An Intervention Approach to Antiagreement

Kunio Kinjo

1. Introduction

This paper argues that the so-called antiagreement effect (AAE: Ouhalla 1993), which refers to suppression of subject-predicate agreement that is induced by subject-extraction, should be accounted for as agreement intervention, in which an element with a certain feature intervenes between the extracted subject and T0. The analysis is based on Chomsky's (2000 et seq.) probe-goal theory with some non-trivial revisions: phrases can probe (Fujii 2001; Bošković 2007; Kato et al. 2014) and lower copies are invisible for probing (cf. Chomsky 2013, 2015a). Focusing on the data from Berber, Breton and Kinande, it will be argued that φ-feature-bearing C0, which triggers so-called wh-agreement (Chung 1998; Watanabe 1996) with the extracted subject, is an AAE-inducing intervener in those languages. The proposed analysis can correctly predict the following facts: (i) there are AAE-languages and non-AAE-languages, (ii) the AAE is only induced by subject-extraction, (iii) the AAE-languages differ as to whether long subject extraction induces the effect and (iv) the AAE can be undone in negative clauses in Berber and Breton. Finally, it will be shown that the intervention approach can extend to a hitherto unaccounted AAE data in Berber: the AAE which is induced by a negative concord item (Ouali 2005).

The following sentences from Berber (VSO; Afro-Asiatic) exemplify a proto-typical case of the AAE. The finite verb agrees with the subject in the canonical VSO sentence in (1a). However, when the subject is extracted by A'-movement as in wh-interrogatives (1b), relative clauses (1c) and clefts (1d), the verb has a special, non-agreement form, which is glossed as AAE.1

(1) Quebliyec Tamazight Berber (Ouali 2011)
   a. θʕla θamttut araw  
      3sgF.saw woman boys
      “The woman saw the boys.”
   b. mani θamttut ag ʕlan/*θʕla araw? 
      which woman C saw.AAE/ *3sgF.saw boys
      “Which woman saw the boys?”
   c. θamttut ag ʕlan/*θʕla araw 
      woman C saw.AAE/ *3sgF.saw boys
      “The woman who saw the boys”
   d. θamttut -a ag ʕlan/*θʕla araw 
      woman-this C saw.AAE/ *3sgF.saw boys
      “It was this woman who saw boys.”

This effect is also observed in Breton (VSO; Celtic) as in (2) and Kinande (SVO; Bantu) as in (3). Although they exhibit the AAE in all the three environments in (1), only wh-interrogative examples are shown here due to space limitation.

(2) Tregor Breton (Borsely and Stephen 1989)

petre paotreda a lenne / *lennent al levriou  
which boys C read. AAE / *read.3pl the books

“Which boys read the books?”

(3) Kinande (Schneider-Zioga 2007)

IyOndI yO u-langIra /*a-langIra Marya  
who1 C1 AAE.saw /* Agr-saw Mary

“Who saw Mary?”

Based on Chomsky’s (2000 et seq.) probe-goal theory of agreement with some non-trivial revisions, I will argue that this effect is induced if there is an φ-feature-bearing element in between the extracted subject and T0, which blocks the subject-predicate agreement. In what follows, it will be argued that in the three languages shown above, C0 has an unvalued φ-feature (uφ) in subject extraction contexts, which triggers so-called wh-agreement (Chung 1998; Watanabe 1996 a.o.) with the extracted subject, and it blocks agreement between the subject and T0. I call it the intervention account of the AAE, which is schematized in (4).

(4) The intervention account of the AAE

This paper is organized as follows: First, the distribution of the AAE in the three languages will be summarized in section 2. Then, the intervention account (4) will be spelled out in details in section 3. In section 4, it will be shown that the distribution of the AAE is explained under the proposed analysis. Section 5 extends the analysis to the AAE which is induced by a negative concord item in Berber. Section 6 concludes.

2. The distribution of the AAE

2.1. AAE- vs. non-AAE-languages

The first obvious fact about the AAE is that there are languages with this effect as described in the previous section, and those without it. As shown in (5) and (6), English and Arabic, for instance, do not show the AAE. Any satisfactory theory of the AAE is expected to explain the difference between the two groups of languages.

