘You ate.’</p> | <p>(91) a. áto<sub>FOC</sub> ʔúg-í<br/>         2SG.PRO drink-PFV.3SG.M<br/>         ‘You<sub>FOC</sub> drank.’</p> <p>b. áto<sub>FOC</sub> yíʔ-í<br/>         2SG.PRO eat-PFV.3SG.M<br/>         ‘You<sub>FOC</sub> ate.’</p> |
|--|--|

In (90a), the subject is not focused. The verbs show full agreement with their subject, taking both the 2nd person proclitic *aC=* and the 2nd person plural perfective suffix *-ti*. In addition, full subject pronoun is optional. On the other hand, in (91a), the subject is focused. The 2nd person pronoun is obligatory, the verb shows no subject proclitic, and is in the 3rd person masculine singular perfective form.

Unfortunately, there is not much available data on these types of constructions in Gawwada<sup>23</sup>. What we have seen is that subject focus in Gawwada disrupts the normal subject agreement paradigm, forcing the verb into a default 3rd person singular masculine form. At this time, it is impossible to know whether or not the effects discussed above extend to subject relative clauses or subject *wh*-questions. It is probably that Anti-Agreement also occurs in those constructions, and we have seen above that in other eastern Cushitic languages it does.

### 3.8 Ben Tey (Dogon)

The Dogon language family is a small language family spoken by the Dogon peoples of Mali. Iemmolo and Moran (2014) shows that several Dogon languages suppress subject agreement in the context of subject focus and *wh*-questions. The languages discussed by Iemmolo and Moran are Jamsay (ISO: djm), Bunoge (ISO: dgb), Najamba<sup>24</sup>, and Ben Tey (ISO: dbt). I have found similar facts to hold for the language Tommo So (ISO: dtso), drawing on data McPherson’s (2013) grammar of that language. None of these languages have been discussed in the wider Anti-Agreement literature.

<sup>23</sup>I will try to make contact with Maura Tosco, whose papers I have relied on, to see if more data is available

<sup>24</sup>I have not been able to determine which ISO code is appropriate for Najamba.

Because I do not have a lot of data at my disposal for each language in Iemmolo and Moran's work, and only a handful of examples for Tommo So, I will focus on only one language in this section, Ben Tey. Ben Tey is SOV, pro-drop, and has agglutinative verbal morphology.

In Ben Tey, subject agreement on the verb is for person and number and is shown via suffixes. Focused subjects take a suffix *-m̄* and occur at the left edge of the clause. When a 1st person or 2nd person subject is focused, the verb appears in the 3SG which is  $\emptyset$ -marked. This is shown in (92), which are all from Heath (2013):

- |         |  |    |   |
|---------|--|----|---|
| (92) a. | $\boxed{\acute{i}=m̄}$ $\text{lò-}\boxed{\emptyset}$<br>1SG=FOC go.PFV-3SG<br>It's I who went.'                | c. | $\boxed{\acute{u}=m̄}$ $\text{ló-m̄-dó-}\boxed{\emptyset}$<br>2SG=FOC go-IMPV-NEG-3SG<br>'It's you.SG who will not go.' |
| b.      | $\boxed{\hat{i}=m̄}$ $\text{lò-rì-}\boxed{\emptyset}$<br>1PL=FOC go-PFV.NEG-3SG<br>'It was we who did not go.' | d. | $\boxed{\hat{u}=m̄}$ $\text{lò-}\boxed{\emptyset}$<br>2PL=FOC go.PFV-3SG<br>It's you.PL who went.'                      |

Importantly, examples (92b-c) show that Anti-Agreement is not sensitive to negation in Ben Tey. In contrast to focused speech act participant subjects, focused 3rd person plural subjects still trigger plural agreement on the verb, as shown in (93):

- (93)  $\boxed{\text{b}\hat{u}:m̄}$      $\text{ló-m̄-n-}\boxed{\acute{e}}$   
 3PL=FOC go-IMPV-NEG-3PL  
 'It's they [focus] who will not go.' (Heath 2013:209)

So, in Ben Tey, with 1st and 2nd person subjects, number and person are neutralized, but number is not neutralized when the focused subject is 3rd person. I will not attempt to explain this asymmetry here, but I would like to note that it is unique amongst the Anti-Agreement systems I have surveyed<sup>25</sup>.

Finally, in Ben Tey, *wh*-subjects are also focused. They too require the 3SG in subject questions:

- (94) a.  $\boxed{\check{a}m=m̄}$      $\text{tê: sírí-m̄m-}\boxed{\emptyset}$   
 who=FOC tea cook-IMPV-3SG  
 'Who will make the tea?' (Heath 2013:213)
- b.  $\boxed{\check{a}m=m̄}$      $\text{lò-}\boxed{\emptyset}$   
 who=FOC go.PFV-3SG  
 'Who went?' (Heath 2013:213)

The examples I have found, however, do not actually show us if the same pattern of Anti-Agreement holds for subject *wh*-phrases, as there is no way to see if anything has been neutralized. I suspect the same pattern holds that holds for non-*wh* focused subjects, but this will have to be left for later.

<sup>25</sup>We might attempt to explain this asymmetry by appealing to the underspecification of 3rd persons (Nevins 2007). That is, we could say that 3rd persons are underspecified for [PERSON] in Ben Tey and that the feature [NUMBER] is only neutralized when the feature person is. Thus, for local persons, where [PERSON] is neutralized, number will also be neutralized in Anti-Agreement forms. With third person subjects this will never happen because there is.

Relative clauses do not show the same pattern of Anti-Agreement just described for subject focus constructions and subject *wh*-questions. In general, relative clauses are quite morphosyntactically distinct from focus clauses. In subject relativization, the subject stays in-situ inside the relative clause and the verb takes a participial suffix that agrees with the gender and number of the head noun, as shown in (95):

- (95) [ yì yàgù-m ] kù  
 [RC child.L fall.IMPV.PART.SG ] DEF  
 ‘the child who will fall’

The strategy used for object relative clauses is the same. Again, the head stays in-situ inside the RC and the verb takes a participle form that agrees with the head of the RC in gender and number.

- (96) [ ú nâ: bàrnà kùròyí éw é-mà ] bù:  
 [RC 2SG cow.pl red.PL six 1SG buy.PFV-PART.PL ] DEF.PL  
 ‘your six brown cows that I bought’

Iemmolo and Moran (2014) argue that this is a second pattern of Anti-Agreement that only occurs in relative clauses. However, while it is true that there is no subject agreement in these clauses, they do not involve (overt) movement and there is no subject/object asymmetry. That is, subject agreement is leveled in *both* types of relative clauses, not just subject relative clauses. Thus, by the criteria in this paper, relative clauses do not show an Anti-Agreement effect.

The other Dogon languages surveyed by Iemmolo and Moran (2014) pattern similarly to Ben Tey, with slight discrepancies here and there. I will not discuss these differences here, though I hope to do a more in depth study of Dogon languages for the dissertation.

### 3.9 Mayan Agent Focus

In a subset of Mayan languages, extraction of an ergative subject triggers changes to the verb’s canonical morphology. In the Mayanist literature, this constructions is called *Agent Focus* (Aissen 1999; Stiebels 2006; Coon et al. 2011; Erlewine 2014, a.o). Consider the basic transitive clause in (97a) and the subject *wh*-question with agent focus in (97b), both from Kaqchikel (ISO: cak; Erlewine 2014)

- (97) a. Iwìr x-Ø-u-tèj ri wäy ri a Juan.  
 yesterday COM-3SG.ABS-3SG.ERG-eat the tortilla Juan  
 ‘Yesterday Juan ate the tortilla.’ (Erlewine 2014:1)
- b. Achike ✓x-Ø-tj-ö / \*x-Ø-u-tèj ri wäy?  
 who COM-3SG.ABS-eat-AF / COM-3SG.ABS-3SG.ERG-eat the tortilla  
 ‘Who ate the tortilla?’ (Erlewine 2014:1)

Agent focus is characterized by a lack of agreement with the ergative subject and the presence of the suffix -ö. In (97a), the verb takes the ergative agreement prefix *u-* marking 3SG. In (97b), on the other hand, no ergative agreement surfaces and the verb bears the suffix -ö, which is nor present in the non-extraction clause.

In Kaqchikel, agent focus also occurs in relative clauses, as in (98a); focus constructions, as in (98); and argument existentials, as in (98c):

- (98) a. Ri xteni' [ (ri) x- $\emptyset$ -tz'et- $\bar{\text{ö}}$  roj ] x-e-wär.  
 the girls [<sub>RC</sub> REL COM-1PL.ABS-see-AF 1PL.PRO ] COM-3PL.ABS-sleep  
 'The girls who saw us slept.' (Erlewine 2014:6)
- b. Ja ri xta Maria x- $\emptyset$ -tz'et- $\bar{\text{ö}}$  rte' ri a Juan.  
 FOC Maria COM-3SG.ABS-see-AF mother Juan  
 'It was Maria who saw Juan's mother.' (Erlewine 2014:6)
- c. K'o x- $\emptyset$ -tz'et- $\bar{\text{ö}}$  roj.  
 $\exists$  COM-1PL.ABS-see-AF 1PL.PRO  
 'Someone saw us.' (Erlewine 2014:6)

All three of the constructions in (98) involve  $\bar{A}$ -movement of the ergative subject to preverbal position, and all three trigger agent focus. Long distance  $\bar{A}$ -movement of an ergative subject triggers agent focus in the embedded clause:

- (99) Achike n- $\emptyset$ -a-b'ij rat [ chin x- $\emptyset$ -tz'et- $\bar{\text{ö}}$  roj ]?  
 who COM-3SG.ABS-2SG.ERG-think 2SG.PRO [<sub>CP</sub> that COM-1PL.ABS-see-AG 1pl.pro ]  
 'Who do you think saw us?' (Erlewine 2014:6)

In (99), the embedded transitive subject *achike* 'who' is moved to the left edge of the matrix clause and agent focus surfaces in the source clause.

In several ergative languages, antipassives serve the same purpose as the Mayan Agent Focus construction in that they facilitate transitive subject extraction. However, the Agent Focus construction is not an antipassive (Aissen 1999; Stiebels 2006; ?). There are several arguments for this. First, in many Mayan languages, Agent Focus and antipassives have different morphology<sup>26</sup>. Second, the theme in an antipassive is demoted to an oblique, while neither argument is so demoted in an Agent Focus construction. Finally, absolutive agreement in an antipassive must target the subject. In contrast, absolutive agreement in Agent Focus constructions can target either the subject or the object<sup>27</sup>.

