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Bachelor's Thesis:

A Cross-Linguistic Study of the Anti-Agreement Effect

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Abstract

Recently, more and more cases of apparent (unexpected) lack of subject-verb agreement have come to the attention of linguists, in languages that otherwise display subject-verb agreement. This effect, normally associated with the extraction of the subject, was coined the Anti-Agreement Effect (AAE) in Ouhalla (1993). In this thesis, we have considered data from five Anti-Agreement Effect languages, and from English. These cross-linguistic data exhibit a considerable amount of variety; the only certainty seems to be that AAE languages are *pro*-drop languages, but this was noted from early on. Also, the data strongly suggest that it has to do with movement as opposed to resumption. We have weighed six proposals to account for these data, but found only one possible explanation of the phenomenon: Baker (2008), who suggests, in short, that there is a parameter determining whether ϕ-features are deleted in a movement chain along with semantic (scope-defining) features or phonological features or neither. Additionally, it must be assumed that apparent exceptions to this rule involve (covert) resumption, such that agreement is again required. The languages displaying these exceptions, Berber and Kinande in particular, have indeed been shown to exhibit covert resumption of the subject in certain circumstances.

Keywords

Contents

iv

Chapter 1

Introduction

Subject-verb agreement is a widespread phenomenon most non-linguists take for granted. It refers to the fact that in many languages the verb has to *agree* with the subject for the sentence to be grammatical. In other words, the verb has to be *inflected* properly, like in the following examples.

(1)   a. I love her.

        b. *I loves her.

(2)   a. *She love me/you/him/us/them.

        b. She loves me/you/him/us/them.

(We put an asterisk before a sentence when it is ungrammatical.) These examples show that the verb requires the third person ending -*s*, only when the subject is a third person ('he/she/it'). If we vary the person of the object, as indicated in (2), the grammaticality is unaltered, so it is the subject indeed that is responsible for this requirement. Now, example 2 concerns a third person singular subject, but the grammaticality flips again for third person plural subjects ('they').

(3)   a. They love me.

        b. *They loves me.

This shows that the person of the subject is not its only attribute relevant for subject-verb agreement, but also whether it is singular or plural, in the English case. These attributes of the subject, and of words in general, have come to be known as *features*; they are often denoted between brackets and in small capitals, e.g., [PERSON]. Cross-linguistically, [PERSON] and [NUMBER] are not the only features involved in subject-verb agreement; all such features are referred to as ϕ-*features*[1], the best known of which are [PERSON], [NUMBER] and [GENDER]. To illustrate [GENDER], here is an example from Modern Hebrew, where a feminine subject requires a feminine suffix.

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[1]The greek letter ϕ (phi) simply stands for feature, perhaps because ϕ-features are the most prototypical of features.

(4) Hu   ohev   oti.
     he   love.PRES me
     'He loves me.'

(5) Hi   ohev   -et oti.
     She   love.PRES -F   me
     'She loves me.'

Of course, there are also famous examples of languages that apparently have no subject-verb agreement at all, like Chinese and Japanese.

Grammarians of all times have noticed and described these facts, but recently, more and more cases of apparent (unexpected) lack of subject-verb agreement have come to the attention of linguists, in languages that otherwise display subject-verb agreement. This effect, normally associated with the extraction of the subject, was coined the Anti-Agreement Effect (AAE) in Ouhalla (1993). Here are some examples from Tamazight Berber (Ouali, 2011), a language spoken in Northern Africa.

(6) θəʕla   θamttut araw
     3.sg.F.see.PERF   woman   boys
     'The woman saw the boys.'

(7) a. *mani θamttut ag   θʕla   araw
             which woman   COMP 3.sg.F.see.PERF boys
             'Which woman saw the boys?'

     b. mani θamttut ag   ʕlan   araw
         which woman   COMP see.PERF.PART   boys
         'Which woman saw the boys?'