(5) a. Which boy likes Mary?  
    b. Which boys like Mary?

(6) ʔayy -u tullabin wasal -uu/*-a?  
    which -Nom students arrived -3pl/*-3sg

   “Which students have arrived?” (Ouhalla 1993)

2.2. No AAE by non-subject extraction

The second important fact about the AAE is that this effect is only induced by subject extraction. The following examples from Berber and Kinande show that non-subject-extraction cannot trigger the AAE morphology on finite verbs.
2.3. The AAE by long subject extraction

Thirdly, in some AAE-languages the effect is sensitive to locality of the subject extraction. Berber is one of them. Observe the following Berber example in (9). In the embedded clause, from which the subject is long extracted to the matrix clause, the finite verb agrees with the extracted subject, hence no AAE. On the other hand, Breton exhibits the effect even in embedded clauses, as exemplified in (10). To summarize, long subject extraction does not induce the AAE in Berber, while it does in Breton.

(9) Quebliyeen Tamazight Berber (Ouali 2011): No AAE by long extraction
mani θaməttuti i ag inna ʕli θʕla/*ʕlan t i argaz-nəz?

which woman C 3sgM.said Ali 3sgF.saw/*saw.AAE man-her

(10) Tregor Breton (Borsley and Stephen 1989): AAE by long extraction
petore paotred i a sonj deoc’h [a lenne/*lennent ti al levrioù]?
which boys C think to-2sg C read.AAE/*read.3pl the books

2.4. The AAE cancellation in negative clauses

Finally, in Berber and Breton, the AAE can be cancelled in negative clauses. In Berber, the AAE is optional – the finite verb can take either the subject agreement form or the AAE form as in (11). In Breton, finite verbs cannot appear with the AAE form – they have to have the subject-agreement form in negative clauses, as exemplified in (12).

(11) Tarifit Berber (Ouhalla 1993): AAE is optional in negative clauses
man tamghart ay ur tssn / yssn Mohand
which woman C Neg 3sgF.know/ know.AAE Mohand

(12) Breton (Ouhalla 1993): No AAE in negative clauses
ar vugale ne lennent/ *lenne ket al levr
the children Neg read.3pl/ read.AAE Neg the book

3. Analysis: The AAE as agreement intervention

The intervention account of the AAE is crucially based on the observation that in the AAE languages discussed so far, there is a complementizer-like element that appears immediately after the A’-extracted phrase (ag/ay in Berber, a in Breton, yo/kyo in Kinande). This phenomenon has been called wh-agreement in the literature (Chung 1994, 1998; Watanabe 1996 a.o.). What is particularly important for the current discussion is the fact that the wh-agreement complementizer in Kinande inflects for the noun class of the extracted phrase (1 = yo, 2 = bo, 7 = kyo, 8 = byo), as exemplified in (13).
The *wh*-agreement fact in Kinande indicates that it is a kind of φ-feature agreement between the extracted phrase and C°. I assume that it is true for the other *wh*-agreement languages although they may not have morphological inflection on the complementizer. The core insight of the intervention account of the AAE is that *wh*-agreement blocks subject-predicate agreement when the extracted phrase is the subject.

The account is based on the following assumptions:

(14) a. Subject movement to Spec CP cannot proceed via Spec TP (Rizzi 1990; Rizzi and Shlonsky 2007; Bošković 2008; Erlewine 2016)
b. AGREE takes place at the phase level (Chomsky 2007, 2008).
d. *Wh*-agreement is φ-agreement
e. Lower copies/traces are invisible for probe operations by minimal search (Chomsky 2013, 2015a; Epstein et al. 2014), i.e. lower copies cannot be probed.

First, I assume that when subjects move to Spec CP, they have to move there directly, skipping Spec TP (14a). As I will discuss in 4.4, I adopt Erlewine’s (2016) Anti-Locality constraint, which bans ‘too short’ movements in syntax. Secondly, with Chomsky (2007, 2008), I assume that the operation AGREE takes place when the phase is complete. In effect, T° does not probe at the timing of its introduction to the derivation, but it has to be delayed until the CP phase is completed. (14c) and (14e) may sound more radical than the others. It is standardly assumed that only syntactic heads (e.g. T° for φ-agreement) act as probes. However, following Ishii (2001), Bošković (2008) and Kato et al. (2014), I claim that phrases can also probe. Especially, I adopt Kato et al.’s (2014) idea that even phrases with interpretable features can initiate probing. As for (14e), a similar constraint is proposed for Labeling Algorithm (LA) in Chomsky (2013, 2015a). If AGREE and LA are implemented by the same simple search operation (i.e. minimal search) as speculated by Chomsky (2013, 2015a, 2015b), it is not unreasonable to impose the same constraint on the two operations.