By the criteria set out in the introduction, Mayan Agent Focus is an Anti-Agreement effect because it reduces the number of featural contrasts that are present in the agreement paradigm used with non-extracted subjects. However, unlike other Anti-Agreement effects we have seen so far, it is dependent on the case of the subject. This suggests that a wider look at how case interacts with Anti-Agreement systems is necessary in the dissertation.

### 3.10 Maasai (Nilotic)

Maasai (ISO: mas) is a Nilotic language spoken in Kenya and Tanzania. It exhibits Anti-Agreement effects in cases of subject fronting for focus, subject relative clauses, and subject *wh*-questions. Data in this section come mainly from Tucker and Mpaayei (1955), a reference grammar of Maasai,

<sup>26</sup>There are some Mayan languages where Agent Focus and antipassive have morphologically identical suffixes. Even in these languages the two constructions must be distinguished Coon et al. (2011).

<sup>27</sup>See Coon et al. (2011) and Erlewine (2014) for details.

and Ashmore (2014), a paper on Maasai agreement, along with some other sources that are cited below<sup>28</sup>.

Maasai is strongly verb initial, though the order of post-verbal constituents is less fixed, with VSO and VOS both being allowed. Agreement in Maasai is complex. Intransitive verbs take a set of prefixes that cross-references the person and number of their subject argument, as shown in (100a). Transitive verbs also take this set of prefixes when their object is 3rd person or plural of any person, as shown in (100b) and (100c), respectively.

- (100) a.  $\boxed{\acute{a}}$ -tú-úrór-ì  
 1SG-PFV-fall-PST  
 ‘I fell.’ (Ashmore 2014:1)
- b.  $\boxed{\acute{é}}$ -dól-ítá ɔl-kítétj en-kóítóí  
 3SG-see-PROG M.SG-ox.NOM F.SG-road.ACC  
 ‘The ox sees the road.’ (Hands Schuh 2014:114)
- c.  $\boxed{\acute{é}}$ -ta-du-à indái  
 3SG-PFV-see-PST you.PL.ACC  
 ‘He saw you all.’ (Ashmore 2014:2)

The intransitive verb in (100a) takes 1SG agreement prefix *á-*, agreeing with a null 1SG subject. The transitive verbs in (100b-c) both show the 3SG agreement prefix *é-*; In (100b) the object is singular noun *enkóítóí* ‘the road’, while in (100c) the object is the 2PL pronoun *indái*.

For transitive verbs with 1SG or 2SG objects, the form of agreement is determined by a person hierarchy where 1st persons outrank 2nd persons which outrank 3rd persons. This is shown in (101)

- (101) **Maasai Person Hierarchy:**  
 1 > 2 > 3

In the relevant cases, if the object outranks the subject according to the hierarchy, a special inverse person prefix is used. This will be the case in 2>1SG and 3>1SG configurations and in 3>2SG configurations<sup>29</sup>. If the subject outranks the object, as is the case in 1>2SG, the appropriate direct prefix is used. Examples of these configurations are shown in (102):

- (102) a.  $\boxed{kí}$ -ta-du-à nanu  
 2SG>1SG-PRF-see-PST me1SG.PRO.ACC  
 ‘You saw me’ (Ashmore 2014:3)
- b.  $\boxed{\acute{a}a}$ -ta-du-â nanu  
 3SG>1SG-PRF-see-PST me1SG.PRO.ACC  
 ‘He saw me’ (Ashmore 2014:3)
- c.  $\boxed{kí}$ -ta-du-à ijé  
 3SG>2SG-PRF-see-PST 2SG.PRO.ACC  
 ‘He saw you’ (Ashmore 2014:3)

<sup>28</sup>My sources do not consistently mark tone in all their examples. Where tone is marked in the source, I have reproduced it here, but where tone is not marked, I have not attempted to reproduce it.

<sup>29</sup>In the formula X>Y, X represents the person of the subject, and Y represents the person of the object.

- d. [á]-ta-du-à ijé  
 1SG-PRG-see-PST 2SG.PRO.ACC  
 ‘I saw you all’ (Ashmore 2014:2)

Notice that the prefix used in (102a) for 2>1SG the prefix used in (102c) for 3>2SG are the same, while the prefix used in (102b) for 3>1SG is different. Ashmore (2014) argues that this is not accidental and that the inverse prefixes track the distance between two arguments on the hierarchy rather than tracking the actual features involved. The prefix *ki-* is used when the arguments are one ‘step’ away on the hierarchy, while the prefix *aa-* is used when the arguments are two ‘steps’ away. I will assume this analysis here. The direct prefixes and inverse prefixes are shown in Table 5 and 6, respectively:

	Singular	Plural
1	<i>a-</i>	<i>ki-</i>
2		<i>i-</i>
3		<i>ε-</i>

Table 5: Direct Prefixes

	1SG.OBJ	2SG.OBJ
2	<i>ki-</i>	-
3	<i>aa-</i>	<i>ki-</i>

Table 6: Inverse Prefixes

As said above, Maasai exhibits an apparent Anti-Agreement effect in cases of subject relativization, *wh*-movement, and fronting for focus. In cases of subject extraction where the verb would bear the direct agreement prefixes in Table 5, that prefix is replaced with an agreement prefix cross-referencing the gender/number of the subject instead. Consider the examples of subject relative clauses below:

- (103) a. ɔltɔŋani [ [o]-lotu ]  
 man.SG.M [RC AAE.SG.M-go ]  
 ‘the man who will go.’ (Tucker and Mpaayei 1955:106)
- b. iltɔŋana [ [ɔɔ]-tareto ]  
 man.PL.M [RC AAE.SG.M-help.PST ]  
 ‘the people who helped him/them’ (Tucker and Mpaayei 1955:106)
- c. enkɛrai [ [na]-dɔl ]  
 child.SG.F [RC AAE.SG.F-see ]  
 ‘the child who sees him/them.’ (Tucker and Mpaayei 1955:106)
- d. mkɛra [ [naa]-ipoto ]  
 child.PL.F [RC AAE.SG.F-call ]  
 ‘the children who called see him/them.’ (Tucker and Mpaayei 1955:106)

Examples (103a) and (103b) show extracted masculine nouns in the singular and plural, respectively. Examples (103c) and (103d) show extracted feminine nouns in the singular and plural, respectively. In all these cases the normal direct prefix we would expect does not show up on the verb. Instead, a prefix indicating gender and number surfaces in its place.

Object relative clauses do not exhibit the same asymmetry. Instead, a gender/number prefix agreeing with the extracted object is placed before the subject agreement prefix that shows person and number of the subject:

- (104) alayieni<sub>i</sub> [ l-a-lo aadol -<sub>i</sub> ]  
 boy.SG.M [RC REL.SG.M-1SG-go PART.see ]  
 ‘the boy who I am going to see.’ (Carstens 2014:1)

In (159a), the object of the verb is extracted and the verb shows agreement with it for gender and number. Crucially, however, the subject agreement prefix still surfaces after the gender/number prefix.

The same replacement of direct prefixes by a gender/number prefix also occurs in the case of subject focus constructions. These are important because they show us that this replacement occurs for 1st and 2nd person subjects as well. Interestingly, it is possible to mark the extracted local person subject’s gender, even if this is not morphologically marked on a fronted pronoun itself:

- (105) a. nanu<sub>foc</sub> ŋ-ta-reto  
 1SG.PRO AAE.SG.M-help.PST  
 ‘It is I (masc.) who helped him/them.’ (Tucker and Mpaayei 1955:108)
- b. nanu<sub>foc</sub> na-ta-reto  
 1SG.PRO AAE.SG.F-help.PST  
 ‘It is I (masc.) who helped him/them.’ (Tucker and Mpaayei 1955:108)
- c. iyie<sub>foc</sub> ŋ-rany  
 1SG.PRO AAE.SG.M-sing.FUT  
 ‘It is you (masc.) who will sing.’ (Tucker and Mpaayei 1955:108)

Apparently, in the focus construction, a fronted subject does not surface with in the nominative case, but instead is marked accusative (which is the citation in Maasai; Handschuh 2014). Case is marked via tonal patterns on the noun. In (106), the extracted subject surfaces in the accusative:

- (106) en-tító na-dól nnyé  
 SG.F-girl.ACC AAE.F.SG-see 3SG.ACC  
 ‘It is the girl who sees him.’ (Handschuh 2014:114)

More examples of this aspect of the Maasai focus construction are hard to find, as many of my sources do not mark tone.

Finally, the same replacement pattern also surfaces with subject *wh*-questions out of a clause that would have direct prefixes. This is shown in (107):

- (107) a. aɲar [ o-ewuo ]  
 man.SG.M [RC AAE.SG.M-come ]  
 ‘Who (masc.) has come?’ (Tucker and Mpaayei 1955:116)
- b. aɲar [ na-tɲduaa ]  
 man.SG.M [RC AAE.SG.F-seePST ]  
 ‘Who (fem.) saw him?’ (Tucker and Mpaayei 1955:116)

These questions look exactly the same as the relative clause examples and the focus examples. Again, we see that a gender distinction not marked on the subject itself can be marked through the ant-agreement prefix (compare (107a) and (107b)).

When a subject is extracted from a clause that would have an inverse prefix, things get more complicated. In that case, the inverse prefix is *retained* and the gender/number prefix is added to the left of it:

- (108) a. iyie<sub>foc</sub> li-ki-ret  
 1SG.PRO REL.SG.M-2SG>1SG.help.FUT  
 ‘It is you who will help me.’ (Tucker and Mpaayei 1955:110)

In (108), a 2nd person singular subject is extracted for focus from a clause with a 1st person singular object. Instead of just the gender/number prefix surfacing, both the gender/number prefix and the inverse agreement prefix are required in this context.

Maasai is problematic for the Feature Subset Hypothesis for two reasons. First, in the cases where a gender/number prefix replaces a direct agreement prefix, putative cases of Anti-Agreement, the resulting featural contrasts are not a proper subset of the featural contrasts marked by normal agreement. In normal agreement, the direct prefix marks [PERSON, NUMBER], and in ‘Anti-Agreement’ contexts, the prefix marks [GENDER, NUMBER]. Second, in places where a subject is extracted from an inverse, there is no reduction of featural contrasts at all. In fact, the in these forms, the  $\phi$ -features of the extracted subject that agreement tracks form a *superset* of the features marked in normal agreement contexts: [PERSON, NUMBER] vs. [PERSON, GENDER, NUMBER].

For now, I will set these problems aside and return to them in section 4.2.1. There, I will argue that Maasai does actually show Anti-Agreement in the direct person forms, but that the gender/number prefix is not actually a marker of Anti-Agreement. Maasai also makes clear that more languages that exhibit person hierarchy effects should be investigated for Anti-Agreement, and I will pursue this line on inquiry in the dissertation.