Now let us consider the derivation of a subject extraction construction in a AAE-language, which is schematized in (15). First, the external argument (EA; = subject) moves from Spec vP to Spec CP, without stopping by Spec TP (cf. 14a). Now, the CP-phase is completed, and AGREE takes place (cf. 14b). The extracted subject probes (cf. 14c) and AGREES with C° for φ-feature, which is morphologically realized as a *wh*-agreement complementizer (cf. 14d). Because the subject is already in a AGREE relation with C°, it cannot reach to T° for subject-predicate agreement due to the minimality condition (Rizzi 1990). As a result, non-agreement or default agreement morphology is assigned to T°, which make the finite verb to be realized with what we call the AAE-form. Note that this account does not prevent syntactic heads from probing. Still, since lower copies are assumed to be invisible for the probe operation, T° cannot probe for the subject as its goal (cf, 14e).3

3 In the AAE languages discussed here, V-v is raised to T°, but crucially, should not to C°. If V-v is raised to C° along with T°, it raises the φ-features on T to C, which makes it possible for the extracted subject to probe for the φ-feature on T. I leave the implications of this possibility for future research.
In this way, under the proposed analysis, the AAE is predicted to arise when there is an agreement intervenor between the extracted subject and T\(^0\). In the three languages discussed in this paper, C\(^0\) with an unvalued φ-feature, which triggers wh-agreement, takes the role. In the following section, I will show that the distribution of the AAE is naturally accounted for under (15). In section 5, it will be shown that wh-agreement is not the only AAE-inducing intervener, but negation-agreement between a negative concord item and Neg\(^0\) can also triggers the effect in certain configurations.

4. Deriving the distribution of the AAE

4.1. AAE- vs. non-AAE-languages

Why are there non-AAE languages such as English and Arabic? The intervention account provides a straightforward answer to it; in non-AAE-languages, there is no φ-feature on C\(^0\), hence no wh-agreement. If there is no φ-feature on C\(^0\), there is nothing to intervene between the extracted subject and T\(^0\) for φ-agreement, as represented in (16). Therefore, the AAE does not arise in those languages.

(16) No wh-agreement, no AAE

\[
\begin{array}{c}
\text{[CP} \text{EA}_{\text{a}}\{\phi\} \quad \text{C} \quad \text{[TP} \text{T}_{\text{uφ}} \quad \text{[vp} \text{EA}_{\text{a}} \quad \text{v} \ldots\text{]} \text{]} \\
\end{array}
\]

φ-Agr (Subj-Agr Agr)

4.2. No AAE by non-subject-extraction

The second fact to be accounted for is that the AAE is induced only by subject-extraction. The object wh-interrogative examples in Berber and Kinande, in which the AAE is not present, are repeated below as (17) and (18).

(17) Quebliyeen Tamazight Berber (Ouali 2011)

ma ag iswa/ *swan Mohand
what C 3sgM.drank/ *drank.AAE Mohand
“What did Mohand drink?”

(18) Kinande (Schneider-Zioga 2007)

ekihi kyo Kambale a-alangila/ *u-alangila
what7 C7 Kambale Agr-saw/ *AAE-saw
“What did Kambale see?”

This is easily accounted for under the proposed analysis. In those constructions, as shown in (19), what is raised to Spec CP is a non-subject phrase and the subject is moved to Spec TP.\(^4\) The former is responsible for wh-agreement and the subject can probe for T for φ-feature. Consequently, the finite verb appears with the subject-agreement form.

\(^4\) In Berber and Breton, I assume that subjects stay at Spec vP or move to somewhere lower than T\(^0\) (see Belleti 2004), and V-v moves to T\(^0\) as standardly assumed for rich agreement/pro-drop languages, which makes their VSO word order (See Ouali 2011: chapter 4 and works cited therein for Berber; Roberts 2005: chapter 1 and works cited therein for Celtic languages including Breton).
4.3. The AAE by long subject extraction

Next, let us turn to the third fact that long subject extraction exhibits the AAE in some languages (e.g. Berber, repeated here as (20)), but not in the others (e.g. Breton, repeated here as (21)).

(20) Quebliyeen Tamazight Berber

mani əamattutini ag inna ʕli [ʕsλan tə argaz-ʔnas]?

which woman C 3sgM.said Ali 3sgF.saw/AAE man-her

“Which woman did Ali say saw her husband?”

(21) Tregor Breton

petore paotred a sonj deoc’h [əlennent al levrioù]?

which boys C think to-2sg C read.AAE/AAE the books

“Which boys do you think read the books?”

Under the intervention account, it is predicted that presence of wh-agreement and the AAE are correlated each other. This prediction is born out in embedded clauses in the languages under discussion. In Berber (20), wh-agreement complementizer cannot appear in the embedded clause (Ouali 2011), and the AAE is absent. On the other hand, the embedded clause in Breton (21) exhibits the AAE, where the wh-agreement complementizer a must be present (Borsley and Stephen 1989). Kinande provides further support for the analysis. In this language, the wh-agreement complementizer is optional in embedded clauses. If it is present, the AAE arises (22a), no AAE otherwise (22b).

(22) Kinande

a. IyOndi yO Kambale akaBula [cp nga-yO ti k-λalangfra Marya]]]

who1 C1 Kambale wondered if-C1 AAE-saw Mary

“lit. Who does Kambale wondered if ___ saw Mary?”

b. IyOndi yO Kambale akaBula [cp nga ti a-kalangfra Marya]]]

who1 C1 Kambale wondered if AGR-saw Mary

These data provide strong supportive evidence to the intervention account of the AAE, which predicts the correlation between wh-agreement and the AAE. The correlation between the two in the three languages is summarized in (23).

(23) Wh-Agr C0 and the AAE in embedded clauses

<table>
<thead>
<tr>
<th></th>
<th>Berber</th>
<th>Breton</th>
<th>Kinande</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wh-Agr C0</td>
<td>NO</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>AAE</td>
<td>NO</td>
<td>YES</td>
<td>YES</td>
</tr>
</tbody>
</table>

4.4. The AAE cancellation in negative clauses

Finally, consider the fact that the AAE can be undone in negative clauses in Berber and Breton. Remember that in Berber, the AAE is optional, and in Breton, it is obligatorily missing in negative clauses, as repeated here as (24) and (25), respectively.
(24) Tarifit Berber (Ouhalla 1993): AAE is optional
man tamghart ay ur tssn / yssn Mohand
which woman C Neg 3sgF.know/ know.AAE Mohand
“Which woman doesn’t know Mohand?”

(25) Breton (Ouhalla 1993): No AAE
ar vugale ne lennant/ *lenne ket al levr
the children Neg read.3pl/ read.AAE Neg the book
“The children who did not read the books”

In order to account for this with the proposed analysis, for the assumption (14a), subject extraction cannot take place via Spec TP, I adopt Erlewine’s (2016) anti-locality constraint of A’-movements (26).

(26) Spec-to-Spec Anti-Locality:
A’-movement of a phrase from the Specifier of XP must cross a maximal projection other than XP.

According to this constraint, if subject moves to Spec TP first, and then to Spec CP, the second movement (from Spec TP to Spec CP), which is A’-movement, is prohibited because it does not cross a maximal projection other than TP, as schematically represented in (27). Due to this constraint, subject-extraction cannot proceed via Spec TP because Spec TP and Spec CP is ‘too close’.

(27) [CP EAi C [TP EAi T [vP EAi v …]]]
Too short!