### 3.11 Sheko (Omotic)

Sheko (ISO: she) is a Omotic<sup>30</sup> language spoken in Southwestern Ethiopia. Data on Sheko comes from Hellenthal (2010), a reference grammar of the language. Sheko is SOV, pro-drop, and exhibits Anti-Agreement in at least subject focus and subject *wh*-questions. In main clauses, the person, number, and gender of the subject are marked by an obligatory clitic that usually attaches to the verb, though it can attach elsewhere<sup>31</sup>. This is shown in (109):

- (109) a. ʃət̪ˈi-ra yí=gààm-àtsù-k-ə  
 maize-ACC 3SG.F=roast.ripe-give-REAL-STI  
 ‘She roasted the maize and gave it.’ (Hellenthal 2010:323)
- b. yí=bārkāy-ṅ k’ay-tə  
 3SG.F=monkey.F-DEF rise-SS  
 ‘...the monkey rose and.....’ (Hellenthal 2010:323)

When the subject is in focus, including when the subject is the target of a *wh*-question, no subject clitic appears:

<sup>30</sup>The Omotic language family is a subbranch of Afro-Asiatic and consists of 29 Languages, spoken predominantly spoken in southwest Ethiopia, like Sheko (Pereltsvaig 2012).

<sup>31</sup>Placement of the clitic is conditioned by a complex number of factors, including tense and aspect and various information structural constraints. See Hellenthal (2010) for details.

- (110) a. m-bāyñ<sub>FOC</sub> nata gasku-k-ə  
 1SG.POSS-wife 1SG insult-REAL  
 ‘My wife<sub>FOC</sub> insulted me.’ (Hellenthal 2010:436)
- b. yīs kòòsù ìtī<sub>FOC</sub> māāk-o  
 DIST.M tradition.ACC who tell-STI.ADRR  
 ‘Who will tell this traditional wisdom?’ (Hellenthal 2010:436)

According to Hellenthal (2010), subject focus can also be expressed using a cleft, where the copula *tə* comes between the focused subject and the rest of the clause. Again, there is no subject clitic:

- (111) [bārkāȳ šōōn]<sub>FOC</sub> tə tʃʰāārū fōōt-ā-m-ə  
 monkey heart COP medicine become-put-IRR-STI  
 ‘[A monkey’s heart]<sub>FOC</sub> could be medicine.’ (Hellenthal 2010:436)

Thus, there is an Anti-Agreement effect in Sheko whereby the featural contrasts expressed by subject clitics are leveled in subject *wh*-questions and subject focus constructions. However, it is unclear if the Anti-Agreement effect extends to subject relative clauses as well. Hellenthal (2010) does not explicitly state whether or not there is a constraint on subject clitics appearing in a subject relative clause, but there is data to suggest that they are at least able to do so. Further work will have to be done to figure out the exact nature of subject relative clauses<sup>32</sup>.

It is not clear how wide spread Anti-Agreement is in the rest of Omotic, but the presence of these effects in at least one language suggests that the rest of the family deserves a harder look for the larger survey in the dissertation.

### 3.12 Yimas (Lower Sepik)

Yimas (ISO: yee) is a Lower Sepik language spoken in Papua New Guinea. It has been noted since Phillips (1996, 1998) to have an Anti-Agreement effect in subject *wh*-questions and relative clauses. In this section, I will only discuss *wh*-questions, as these are the constructions are the constructions discussed in Phillips (1998). More work needs to be done to understand Yimas relative clauses.

Yimas has a rich agreement system. In declarative sentences, both subject and object agreement appear as prefixes on the verb. These prefixes cross-reference person and number. The choice of affix and placement of that affix for any given argument are conditioned by the person of both arguments and they type of argument being referenced. When both arguments of a transitive of a transitive verb are 3rd person, the absolutive prefix comes outside of the ergative prefix:

- (112) na-mpu-tay  
 3SG.ABS-3PL.ERG-see  
 ‘They say him.’ (Yuan 2014:2)

In (112), the affix corresponding to the notional ‘subject’ is boxed. When the O argument of a transitive verb is a speech act participant (1st/2nd person), it occurs closer to the verb and the outer prefix references the subject. It takes the absolutive form:

<sup>32</sup>I plan on contacting Hellenthal to see if she can shed light on this question.

- (113) [pu]-nan-tay  
 3pl.abs          2sg.acc see  
 ‘They saw you.’ (Phillips 1998:17)

What is important about the ordering of these affixes is that they condition whether or not an Anti-Agreement effect occurs when a subject *wh*-phrase is extracted. I will discuss the transitive cases here. When the *wh*-subject corresponds to the outermost agreement prefix in the verb, that prefix is suppressed. In addition, the number of the extracted subject is registered with an agreement suffix that only appears in these cases (Michelle Yuan, p.c.). This can be seen in (114):

- (114) nawm m-[]-kul-ɕpul-[um]?  
 who.PL C-Ø-2PL.ACC-hit-PL.WH.SBJ  
 ‘Who hit you all?’ (Phillips 1998:17)

In (114), the subject *wh*-phrase corresponds to an agreement affix that would occur in the outer position on the verb, yet that affix does not occur. In addition, since the *wh*-word is plural, the verb bears the special plural suffix *-um*.

When the extracted *wh*-subject corresponds to the inner agreement prefix on the verb, that agreement affix still occurs and no number suffix occurs on the verb. This can be seen in (115):

- (115) nawrm na-[mpi]-tpul?  
 who-DU 3SG.ABS-3DU.ERG-hit  
 ‘Which two people hit him?’ (Phillips 1998:17)

As can be seen in (115), the inner affix that agrees with the person and number of the extracted *wh*-word still occurs on the verb. That is, there is no Anti-Agreement effect. In addition, there is no special number suffix on the verb.

The Yimas system is clearly very complex. However, it is also clear that there is an Anti-Agreement effect in that language that neutralizes person distinctions in certain agreement slots. We must say that the Anti-Agreement effect in Yimas only suppresses PERSON because of the dedicated number affix that appears on the verb when an agreement prefix is suppressed by extraction of the subject. At this time, this is my understanding of the Anti-Agreement pattern in Yimas.

### 3.13 Fiorentino (Northern Italian)

Three Italian dialects have been discussed in the Anti-Agreement literature to date: Fiorentino and Trentino in Brandi and Cordin (1989) and Ouhalla (1993) and Piedmontese in Campos (1997). The facts in these dialects are very similar, if not identical, and I have therefore chosen to discuss only one here in depth, namely Fiorentino, a Northern Italian dialect.

Fiorentino is SVO. In addition to subject agreement for person/number on the finite verb, Fiorentino has a series of obligatory subject clitics that must precede the verb. The subject clitics distinguish person, number, and, in the 3rd person, gender-masculine vs. feminine (Brandi and Cordin 1989)<sup>33</sup>. Examples are given in (116). The subject clitics obligatorily cooccur with DP subjects, as can be seen in (116c):

<sup>33</sup>In Fiorentino the 1st singular clitic is actually optional.

- (116) a. tu parl-i  
2SG speak-2SG.PRS  
'You speak.' (Brandi and Cordin 1989:113)
- b. e parl-a  
3SG.M speak-3SG.PRS  
'He speaks.' (Brandi and Cordin 1989:113)
- c. e parl-ano  
3SG.M speak-3PL.PRS  
'They (masc) speaks.' (Brandi and Cordin 1989:113)
- d. Mario e parla  
Mario 3SG.M speak.3SG.PRS  
'Mario speaks.' (Brandi and Cordin 1989:113)

As can be seen from (116c), preverbal subjects trigger agreement on the verb and the clitic must match the features of the subject. However, when the subject is post-verbal in a subject-verb inversion construction, there is no agreement between the verb and the subject. In addition, the subject clitic changes. Consider the examples in (117):

- (117) a. gl' è venuto delle ragazze  
3SG be.3SG come.SG some girls  
'Some girls have come.' (Brandi and Cordin 1989:121)
- b. gli ha telefonato delle ragazze  
3SG have.3SG phoned some girls  
'Some girls have telephoned.' (Brandi and Cordin 1989:122)

In both examples (117) the subject is postverbal. The finite verbs, *è* in (117a) and *ha* in (117b) are in the 3SG form even though the subject is plural. In addition, the expected plural subject clitic has been replaced by the clitic *gli*, which Brandi and Cordin (1989) a 3SG neutral clitic; in other words, it is a default clitic.

The same pattern is present when a subject is extracted in a *wh*-question, as shown in (118):

- (118) a. Quante ragazze gli ha parlato con te  
how.many girls 3SG have.3SG spoken with you  
'How many girls (it) has spoken to you?' (Ouhalla 1993:481)
- b. Quante ragazze gli è venuto con te  
how.many girls 3SG be.3SG come.SG with you  
'How many girls have come with you?' (Brandi and Cordin 1989:124)

The same pattern of singular agreement on the verb and the neutral clitic is seen in (118). As shown by (??), it is impossible to get full agreement in a clause with subject extraction:

- (119) a. \*Quante ragazze le hanno parlato con te  
how.many girls 3PL have.3PL spoken with you  
'How many girls have spoken to you?' (Brandi and Cordin 1989:125)

- b. \**Quante ragazze* [ *le* *sono* ] *venute con te*  
 how.many girls 3PL be.3PL come.PL with you  
 ‘How many girls have come with you?’ (Brandi and Cordin 1989:125)

The same Anti-Agreement pattern holds for subject relativization, as shown by (120):

- (120) a. *Le ragazze* [ *che* [ *gli/\*le* ] [ *ha/\*hanno* ] *parlato con te* ]  
 the girls [RC C 3SG/\*3PL have.3SG/have.\*3PL spoken with you ]  
 ‘the girls who have spoken to you’ (Brandi and Cordin 1989:126)
- b. *Le ragazze* [ *che* [ *gli/\*le* ] [ *è/\*sono* ] *venuto/\*venute con te*  
 the girls [RC C 3SG/3PL be.3SG/\*be.3PL come.SG/come.PL with you ]  
 ‘the girls who came with you’ (Brandi and Cordin 1989:126)

Unlike Berber, Anti-Agreement still holds when the subject is extracted from an embedded clause:

- (121) *Quante ragazze tu credi* [ *che* [ *gli* ] [ *ha* ] *telefonato* ]  
 how.many girls you think [CP C 3SG have.3SG phoned ]  
 ‘How many girls do you think have phoned?’ (Ouhalla 1993)

In (121), the *wh*-subject *quante ragazze* ‘how many girls’ is extracted from the subject position of an embedded clause. The verb and clitic in that clause must show singular agreement, i.e. Anti-Agreement.

The effects just discussed for Fiorentino qualify as Anti-Agreement because they neutralize number and gender in the agreement system in the verbal complex (clitic + verb) when a subject is extracted. While I do not have explicit evidence that Anti-Agreement in Fiorentino suppresses person features, I strongly suspect that it does, and therefore will assume so here. The Anti-Agreement effects exhibited by Trentino and Piedmontese are identical to the AAE pattern in Fiorentino, with minor morphological differences. While I have not been able to find other cases of this type of Anti-Agreement elsewhere in Romance so far, I suspect that by digging further into Romance dialects I will be able to find several more. The larger survey for the dissertation will hopefully include more Romance languages.

### 3.14 Halkomelem (Salish)

Halkomelem (ISO: hur) is a Coast Salish language spoken in southwest British Columbia. Citing Gerds (1980), several studies on Anti-Agreement have cited Halkomelem as a language exemplifying the phenomenon (Richards 1997; Diercks 2010; Henderson 2013). Despite this, no researcher has ever presented a detailed analysis of Halkomelem AAE. Here, I examine the contexts in which subject agreement in Halkomelem is suppressed and show that is is a general property of clauses from which a subject has been extracted.

Halkomelem displays a split-ergative pattern of agreement. For 1st and 2nd persons subjects of both intransitive predicates and transitive predicates are marked by the same set of subject clitics. First person and second person transitive objects are marked with a set of suffixes. Examples of these are given in (122):

- (122) a. ʔí cən təcəl  
 AUX 1SG.SBJ arrive.here  
 ‘I arrived here.’ (Suttles 2004:35)
- b. ní cx<sup>w</sup> c’éw-ət-Ø  
 AUX 2SG.SBJ help-TR-3ABS  
 ‘You helped him.’ (Suttles 2004:35)
- c. c’éw-əθ-əs ceʔ  
 help-TR+1SG.OBJ-3ERG FUT  
 ‘I will help him.’ (Suttles 2004:33)

In (122a), the 1SG clitic *cən* marks the subject of an intransitive verb, while in (122b) it marks the subject of a transitive verb. In (122c) the 1SG object suffix *-s* fuses with the transitive suffix *-ət* to yield *-əθ*.

Third person arguments show a different pattern, with subjects of intransitive verbs and objects of transitives receiving Ø marking and transitive subject receiving marking with the suffix *-(ə)s*.

- (123) a. cyəwən Ø ceʔ m’ə  
 sing.possession.song 3ABS FUT CERT  
 ‘He will sing the possession song.’ (Suttles 2004:33)
- b. ní cən təpət-t-Ø  
 AUX 1SG.SBJ be.stretching.on.frame-TR-3ABS  
 ‘I’m stretching it over a frame.’ (Suttles 2004:33)
- c. ní c’éw-ət-Ø-əs  
 AUX help-TR+1SG.OBJ-3ERG  
 ‘I helped him.’ (Suttles 2004:324)

In (123a-b) we see that 3rd person intransitive subjects and transitive objects receive zero marking. In (123c), we see that a transitive subject in the 3rd person is indicated with the agreement suffix *-(ə)s*.

Number is also marked in the agreement paradigm, but again speech act participants pattern differently than 3rd person arguments. 1st and 2nd person agreement morphemes have distinct plural forms for both subjects and objects. For 3rd persons, plurality is generally indicated through modification of the root. There is no agreement morpheme that encodes PL. However, plurality can also be indicated through the particle *ʔé·tən*.

- (124) a. ném’ cé·p ceʔ  
 go 2PL.SBJ FUT  
 ‘You guys will go.’ (Suttles 2004:323)
- b. ní cən c’éw-ət-àlə  
 AUX 1SG.SBJ help-TR-2PL.OBJ  
 ‘I helped you guys.’ (Suttles 2004:328)
- c. k’wəc-n-ámx-əs ceʔ ʔé·tən  
 see-TR-1SG.OBJ-3ERG FUT 3PL  
 ‘They will help me.’ (Suttles 2004:323)

In (124a), we see the 2nd person plural subject agreement morpheme *cé·p*. In (124b), we see the 2nd person plural object agreement suffix *-àb*. Finally, we see the 3rd person plural particle *ʔé·ttən* in (124c).

Gerdts (1980) observes that the 3rd person transitive subject suffix *-əs* does not appear in focus constructions where a NP transitive subject has been fronted to before the predicate:

- (125) *słéniʔ θə ni q'wəl-ət-□ ʔə tʃə səplil*  
 woman ART AUX bake-TR OBL ART bread  
 'A woman is the one who baked the bread.' (Gerdts 1980:303)

In (125), the subject *słéniʔ* 'woman' has been fronted for focus. While we would expect the verb to have the suffix *-əs* because it is a transitive verb, yet it does not, instead simply terminating in the transitive suffix.

Kroeger (1999) argues that focus constructions such as the one in (125) are clefts in which the focused element is a predicate and the remnant of the clause is a headless relative clause that acts as its subject. More specifically, he assigns a structure like (126) to the sentence in (125):

- (126) [<sub>Pred</sub> *słéniʔ* ] [<sub>DP</sub> *θə* [<sub>NP</sub>  $\emptyset$  [<sub>RC</sub> *ni q'wəl-ət ʔə tʃə səplil* ]]]

Kroeger then goes on to observe that lack of subject agreement is characteristic of subject relative clauses in general in Halkomelem. Consider the clauses in (127):

- (127) a. *kʷθə [ ni c'éw-ət-□ ]*  
 ART [<sub>RC</sub> AUX help-tr ]  
 'The one who helped him.' (Kroeger 1999:276)
- b. *ʔə słéniʔ [ ni q'áqʷ-ət-□ ]*  
 ART woman [<sub>RC</sub> AUX club-TR ]  
 'the woman who clubbed it.' (Kroeger 1999:276)

The example in (127a) is another headless subject relative clause that lacks subject agreement. In (127b), we have a subject relative clause whose head is the noun *słéniʔ* 'woman', and in the relative clause itself the verb shows no agreement with the 3rd person transitive subject. Thus, it is not something special about the cleft structure in (126) that enforces agreement suppression, but the relative clause structure.

Importantly, Kroeger shows that the cleft structure in (126) underlies other types of fronting constructions, including *wh*-fronting of subjects, as shown in (128a).

- (128) a. *ʔwét tʃə [ ní k'wíc'-ət-□ tʃə smáyəθ ]*  
 who ART [<sub>RC</sub> AUX butcher-TR ART deer ]  
 'Who butchered the deer?' (Kroeger 1999:263)
- b. *nówə [ ni □ k'ón-ət ]*  
 2SG.PRO [<sub>RC</sub> AUX take-TR ]  
 'It's you who are the one who took it.' (Kroeger 1999:276)
- c. *ʔé·nʔə [ ni □ t'iləm ]*  
 1SG.PRO [<sub>RC</sub> AUX sing ]  
 'I am the one who sang.' (Kroeger 1999:277)



- c.  $xar_i$  Jegaan [a] jaw-'-u —i?  
 who Jegaan 3 cookcook.SG-PST-EXT  
 'What did Jegaan cook?' Object *wh*-question

Besides word order and the presence of subject agreement, the examples in (129) differ in another important regard. In both sentences, the verb bears what I will name a *final suffix*. The final suffix is *-a* in the affirmative clause and *-u* in the *wh*-question. The suffix *-a* occurs in affirmative declarative clauses, as shown in (129a). The suffix *-u* occurs on when  $\bar{A}$ -movement has occurred in the local clause. Beyond *wh*-questions, *-u* is required in such as focus clauses, as shown in (130a), and relative clauses, as shown in (130b)<sup>34</sup>:

- (130) a. **maalo**<sub>FOC</sub> Mataar a jaw-[u] —  
 rice Mataar 3 cook-EXT  
 'Mataar cooked RICE<sub>FOC</sub>.' Object Focus
- b. **maalo fe** [ Mataar a ci'-[uu]-n-a — ]  
 rice DET [CP Mataar 3 give-EXT-3OBJ-REL ]  
 'the rice that Mataar gave him' Object Relative

I refer to the final suffix *-a* (glossed DV) as the *default vowel* (glossed DV). I will refer to the final suffix *-u* (glossed EXT) as *extraction morphology* or as the *extraction suffix* since it occurs exclusively under conditions where an element has extracted (that is, undergone  $\bar{A}$ -movement) to the left periphery.

As mentioned above, the verb agrees with its subject in person and number, and I refer to the morpheme that expresses this agreement as the *subject marker* (SM)<sup>35</sup>. In addition to the SM, verbs with plural subjects undergo a process of initial consonant mutation whereby the first consonant of the verb is changed<sup>36</sup>. This mutation is obligatory. With third person subjects, mutation is the only indication of plurality. Consider (131)

- (131) a. a [war]-a okoor oxe  
 3 kill.SG-DV  
 'He killed the man.
- b. a [mbar]-a okoor oxe  
 3 kill.PL-DV  
 'They killed the man.

In both examples in (131), the SM is *a*. A singular 3rd person subject is marked by the unmutated form of the verb stem, (131a). A plural 3rd person subject is indicated by the mutated form of the verb stem, (131b).

In subject *wh*-questions, subject relative clauses, and subject focus constructions, the subject marker cannot appear. This is true regardless of the person of the subject, as shown in (132):

<sup>34</sup>In (??b), *-u* is lengthened due to a regular morphophonological rule triggered by the relative suffix *-(n)a*.

<sup>35</sup>When the verb has a final suffix, 1st person singular and 2nd person singular subject markers are realized as suffixes on the verb. In all other person/number combinations, they are preposed to the stem. In other conjugations, 1SG and 2SG are also preposed. I have chosen to be agnostic as the morphological category of the Seereer subject markers in this paper for this reason.

<sup>36</sup>Initial consonant mutation in verbs can involve nasalization or fortition.