The anti-locality constraint (26) implicates that if there is an another maximal projection between TP and CP, the subject is allowed to move to Spec TP on the way to Spec CP. This is exactly what happens in negative clauses in Berber and Breton if we follow Ouhalla (1991, 1993) in that NegP is located in between TP and CP in the two languages. When NegP is projected, subject extraction can proceed via Spec TP, because the movement from Spec TP to Spec CP is no longer prohibited by the anti-locality constraint due to presence of NegP, as shown in (28a). Consequently, the subject can leave two higher copies: one is at Spec CP and the other at Spec TP. The former AGREEs with C0 for wh-agreement, and the latter with T0 for subject-predicate agreement. Therefore, the AAE does not exhibit there. I assume that EA’s movement to Spec NegP is optional in Berber while it is obligatory in Breton.

(28) a. [CP EAi C [NegP Neg [TP EAi T [vP EAi v …]]]]
Long enough!

b. [CP EAi φ C [NegP Neg [TP EAi φ [vP EAi v …]]]]
AGREE (X,C) AGREE (EA, T)
φ-Agr (=Wh-Agr) φ-Agr (Subj-Pred-Agr)

5. The AAE by NCI-subjects

Before concluding the paper, I argue that the proposed analysis can extend to an AAE case, in which wh-agreement is not involved. Consider the following pair of sentences in Berber, where the subject is the negative concord item (NCI), agidge ‘no one’. In the canonical VSO word order as in (29a), the finite verb has the subject-agreement form. On the other hand, in the SVO sentence (29b), where the

5 The first movement (from Spec vP to Spec TP) is not subject to (26) since it is A-movement.
6 Note that (14e) states that lower copies cannot be probed, but it does not prevent them from probing.
NCI-subject is placed sentence-initially, the AAE arises. This data is significant for the current discussion because it does not involve wh-agreement but still exhibits the AAE.

(29) Quebliyeen Tamazight Berber (Ouali 2005)

a. ur i/ddi/ *iddin agidge Neg > V > S: No AAE
   Neg 3sg.left left.AAE no one
   “No one left.”

b. agidge ur i/ddin/ *iddi S > Neg > V: AAE
   no one Neg left.AAE 3sg.left
   “No one left.”

The proposed analysis provides a way to analyze this hitherto unaccounted data in the AAE literature as an instance of agreement intervention on par with the cases discussed so far. First, I follow Zeilstra’s (2004) in that NCIs are licensed via \textit{AGREE} with \textit{Neg} for their [NEG] feature (see also Haegeman and Lohndal 2010 and works cited therein). Secondly, I assume that NCIs have both [NEG] and φ-feature. With these assumptions in mind, consider the derivation of (29a) and (29b), represented as (30a) and (30b), respectively. Remember that NegP is projected above T in Berber (see 4.4).

(30) a. Neg > V > NCI-Subj : No AAE b. NCI-Subj > Neg > T : AAE

\begin{figure}
\centering
\begin{tikzpicture}
  \node (vP) at (0,0) {vP};
  \node (Neg) at (-4,-2) {Neg [NEG]};
  \node (EA) at (-2,1) {EA \{φ\}[NEG]};
  \node (T) at (2,-2) {T \{uφ\}};
  \draw (Neg) -- (vP);
  \draw (EA) -- (vP);
  \draw (T) -- (vP);
  \draw (Neg) -- (EA) node[above] {\textbf{\checkmark AGREE (Neg, EA) = NEG-Agr}};
  \draw (Neg) -- (T) node[below] {\textbf{\checkmark AGREE (T, EA) = Subj-Pred Agr}};
\end{tikzpicture}
\end{figure}

\begin{figure}
\centering
\begin{tikzpicture}
  \node (vP) at (0,0) {vP};
  \node (Neg) at (-4,-2) {Neg [NEG]};
  \node (EA) at (-2,1) {EA \{φ\}[NEG]};
  \node (T) at (2,-2) {T \{uφ\}};
  \draw (Neg) -- (vP);
  \draw (EA) -- (vP);
  \draw (T) -- (vP);
  \draw (Neg) -- (EA) node[above] {\textbf{\checkmark AGREE (EA, Neg) = NEG-Agr}};
  \draw (Neg) -- (T) node[below] {\textbf{\checkmark AGREE (T, EA) = Subj-Pred Agr}};
\end{tikzpicture}
\end{figure}

In (30a), where the subject is assumed to stay lower than T, Neg and T initiate the probe operation for their [NEG] and φ-feature, respectively. Their closest goal is the subject, which has the two agreement features, and the two agreement relations (NEG-agreement and φ-agreement) are successfully established. Thus, the AAE does not arise here. On the other hand, in (30b), where the subject is raised higher than Neg and T, the probe is the NCI subject. I assume that it probes for both [NEG] and φ-feature, and first AGREES with Neg for NEG-agreement as it is the closest goal. Since the subject is already agreed with Neg, it cannot probe for T for φ-agreement, which results in the AAE.