- (132) a. **xar**  ref-**u** took ataabul ale?  
 what be.SG-EXT on table DET  
 ‘What is on the table?’ Wh-question; 3rd person
- b. **mi**<sub>FOC</sub>  foon-**u** a Yande  
 1sg.pro kiss.SG-EXT OBJ Yande  
 It’s me who kissed Yande.’ Focus; 1st person
- c. **wo**<sub>FOC</sub>  ñaam-**u** maalo ’an  
 2sg.pro eat.SG-EXT rice 1SG.POSS  
 It’s you who ate my rice.’ Focus; 2nd person
- d. **okoor oxe** [  ci’-**uu-n-a** maalo fe ]  
 man DET [RC give.SG-EXT-3OBJ-REL rice DET ]  
 ‘the man that gave him the rice’ RC; 3rd person

In all four examples in (132) the verb lacks any subject marker, regardless of the person of the subject. Notice also that the verbs have the extraction suffix *-u*, thus giving us evidence that there has been  $\bar{A}$ -movement in these clauses. Interestingly, number mutation on the verb is *not* suppressed in cases of subject extraction. When a plural subject is extracted, the verb still mutates to show that it the subject is plural. This is shown in (133):

- (133) a. **muus kum**  ndef-**u** took ataabul ale?  
 cat which.PL be.PL-EXT on table DET  
 ‘Which cats are on the table?’ Wh-question; 3PL
- b. **in**<sub>FOC</sub>  njaw-**u** ñaamel ke  
 1pl.pro cook.PL-EXT food DET  
 It’s us who cooked the food’ Focus; 1PL
- c. **nuun**<sub>FOC</sub>  nga’-**u** a Yande  
 2pl.pro see.SG-EXT OBJ Yande  
 It’s you guys who saw Yande.’ Focus; 2PL
- d. **goor we** [  ndet- $\emptyset$ -na Dakaar ]  
 man DET [RC go.PL-EXT-3OBJ-REL Dakaar ]  
 ‘the men who went to Dakaar’ RC; 3PL

As is clear from the examples in (133), plural mutation surfaces on the verb in all cases where a plural subject has been extracted. Thus, Seereer can be said to neutralize the feature [PERSON], but not [NUMBER]. Seereer therefore has an Anti-Agreement effect in cases of subject extraction that confirms to the Feature Subset Hypothesis.

When a subject is extracted from an embedded clause, Anti-Agreement is still required in that clause. This can be seen for *wh*-questions and relative clauses in (134)

- (134) a. **an**<sub>i</sub> [ foog-**o** [ yee ten<sub>i</sub>  ret-**u** Dakar ] ]  
 who [ think-2SG.SBJ.EXT [CP C 3SG.PRO go-EXT Dakar ] ]  
 ‘Who do you think went to Dakar?’

- b. **okoor oxe<sub>i</sub>** [ foog-**oo**-na [ yee ten<sub>i</sub>  ret-**u** Dakar? ] ]  
 man DET [RC think-2SG.SBJ.EXT [CP C 3SG.PRO go-EXT Dakar ] ]  
 ‘the man who you think went to Dakaar’

In both clauses in (134), the embedded source clause still shows Anti-Agreement. Thus, Seereer patterns differently than languages like Tarifit Berber, where long distance subject movement does not trigger Anti-Agreement (Ouhalla 1993), instead patterning with Austronesian and Mayan, where long distance subject movement does trigger Anti-Agreement. In addition, both clauses along the path of movement show extraction morphology.

Anti-Agreement is not blocked by clausal negation in Seereer. This is shown (135):

- (135) a. **an**  jang--**eer**-**u** ateere ale  
 who read-NEG-EXT book DET  
 ‘Who didn’t read the book?’  
 b. **goor we** [  ndet--**eer**-**Ø**-na Dakaar ]  
 man DET [RC go.PL-EXT-NEG-3OBJ-REL Dakaar ]  
 ‘the men who didn’t go to Dakaar’

In both examples above, the verb has the negative suffix *-eer*. However, the subject marker is still blocked in both (135a), a *wh*-question, and (135b), a relative clause. Again, Seereer patterns differently than Berber in this way.

Seereer makes a distinction between perfective and imperfective aspects. In all the examples we have seen so far, the verbs have been in the perfective aspect. When the verb is imperfective, it takes the suffix *-aa* and stays low in the clause<sup>37</sup>. In these cases, all the subject markers are proposed to the verb in declarative clauses:

- (136) a. Jegaan  a jaw--**aa** maalo  
 Jegaan 3 cook.SG-IMPFV rice  
 ‘Jegaan is cooking rice.’  
 b. (mi)  um jaw--**aa** maalo  
 1SG.PRO 1SG cook.SG-IMPFV rice  
 ‘I’m cooking rice.’

When an object is extracted from an imperfective clause, everything precedes as we have seen, except that no extraction suffix occurs on the verb:

- (137) a. **xar** Jegaan a jaw-aa  
 what Jegaan 3 cook.SG-IMPFV rice  
 ‘What is Jegaan is cooking’  
 b. **maalo**<sub>FOC</sub> um jaw-aa  
 rice 1SG cook.SG-IMPFV rice  
 ‘It’s rice that I’m cooking.’

<sup>37</sup>See Baier (2014) for a partial analysis of verb position in Seereer.

In the case of subject extraction, imperfective clauses still exhibit an Anti-Agreement effect. Like in object extraction out of imperfectives clauses, no extraction suffix is seen on the verb. Additionally, there is a particle *naa* that occurs between the extracted subject and the verb. Again, there is no agreement on the verb.

- (138) a. **an** naa   jaw-aa      maalo  
           who NAA            cook.SG-IMPV    rice  
           ‘Who is cooking rice?’
- b. **mi<sub>FOC</sub>** naa   jaw-aa      maalo  
           who NAA            cook.SG-IMPV    rice  
           ‘It’s me who’s cooking rice.’

I analyze the particle *naa* as a marker of subject extraction that only occurs in imperfective clauses. I do not treat it as part of the Anti-Agreement effect proper, but instead treat it as an extra piece of morphology that only surfaces in imperfective contexts.

To close this section, I give a table that summarizes the Seereer subject extraction facts:

	Perfective	Imperfective
<b>Wh-question</b>	WH <sub>S</sub> [ – <sub>S</sub> V- <i>u</i> ]	WH <sub>S</sub> [ <i>naa</i> – <sub>S</sub> V- <i>aa</i> ]
<b>Focus</b>	FOC <sub>S</sub> [ – <sub>S</sub> V- <i>u</i> ]	FOC <sub>S</sub> [ <i>naa</i> – <sub>S</sub> V- <i>aa</i> ]
<b>Relative</b>	REL <sub>S</sub> [ – <sub>S</sub> V-( <i>u</i> )- <i>na</i> ]	REL <sub>S</sub> [ <i>naa</i> – <sub>S</sub> V- <i>aa</i> ]

Table 7: Seereer Subject Extraction

### 3.16 Tadaksahak (Northern Songhay)

Tadaksahak (ISO: dsq) is a language of the Northern Branch of the Songhay language family. In non-subject extraction clauses, the verb is obligatorily marked for person/number of the subject via a set of proclitics:

- (139) a. lwayn’ a=bə-bíibi      bor-én.  
           sun    3SG=IMPV-blacken    person-PL  
           ‘the sun makes people black.’ (Christiansen 2010:183)
- b. farc-én i=bb-ássay  
           donkey-PL 3PL=IMPV-tie.two  
           ‘the donkeys are tied together.’ (Christiansen 2010:183)
- c. aya=ttén ándi      daw  
           1SG=arrive 2PL.PRO LOC  
           ‘I arrived at your place.’ (Christiansen 2010:133)

In (139a), the verb takes the 3SG subject proclitic *a=*; in (139b), the subject proclitic is 3PL *i=*; and in (139c), the verb has the 1SG subject proclitic *aya=*. Subject extraction changes this pattern of agreement. The proclitic is absent in subject relative clauses and subject *wh*-questions. Consider first the examples in (140), where the *wh*-word *ci* (which can mean either ‘who’ or ‘what’) functions as the subject. In both cases, the expected 3SG subject proclitic *a=* is missing:

- (140) a. cí (ə)b-zurú  
 who IMPFV-run  
 ‘Who is running?’ (Christiansen 2010:257)
- b. cí bb-óddər=a  
 what IMPFV-hold=3SG.OBJ  
 ‘Who is married to her?’ (Christiansen 2010:257)

The same is true of the subject relative clauses in (141). In all three cases, the expect subject proclitic is absent. This is true even when the subject is a speech act participant, such as the 2SG pronoun *nín* in (141c):

- (141) a. bor(á) ayo [ ttáw-kat néeda ]  
 person DET [ reach-DET here ]  
 ‘the person who arrived here.’ (Christiansen 2010:228)
- b. bor(á) agho [ f-keedí tághlamt ]  
 person DET [ IMPFV-be.up riding.camel ]  
 ‘the person who is riding the camel.’ (Christiansen 2010:229)
- c. nín [ nó kár aḡáy ] ən=tə-kó kássaw  
 2SG.EMP [ there hit 1SG.OBJ ] 2SG=FUT-go prison  
 ‘you who hit me will go to prison.’ (Christiansen 2010:235)

Kossman (2010) shows that the lack of subject proclitic in subject relative clauses is not a general feature of relative clauses in the language. This is shown clearly by the object relative clause in (142), where there is subject marking:

- (142) imúnsuwan aḡondó [ aḡa=b-fúr-an ándi se ]  
 meals DEF.PL 1SG=IMPFV-throw-ALL 2PL DAT  
 ‘the food that I threw to you.’ (Kossman 2010:8)

Suppression of subject proclitics also occurs in cases of subject focus. The subject focus construction involves the prefix *nə-*, which Christiansen (2010) dubs the ‘extraction marker’<sup>38</sup>. Examples of subject focus constructions are given in (143):

- (143) a. ánga [ nə ]-hun(ú) adínit jinjiná  
 3SG.EMPH EXM-leave.from world first  
 ‘It’s him who died first.’ (Christiansen 2010:250)
- b. ándi [ nə ]-dd(á) áa=se h(e) adí  
 2p.EMPH EXM-do 3SG=DAT thing ANA  
 ‘It’s you (pl) who did this to him.’ (Christiansen 2010:251)
- c. áari [ nə ]-zzáw-kaat=a  
 1PL.EMPH EXM-take-=3SG.OBJ  
 ‘It’s us who brought it.’ (Christiansen 2010:251)

<sup>38</sup>It is not clear if Christiansen considers *nə-* to be a prefix or a proclitic, as she varies in writing its boundary with the rest of the verb as ‘-’ or ‘=’. I have chosen to treat it as a prefix, as she never explicitly refers to it as a proclitic. Kossman (2010) also calls it a prefix.

Example (143) is important in showing that all person/number categories are neutralized by Tadak-sahak Anti-Agreement. In (143b), a 2nd person plural subject is focused and in (143c) a 1st person plural subject is focused. In both examples, the expected subject proclitic is replaced by *nə-*

The extraction marker also occurs in subject relatives in the presence of certain inflectional prefixes. Specifically, these are the negative perfective *nə-*, the negative imperfective *sə-* and the future *tə-*. Examples of the extraction marker in subject relatives is given in (144):

- (144) a. aarú ayo [ nə-nə-hunú          húgu daw ]  
 man DET [ EXM-NEG.PERF-leave house LOC ]  
 ‘the man who did not leave from home.’ (Christiansen 2010:229)
- b. aaru ayo [ n-sə-húuru          ay\_n car-én ]  
 man DET [ EXM-NEG.IMPERF-enter 3SG=GEN friend-PL ]  
 ‘the man who is not together with his friends’ (Christiansen 2010:229)
- c. he (a)yo [ n-tə-nin.i ]  
 thing DET [ EXM-FUT-drink=3PL ]  
 the thing (human/animal) that will drink it’ (Christiansen 2010:229)

From my sources, it is unclear as to whether the extraction marker can appear in subject *wh*-questions. Since Christiansen (2010) is explicit about it occurring in both subject focus and relative clauses, however, I will assume that it is blocked in such questions. Crucially, however, the extraction marker patterns with full subject proclitic suppression in that it does not occur in cases of object extraction Kossman (2010); Christiansen (2010). A summary of the pattern of subject proclitic suppression and *nə-* prefixation in Tadak-sahak is given in Table 8:

	<i>Wh</i> -Question	Relative	Subj. Focus
AAE	✓	✓	✓
<i>nə-</i>	✗	(✓)	✓

Table 8: Tadak-sahak Subject Extraction

While both Anti-Agreement and the subject extraction marker are characteristic of subject extraction in Tadak-sahak, I would like to propose that they are actually two separate phenomena. This is because they pattern differently with respect to their distribution in different constructions, as can clearly be seen in Table 8. Anti-agreement is a property of all three extraction constructions. Compare this to *nə-* prefixation, which patterns differently in all three. In *wh*-questions it is blocked, in relative clauses it is conditioned by the presence of other morphology, and in subject focus constructions it is required. Thus, I argue that *nə-* is best treated as a type of  $\bar{A}$ -movement sensitive morphology which is triggered in the case of subject extraction in certain constructions. Thus, it is an additional piece of morphology on top of Anti-Agreement in some clauses.

### 3.17 Turkish

Turkish (ISO: *tur*) exhibits Anti-Agreement effects only subject relative clauses (Ouhalla 1993; Kornfilt 1985, 1991, 2008). Turkish has two morphosyntactically distinct relativization strategies.

When a non-subject is relativized the verb appears with the participle suffix *-DİK*, the subject of the relative clause receives genitive case and the verb shows possessor agreement with the subject:

- (145) a. [ <sub>RC</sub> ben-im <sub>-i</sub> gör-dugu-m ] hoca<sub>i</sub>  
           [ <sub>RC</sub> I-GEN           see-NSBJ.PART-1SG.POSS ] lecturer  
           ‘the lecturer that I saw.’ (Ouhalla 1993:484)
- b. [ <sub>RC</sub> yılan-in <sub>-i</sub> ye-diğ-i ] kabak<sub>i</sub>  
           [ <sub>RC</sub> snake-GEN       eat-PART-3SG.POSS ] squash  
           ‘the squash that the snake ate’ (Sherley-Appel 2014:1)

In (145a), the verb in the relative clause has the non-subject participial suffix and takes 1SG possessive agreement (*-m*). The verb in (145b) has 3SG possessive agreement, *-i*.

When a subject is relativized, the verb takes the subject participle suffix *-AN* and the verb does not exhibit any agreement with the extracted subject/head of the RC.

- (146) a. [ <sub>RC</sub> <sub>-i</sub> hoca-yi       gör-en ] öğrenci-ler<sub>i</sub>  
           [ <sub>RC</sub>   lecturer-ACC see-SBJ.PART ] student-PL  
           ‘the students who saw the lecturer.’ (Ouhalla 1993:484)
- b. [ <sub>RC</sub> <sub>-i</sub> kabağ-1       yi-yen ] yılan<sub>i</sub>  
           [ <sub>RC</sub>   squash-ACC eat-SBJ-PART ] snake  
           ‘the snake that ate the squash’ (Sherley-Appel 2014:1)

In the example in (147) the verbs have participle morphology that is different than the morphology that occurs in the non-subject relative clauses in (145). In addition, the verbs do not agree with the extracted subject that acts as the head of the relative clause. Further evidence comes from the ungrammatical example in (??):

- (147) \* [ <sub>RC</sub> <sub>-i</sub> hoca-yi       gör-en-ler ] öğrenci-ler<sub>i</sub>  
           [ <sub>RC</sub>   lecturer-ACC see-SBJ.PART-3PL ] student-PL  
           ‘the students who saw the lecturer.’ (Ouhalla 1993:484)

Long distance subject relativization does not give rise to Anti-Agreement in the source clause, as shown by (3.17):

- (148) [ <sub>RC</sub> [ <sub>-i</sub> hoca-yi       gör-duk-leri-ni ] söyle-digi-n ] öğrenci-ler<sub>i</sub>  
           [ [ <sub>RC</sub>   lecturer-ACC see-NSBJ.PART-3PL-ACC ] say-NSBJ.PART-2SG.POSS ] student-PL  
           ‘the students who you said saw the lecturer’ (Ouhalla 1993:485)

Extraction of the subject from the embedded clause in does not trigger either mark of subject relativization. Both verbs along the path of extraction take the participial suffix *-DİK* and show agreement with their subject. The embedded verb takes 3PL agreement (agreeing with the *extracted subject*) and the matrix verb takes the 2SG possessive suffix *-n*. In this way, Turkish patterns with Berber and Celtic languages in treating long distance extracted subjects differently than locally extracted subjects.

Interestingly, Turkish also displays an asymmetry in the relativization of constituents of subjects and non-subjects. Compare (149a), where a possessor is extracted from a subject DP, and (149b), where a possessor is extracted from a non-subject:

- (149) a. [ yılan-ın [ <sub>-i</sub> kabağ-ın-ı ] ye-diğ-i ] adam  
           [<sub>RC</sub> snake-GEN [DP squash-3SG.POSS-ACC] eat-NSBJ.PART-3SG.POSS man  
           ‘the man whose squash the snake ate’ (Sherley-Appel 2014:1)
- b. [ [ <sub>-i</sub> yılan-ı ] kabağ-ı ye-ye ] adam  
       [<sub>RC</sub> [DP snake-3SG.POSS] squash-ACC eat-SBJ.PART man  
       ‘the man whose snake ate the squash’ (Sherley-Appel 2014:1)

When the possessor is extracted from an object DP, as in (149b), the relative clause have the form of a non-subject relative clause. On the other hand, when the possessor is extracted from the subject DP, the relative clause displays the same morphology as a subject relative clause. Thus, the same asymmetry that applies to the extraction of the subjects vs. non-subjects extends to the extraction of constituents of those constituent types.

Kornfilt (2008) argues that the above effect arises because of a ban on extraction out XPs in subject position (for *Her*, *Spec-AgrP*). Thus, when the possessor has been extracted from a subject DP, that subject DP must raise further from the subject position to facilitate extraction. According to Kornfilt, raising from *Spec-AgrP* is what triggers Anti-Agreement in these cases<sup>39</sup>. For now, I will not take a position as to whether Kornfilt’s analysis is sufficient. Whatever derives the constituent extraction asymmetry in Turkish, it is important to note that it exists, and recognize that is possible in other languages, though so far, no such language has been found in my survey<sup>40</sup>.

Anti-agreement is limited to relative clauses in Turkish. It does not appear in subject *wh*-questions, which are in situ (Ouhalla 1993). However, as we have seen, in situ subject questions do exhibit Anti-Agreement effects in at least one language, *Ibibio* (Baker 2008b), so it is important to note that Anti-Agreement does not extend to in-situ *wh*-subjects in Turkish.

### 3.18 Lelemi (Kwa)

Lelemi (ISO: 1eɸ) is a Kwa language spoken in Volta region of Ghana. Data here were taken from Schwarz and Fielder (2006), a description of the Lelemi focus system. Lelemi word order is strictly SVO. In declarative clauses the verb agrees with its subject for person and number, and, if the subject is 3rd person, its class. Agreement is marked on the verb with a prefix, which varies with the aspect/mood/polarity of the verb. Schwarz and Fielder (2006) call this series of markers the ‘simple paradigm’, examples of which are shown in (150):

- (150) a. ɔ̀nà̀nà ɔ̀ɲvò ú-tì      ùlòkúbì ɔ̀ɲvò ùɲwèníjì  
           man DEM 3SG.PFV-take girl DEM pen  
           ‘The man took the girl’s pen.’ (Schwarz and Fielder 2006:5)

<sup>39</sup>Kornfilt derives this fact by appealing to the  $\bar{A}$ -Disjointness Requirement, discussed in section 2.1. See that section for discussion of this type of analysis of Anti-Agreement

<sup>40</sup>This may partly be because of the data available to me. However, I have been able to test whether Anti-Agreement extends to the extraction of possessors from subjects in *Seereer*, and it does not.

- b. lí-nù kàkùn kòdì  
 1SG.PFV-hear noise INDEF  
 ‘I heard a noise.’ (Schwarz and Fielder 2006:5)
- c. m̀d̀-̀f̀ libí lém̀  
 1SG.IMPV-wash car DEM  
 ‘I’m washing the car.’ (Schwarz and Fielder 2006:6)

Contrasting with the simple paradigm of subject+aspect/mood/polarity prefixes is what Schwarz and Fielder (2006) term the ‘relative paradigm.’ In the relative paradigm, the verbal prefix only indicates the aspect/mood/polarity of the clause. There is no marking of the features of the subject. The relative paradigm is found in three types of clauses: subject focus constructions, subject relative clauses, and subject *wh*-questions. Examples of these are given in (151):

- (151) a. ùlòkù<sub>FOC</sub> óm̀ ná-dī  
 woman DEM REL.PFV-eat  
 ‘The woman<sub>FOC</sub> has eaten (them).’ (Schwarz and Fielder 2006:8)
- b. ébì ánỳ m̀-cúī nā ùl̀ òtè  
 car two REL.IMPV-burn in road middle  
 ‘Two cars are burning in the middle of the road.’ (Schwarz and Fielder 2006:9)
- c. èbù̀ óní [ n̄-nyé v̄ ]  
 animal CL.NI [ REL.STAT-stand there ]  
 ‘the kind of animal that is over there’ (Schwarz and Fielder 2006:12)
- d. òmá ná-dī àkábì ám̀  
 who REL.PFV-eat beans DEM  
 ‘Who ate the beans?’ (Schwarz and Fielder 2006:14)

Examples (151a) and (151b) are subject focus constructions, example (151c) is a subject relative clause, and (151d) is an example of subject *wh*-question. In all these cases, the verb takes a prefix that only varies for the aspect/mood/polarity of the clause; there is no indication of the  $\phi$ -features of the subject.