Note that in order to make the analysis above to work out, the following assumption should be made. In standard probe-goal theories, it is implicitly or explicitly assumed that what initiate the probe operation is an individual feature, as represented in (31). Under this model, given the situation (31), where the highest element X has two agreement features, each feature probes for its matching feature in its search domain, and no intervention effect is expected to arise there. However, in (30), it is assumed that what AGREE establishes is relations between syntactic objects, rather than features. Under this model, as represented in (32), if the probe X has two features, it probes for a syntactic object which has those features, either one of them or both. Then, X finds Y, which has one of the matching features with X, and they AGREE. Since X is now AGREEd with Y, it cannot initiate further probing.

(31) Probing by features

\begin{figure}
\centering
\begin{tikzpicture}
  \node (X) at (-4,0) {X [F₁] [F₂]};
  \node (Y) at (0,0) {Y [F₁]};
  \node (Z) at (4,0) {Z [F₂]};
  \draw (X) -- (Y) node[below] {AGREE ([F₁],[F₁])};
  \draw (Y) -- (Z) node[below] {AGREE ([F₂],[F₂])};
\end{tikzpicture}
\end{figure}

(32) Probing by syntactic objects

\begin{figure}
\centering
\begin{tikzpicture}
  \node (X) at (-4,0) {X [F₁][F₂]};
  \node (Y) at (0,0) {Y [F₁]};
  \node (Z) at (4,0) {Z [F₂]};
  \draw (X) -- (Y) node[below] {AGREE (X, Y)};
  \draw (X) -- (Z) node[below] {*AGREE (X, Z)};
\end{tikzpicture}
\end{figure}
6. Concluding remarks

In this paper, I proposed the intervention approach to the AAE. I argued that the AAE occurs if the language has an unvalued φ-feature on C0, which triggers wh-agreement with the extracted subject, and it blocks subject-predicate agreement between the extracted subject and T0. I showed that the analysis correctly predicts the following facts about the AAE:

(33) a. Presence/absence of the AAE across languages
   b. Absence of the AAE in non-subject extraction constructions
   c. Presence/absence of the AAE in embedded clauses in AAE languages.
   d. Absence/optionality of the AAE in negative clauses in Berber and Breton.

Furthermore, I suggested that wh-agreement is not the AAE-inducing-intervener. The AAE data in section 5 indicates that NEG-agreement can induce this effect in certain configurations. This leaves a possibility that the proposed analysis may extend to AAE-languages which do not have wh-agreement, such as Northern Italian dialects (Trentino and Fiorentino; Brandi and Cordin 1989).

The intervention account of the AAE is based on some non-trivial revisions of Chomsky’s probe-goal theory. They include the assumptions that phrases can act as probes and lower copies are invisible for probe operations by minimal search. In Kinjo (2015), I argued that this version of probe-goal theory can provide an account for an asymmetry between pre- and post-verbal subjects with respect to richness of the verbal agreement they control. I proposed that the asymmetry should be attributed to the different roles of the subject, depending on its relative position to T0: pre-verbal subjects act as probes, while post-verbal subjects as goals for φ-agreement (See also Kobayashi (2014) for a similar account). I leave further empirical implications of the revised probe-goal theory for future research.

Finally, it should be noted that the nature of the AAE is far more complicated than I presented here (see Baier 2016) and this paper is not intended to provide a full-fledged account for every aspect of the effect. For instance, in some AAE-languages, this effect appears to be ‘partial’ – person and gender agreement get lost while number agreement retained (e.g. dialects of Tamazight Berber; see Ouhalla 2005). Also, in Bantu languages, the AAE is induced only by class 1 nominal phrases (see Henderson 2013 a.o.). I leave it for future research whether the intervention account can extend to those cases.

References


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