The relative paradigm is not used when an object is extracted. Consider the object relative below:

- (152) trouzis óní [ ónàabì ónỳ ̀-cà ]  
 trousers CL.NI [ boy DEM 3SG.PFV-wear ]  
 ‘the trousers that the boy wears’ (Schwarz and Fielder 2006:12)

In (152), the verb in the relative clause takes a simple paradigm subject prefix that indicates the person, class and number of the extracted object, *trouzis* ‘trousers.’ This shows that the relative paradigm is limited to subject extraction.

Negation does not reverse agreement suppression in Lelemi. As can be seen in (153), the same relative prefix is used for a perfective clause as is used in the affirmative clause in (151a). Like its affirmative counterpart, the prefix does not express the  $\phi$ -features of the subject.

- (153)  $\acute{o}$ -dì            nā bār óní [ ná-tá]- $\phi$ ò                    kùyé kēmō ]  
 3SG.PFV-eat in bar CL.NI [ REL.PFV-NEG-be.costage price inside ]  
 ‘She ate in a cheap restaurant.’ (Schwarz and Fielder 2006:9)

Thus, Anti-Agreement in Lelemi is constant across polarity categories. At this time, it is impossible to figure out if the Lelemi relative paradigm shows up in cases of long distance subject extraction.

## 4 Discussion and Analysis

In this section, I offer discussion and analysis of the facts from the survey that was just presented in section 3. I begin with a discussion of the core question of this prospectus: What is Anti-Agreement? I then turn to the morphosyntactic strategies used to encode Anti-Agreement, offering a preliminary organization of these strategies into various types. In section 4.3, I discuss the features that are suppressed in Anti-Agreement and propose an implicational hierarchy that captures the patterns seen in the data. Finally, in section 4.4, I briefly discuss the overwhelmingly absolute link between languages with Anti-Agreement and languages that are pro-drop.

### 4.1 What is Anti-Agreement?

A core question of this project is whether it is possible to establish definitional criteria for identifying a construction in a given language as exhibiting Anti-Agreement. In the introduction, I put forward the Feature Subset Hypothesis, repeated here in (154):

- (154) **The Feature Subset Hypothesis (FSH):**  
 The  $\phi$ -features expressed by agreement in an Anti-Agreement context are always a proper subset of the  $\phi$ -features expressed by agreement in a Full Agreement context.

The FSH has almost confirmed for each language in the survey but one<sup>41</sup>. That is, for each language, in the constructions we have examined there is a reduction of the number of  $\phi$ -features expressed by agreement and that reduced set is always a proper subset of the  $\phi$ -features expressed by canonical agreement. The patterns of feature neutralization we have seen are summarized in table 9. The table also shows the number of languages in the survey that exhibit each pattern:

	Agreement Features			Anti-Agreement Features			Count
	Person	Gender	Number	Person	Gender	Number	
Type 1a	✓		✓				10
Type 1b	✓	✓	✓				9
Type 2a	✓		✓			✓	3
Type 2b	✓	✓	✓			✓	2
Type 3b	✓	✓	✓		✓	✓	2

Table 9: Feature Neutralization Patterns

<sup>41</sup>The notable exception being Maasai, which I will return to in section in section 4.2.

I will set these pattern aside for now and return to these patterns of feature neutralization below in the next section. For now, it is enough to say that there are three major types of feature neutralization seen in table 9 and that each is consistent with the FSH. With this in mind, I propose the following definition of Anti-Agreement:

(155) **Anti-Agreement:**

A construction K displays ANTI-AGREEMENT for an argument  $\alpha$  iff

- i.  $\alpha$  has undergone  $\bar{A}$ -movement and
- ii. the  $\phi$ -features expressed by paradigm of agreement with  $\alpha$  in K are a proper subset of the  $\phi$ -features expressed by paradigm of agreement with  $\alpha$  when it has not undergone  $\bar{A}$ -movement.

The definition of Anti-Agreement offered in (155) has several important features. First, it is relativized to constructions. That is, we are not talking about globally about an entire language as displaying Anti-Agreement or not, but of individual constructions within that language that meet certain other criteria. Second, it is not limited to a specific set of arguments. Although I have focused on subjects in this prospectus, it is an empirical question as to whether Anti-Agreement is truly limited to subjects or if this is only a strong tendency. The above definition allows us to expand inquiry to other argument types cross-linguistically. Third, extraction is a definitional characteristic of Anti-Agreement according to one. That is, a construction does not qualify as exhibiting Anti-Agreement if the argument in question has not undergone extraction. Here, I would like to understand the term ‘extraction’ in the broadest of ways. Finally, to qualify as an Anti-Agreement construction, the features expressed by agreement with argument in question must be proper subset.

Once we have characterized a construction as exhibit Anti-Agreement, there is the further step of defining the Morphosyntactic Types that the construction shows. There are several of these, and I turn to them now in the next section.

## 4.2 Morphosyntactic Types of Anti-Agreement

There is a good amount of variation in the way that Anti-Agreement is expressed morphosyntactically. In this section, I will lay out a classification of the different morphosyntactic types of Anti-Agreement attested in the survey. First, the following strategies for expressing AAE have been found:

(156) **AAE Morphological Flavor:** What is the morphological strategy that expresses AAE?

- i. **Normal:** A normal agreement morpheme is used. This will usually only occur if that morpheme expresses a feature that remains after AAE. EXAMPLE: Seereer number mutation.
- ii. **Zero:** No agreement morpheme appears. The host of agreement remains unchanged. EXAMPLE: Seereer SM suppression.
- iii. **Default:** A default form of the agreement morpheme appears in place of the normal agreement. The host of agreement remains unchanged. EXAMPLE: Fiorentino default verb inflection.

- iv. **Nominal:** The normal agreement morpheme is changed to a nominal agreement morpheme. EXAMPLE: Berber participial verb forms.
- v. **Alternative:** An agreement morpheme not used elsewhere in the language surfaces. EXAMPLE: Yimas number suffixes.

The list in (156) is intended to classify the morphological form of the item expressing AAE. For example, in the Italian dialect Fiorentino, the verb surfaces in a default 3SG form in AAE contexts. Thus, Fiorentino Anti-Agreement has the ‘Default’ morphological flavor. In some cases, multiple values will need to be specified. When this is the case, a ‘+’ is used. For example, in Seereer, AAE is expressed by deleting the subject marker, but leaving number mutation on the verb. So, Seereer has a ‘Zero+Normal’ morphological flavor.

Anti-Agreement is often accompanied by some other morphosyntactic marking outside of the Anti-Agreement form itself. These morphosyntactic devices should be seen as formally separate from the Anti-Agreement. For example, in Seereer, verbs in clauses from which extraction has occurred take the final suffix *-u*. This marker is formally separate from Anti-Agreement, but occurs in subject extraction constructions alongside Anti-Agreement. I call such markers ‘Morphosyntactic Additives’. The following types can be distinguished:

- (157) **Morphosyntactic Additives:** Does anything accompany AAE in the construction?
- i. **AAE + Ø:** Nothing else cooccurs with AAE in the construction.
    - Example: Fiorentino extraction contexts.
  - ii. **AAE + X<sub>EXT</sub>:** A general marker of extraction cooccurs with AAE.
    - Example: Seereer *-u*.
  - iii. **AAE + X<sub>ARG</sub>:** A marker that a specific type of argument has been extracted cooccurs with AAE.
    - Example: Tadaksahak *nə-*, Chamorro *-um-*.
  - iv. **AAE + X<sub>Typ</sub>:** A marker of clause/construction type cooccurs with AAE.
    - Example: Yimas *m*<sup>-42</sup>; CREL in several languages.
  - v. **AAE + X<sub>TAM</sub>:** A specific TAM category cooccurs with AAE.
    - Example: Palauan realis mood requirement in AAE contexts.

So, each construction that exhibits Anti-Agreement can be classified along two lines: what the actual Anti-Agreement form looks like morphologically and if anything else accompanies the AAE in a given construction. A table classifying each language in the survey along these lines can be found in Appendix C.

#### 4.2.1 Solving Maasai

With these morphological types in mind, we can confront the troublesome case of Maasai. Recall that in Maasai subject extraction triggers replacement of a direct agreement prefix on the verb with a gender/number prefix agreeing with the extracted subject:

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<sup>42</sup>See Phillips (1998).

- (158)  $\text{enkeraï}$  [  $\boxed{\text{na}}$ -d $\text{ɔl}$  ]  
 child.SG.F [RC AAE.SG.F-see ]  
 ‘the child who sees him/them.’ (Tucker and Mpaayei 1955:106)

Maasai has been noted as having Anti-Agreement in these contexts by Carstens (2014). This is problematic because these constructions do not qualify as Anti-Agreement constructions by (155). This is because because the ‘Anti-Agreement’ features [GENDER, NUMBER] do not form a proper subset of the normal agreement feature [PERSON, NUMBER].

However, recall that when the agreement prefix on the verb is one of the inverse prefixes, or if the extracted argument is a non-subject, then the gender/number prefix occurs to the *left* of those prefixes without replacement:

- (159) a.  $\text{alayieni}_i$  [  $\boxed{\text{l-a}}$ -lo aadol  $_{-i}$  ]  
 boy.SG.M [RC REL.SG.M-1SG-go PART.see ]  
 ‘the boy who I am going to see.’ Object RC (Carstens 2014:1)
- b.  $\text{iyie}_{\text{foc}}$   $\boxed{\text{li-ki}}$ -ret  
 1SG.PRO REL.SG.M-2SG>1SG.sing.FUT  
 ‘It is you who will help me.’ Subject FOC from Inverse (Tucker and Mpaayei 1955:110)

When examined more closely, these contexts provide an answer to saving the construction in (158) as a construction exhibiting Anti-Agreement. Specifically, I argue that the gender/number prefix is actually is a relativizing morpheme that occurs in all extraction and agrees for gender and number with the extracted element. This allows us to classify the subject extraction from a clause with a direct agreement prefix as a construction of the AAE+ $X_{\text{TOP}}$ . Anti-Agreement in these contexts surfaces as a zero prefix on the verb, expressing no agreement features. This gives us a new analysis for (158), shown in (160)

- (160)  $\text{enkeraï}$  [  $\text{na-}\boxed{\emptyset}$ -d $\text{ɔl}$  ]  
 child.SG.F [RC REL.SG.F- $\boxed{\text{AAE}}$ -see ]  
 ‘the child who sees him/them.’ (Tucker and Mpaayei 1955:106)

Thus, with closer examination, we are actually able to establish that Maasai has Anti-Agreement which suppresses [PERSON, NUMBER] by the definition in (155) in some contexts.

### 4.3 The Importance of PERSON

Anti-Agreement always suppresses the feature [PERSON]. This is a cross-linguistic absolute in the languages surveyed, which can be seen clearly in Table 10, repeat from above:

	Agreement Features			Anti-Agreement Features		
	Person	Gender	Number	Person	Gender	Number
Type 1a	✓		✓			
Type 1b	✓	✓	✓			
Type 2a	✓		✓			✓
Type 2b	✓	✓	✓			✓
Type 3b	✓	✓	✓		✓	✓

Table 10: Feature Neutralization Patterns

The left hand side of the table shows which features are present in ‘normal agreement’ contexts, while the right side of the table shows features that are present in Anti-Agreement contexts. There are five patterns, with three broad types of pattern. Each type of pattern (1/2/3) refers to the relation between the features expressed in normal agreement vs. Anti-Agreement; Type 1 languages neutralize all featural contrasts in Anti-Agreement contexts; Type 2 languages neutralize all contrasts but number; and Type 3 languages suppress only person. Pattern subtypes (a/b) refer to the set of features expressed in normal agreement. Patterns of subtype “a” have [PERSON] and [NUMBER] in the normal paradigm. Patterns of subtype “b” have [PERSON], [NUMBER] and [GENDER].

The fact that PERSON is always suppressed follows from Feature Subset Hypothesis when one also assumes an implicational hierarchy that constrains the way that features are neutralized by Anti-Agreement. Such a hierarchy is given in (161):

- (161) **The Feature Neutralization Hierarchy (FNH):**  
 Person  $\ll$  Gender  $\ll$  Number

The Feature Neutralization Hierarchy requires that features towards the left end of the scale be neutralized by Anti-Agreement before features to their right. When combined with the Feature Subset Hypothesis, this implicational hierarchy derives the fact that every Anti-Agreement pattern suppresses at least person. Consider how this works. For a language to qualify as having Anti-Agreement, the feature contrasts in Anti-Agreement contexts must form a proper subset of the feature contrasts in normal agreement contexts by the FSH. To form a proper subset, at least one feature must be neutralized, and the hierarchy in (161), this feature must be [PERSON].

The ‘specialness’ of the  $\phi$ -feature [PERSON] has been noted by several authors in the literature (Bejar and Rezac 2003; Siewierska 2004; Baker 2008a; Preminger 2011). The implicational hierarchy in (161) resembles a hierarchy argued for by Preminger (2011) which derives the fact that PERSON-agreement seems to be more easily disrupted more easily than NUMBER-agreement. Clearly, the picture of Anti-Agreement that emerges from the survey in this work fits perfectly into the picture that has emerged from other effects with regards to the exceptionality of person.

#### 4.4 Anti-Agreement and Null Subjects

Since the paper that coined the term ‘Anti-Agreement Effect’, Ouhalla (1993), it has been recognized that there is a strong link between languages that exhibit Anti-Agreement and those which are pro-drop. In fact, the link was viewed as so central to the phenomenon that Ouhalla (1993) develops his entire theory of Anti-Agreement around this fact (see section 2.1). This link is robustly

confirmed by survey conducted for this paper: All languages in the survey are pro-drop. While recent analyses of Anti-Agreement have not attempted to analyze this fact, the correlation seems too strong not to ignore, and I believe any theory of Anti-Agreement should incorporate this fact into the analysis in some way.

## 5 Next Steps

Where does the project go from here? I believe that are several lines of inquiry I need to start on, from both an empirical standpoint and conceptual/empirical one. From an empirical standpoint, there are three main areas that I would like to pursue. First, from the time I have spent conducting the small cross-linguistic survey described in this paper, it has become clear to me that the likelihood of finding many more Anti-Agreement effects is high. Therefore, I will continue to search for new languages that exhibit Anti-Agreement. Specifically, more work needs to be done on Austronesian languages, as I believe that are many effects to be found there. Areally, I hope to conduct a more thorough survey of North America as well. Second, I hope to reach out to the researchers who work on the languages I have already begun studying to get more in depth data and fill in wholes in the empirical picture. Thirdly, I plan to begin tackling the question as to whether there are Anti-Agreement effects that target arguments other than 'subjects.' From a conceptual standpoint, the definition of Anti-Agreement offered in this paper opens up the way for finding such effects. This will require more nuanced work on the agreement and case systems of the languages already in the survey, and those that will be added as well.

From a theoretical standpoint, I first plan to start researching the connection between rich agreement systems and argument drop, as the connection between argument drop and Anti-Agreement has become abundantly clear to me. In many published descriptions of languages, there is not a clear line cut between agreement and clitic. Therefore, I hope to develop a better metric of what it counts to be 'agreement', as I was on murky ground for most of my survey. Finally, I plan to dive more deeply into what makes the feature [PERSON] different from other  $\phi$ -features, as I think the study of Anti-Agreement can add to the already large discussion on this issue.

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## Appendix A: List of Neutralization Patterns

Table 11 gives the pattern of feature neutralization for each language in the survey. The left hand side of the table shows which features are present in ‘normal agreement’ contexts, while the right side of the table shows features that are present in Anti-Agreement contexts. When a featural is marked in a given languages paradigm, a checkmark is put in the relevant column.

	Agreement Features			Anti-Agreement Features			Pattern
	Person	Gender	Number	Person	Gender	Number	
Bantu lgs. Ouargli Berber	✓	✓	✓		✓	✓	Type 3
Tashlhit Berber Matsigenka	✓	✓	✓			✓	Type 2b
Seereer Yimas Ben Tey	✓		✓			✓ ✓ (✓)	Type 2a
Tarifit Berber Italian Dial. Bare Yine Somali Gawwada Oromo Sheko Lelemi	✓	✓	✓				Type 1b
Maasai Dinka Tadaksahak Turkish Breton Welsh Mayan Halkomelem Palauan Chamorro	✓		✓				Type 1a

Table 11: Patterns of Neutralization

## Appendix B: Structural Summaries

This appendix offers two tables summarizing structural features of the languages in the survey. Table 12 contains the following information shown in (162). In all cases, a cell marked as ‘-’ means I do not have sufficient data bearing on that point.

- (162) a. **Word Order:** The basic word order in declaratives.  
 b. **Pro-Drop:** Whether the language is pro-drop.  
 c. **AAE Alignment:** The alignment pattern displayed by AAE triggering arguments.  
 d. **Long:** Whether or not the language displays Anti-Agreement when a subject is extracted from an embedded clause. ‘Yes’ means it does, ‘no’ means there is no AAE in those clauses.  
 e. **Neg:** Whether or not the language has Anti-Agreement in negated clauses. ‘Yes’ means Anti-Agreement survives under clausal negation. ‘No’ means it does not.  
 f. **TAM:** Whether or not Anti-Agreement is limited certain TAM values or requires certain TAM values. ‘Yes’ means Anti-Agreement is so limited, ‘no’ means it is not.

	Word Order	Pro-Drop	AAE Alignment	Long	Neg	TAM
Abo	SVO	yes	NOM	-	-	no
Arbore	SOV	yes	NOM	-	yes	no
Bare	SVO	yes	SPLIT-S	yes	yes	no
Ben Tey	SOV	yes	NOM	-	yes	no
Berber	VSO	yes	NOM	no	no	no
Celtic	VSO	yes	NOM	no	no	no
Chamorro	VSO	yes	ERG	yes	no	yes
Gawwada	SOV	yes	NOM	-	yes	no
Halkomelem	VSO	yes	NOM	-	-	no
Italian	SVO	yes	NOM	yes	-	no
Lelemi	SVO	-	NOM	-	yes	no
Lubukusu	SVO	yes	NOM	yes	-	no
Maasai	VSO	yes	NOM	-	no	no
Matsigenka	VSO	yes	NOM	-	no	no
Mayan	VSO	yes	ERG	yes	-	no
Palauan	VSO	yes	NOM	yes	yes	no
Seereer	SVO	yes	NOM	yes	yes	no
Sheko	SOV	yes	NOM	yes	yes	no
Tadaksahak	SOV	yes	NOM	yes	yes	no
Turkish	SOV	yes	NOM	no	yes	no
Yimas	SVO	yes	ERG/NOM	-	no	no
Yine	SVO	yes	NOM	-	yes	no

Table 12: Structural Typology

Table 13 shows which  $\bar{A}$ -constructions exhibit Anti-Agreement in the languages in the survey. A ‘yes’ means that Anti-Agreement does occur in a given construction, a ‘no’ means that it does not, a ‘-’ means I do not have sufficient data to determine whether it does or not.

	<b>Wh-question</b>	<b>Focus</b>	<b>Relative</b>
Abo	yes	optional	yes
Arbore	yes	yes	yes
Bare	yes	yes	yes
Ben Tey	yes	yes	no
Berber	yes	yes	yes
Celtic	yes	-	yes
Chamorro	yes	yes	yes
Gawwada	yes	yes	yes
Halkomelem	yes	yes	yes
Italian	yes	-	yes
Lelemi	yes	yes	yes
Lubukusu	yes	yes	yes
Maasai	yes	yes	yes
Matsigenka	yes	yes	yes
Mayan	yes	yes	yes
Palauan	yes	yes	yes
Seereer	yes	yes	yes
Sheko	yes	yes	-
Tadaksahak	yes	yes	yes
Turkish	no	no	yes
Yimas	yes	-	-
Yine	yes	yes	-

Table 13: Construction Types

## Appendix C: Morphological Profiles

The table in this appendix gives the morphological classification for Anti-Agreement constructions in each language of the survey. The first column, ‘Morphological Flavor’ refers to the criteria in (156). The second column, ‘Morphosyntactic Additives’, refers to the criteria in (157).

	Morphological Flavor	Morphosyntactic Additives
Abo	Alternative	AAE + $\emptyset$
Arbore	Default	AAE + $\emptyset$
Bare	Zero, Alt.	AAE + $\emptyset$
Ben Tey	Default	AAE + $\emptyset$
Berber	Nominal	AAE + $\emptyset$
Celtic	Default	AAE + $X_{TYP}$
Chamorro	Zero	AAE + $X_{ERG}$
Gawwada	Default	AAE + $\emptyset$
Halkomelem	Zero	AAE + $\emptyset$
Italian	Default	AAE + $\emptyset$
Lelemi	Alternative	AAE + $\emptyset$
Lubukusu	Alternative	AAE + $X_{TYP}$
Maasai	Zero	AAE + $X_{TYP}$
Matsigenka	Zero	AAE + $\emptyset/X_{SBJ}$
Mayan	Zero	AAE + $X_{ARG}$
Palauan	Zero	AAE + $X_{TAM}$
Seereer	Zero+Normal	AAE + $X_{EXT}$
Sheko	Zero	AAE + $\emptyset$
Tadaksahak	Zero	AAE + $X_{SBJ}$
Turkish	Zero	AAE + $X_{SBJ}$
Yimas	Zero	AAE + $\emptyset$
Yine	Zero	AAE + $\emptyset$

Table 14: Morphological Factors