(8) a. ma   ag   inna   ʕli θəʕla   araw?
         who COMP 3.sg.M.say.PERF Ali 3.sg.F.see.PERF boys
         'Who did Ali say saw the boys?'

     b. *ma   ag   inna   ʕli ʕlan   araw?
             who COMP 3.sg.M.say.PERF Ali see.PART   boys
             'Who did Ali say saw the boys?'

Here, the subject is questioned and placed at the front of the sentence; as a result, a non-agreeing, 'participial' form of the verb is required in (7). Since we have just seen that *subject*-verb agreement is all about the subject, it is not surprising that the AAE has also been related to the subject; moreover, objects never trigger the effect. Also, it is tempting to associate the effect to the closeness of the subject to the verb, since extraction seems to be the cause of it. However, why then is there a grammaticality contrast between (7) and (8), and why is the same contrast absent in other languages?

These and other questions will be addressed in this thesis. We do not expect to solve this now longstanding puzzle, but we aspire to get a better understanding of it. In doing this we have compiled a cross-linguistic dataset in Chapter 2 and collected a number of analyses in Chapter 3. We also evaluate each analysis in Chapter 3, while in Chapter 4 we compare and discuss them as a whole. Finally, in Chapter 5 we will formulate the conclusions of our research.

Chapter 2

The data

As this is a cross-linguistic study, we will consider data from different languages. Actually, most of the languages considered will even be from different language families. This plethora of attestations goes to show that the Anti-Agreement Effect is not just an idiosyncrasy, but a phenomenon that calls for a more general explanation. The most cited and probably first significant work on the AAE, Ouhalla (1993), already was cross-linguistic in nature, to which this thesis could in a way be considered a modest sequel. Actually, the languages under consideration are the same, except that we have replaced the Italian varieties Fiorentino and Trentino by the Bantu languages Kinande and Ibibio. This way, our dataset is more varied and we can more easily take several recent analyses into account.

In the following, we will supply examples of the three types of sentence where the subject is typically extracted, insofar we have found them in the literature. These three types are the sentences where the subject is questioned, relativized or clefted, respectively. We intend the term *extraction* to be a neutral term, covering both (successive-cyclic) *movement* and *resumption*. Resumption supposes the extracted element to be resumed by a pronoun, like in (9) below; in some cases, this resumptive pronoun is not pronounced, but still analyzed as such and denoted *pro*. The same *pro* is assumed to occupy the subject position in *pro*-drop languages, where the subject can be 'dropped' from a sentence. Example 10 from Borsley and Stephens (1989) is a Breton example of this.

(9)   Rose, I love her.

(10)   Levrioù a   lennont   *pro.*
        books   COMP read.3.pl
        'They read books.'

In all cases, a pronoun requires regular agreement, if necessary; e.g., a pronoun in the subject position requires subject-verb agreement. For this reason, a *pro* cannot cause the AAE. Consequently, as we will see in Chapter 3, most analyses associate the AAE with the only alternative to resumption: movement. In movement, the extracted element is not resumed, but moved, though leaving behind a *trace*, denoted *t*. It is widely believed (see, e.g., McCloskey, 2002)

that there is no such thing as long-distance movement, but only repeated local movement, thus leaving a whole trail of traces. This is called *successive-cyclic* movement. The linguists that relate the AAE to movement, assume that t does not to require (subject-verb) agreement in *pro*-drop languages (probably caused by the use of *pro*, which does require agreement), even though in other languages t does license agreement, e.g. in English.

In this chapter we will present data from five languages (or six, if we count English). For each language, we will start out with an example of an ordinary sentence, where the subject is not extracted and the verb bears canonical agreement. Next, we will cite examples of the three types of extraction mentioned above, in that order. Each type will be represented by a pair of sentences, the first of which with canonical agreement, and the second without, i.e., showing an AAE. Since it is well established (e.g., in Ouhalla, 1993) that languages differ with respect to the AAE when an embedded subject is extracted, we will also supply analogous examples of long-distance subject extractions. To sum up, the following is an English example of the template we will use in presenting the data.

(11)   The man suggests a solution.

(12)   a. Who suggests a solution?
       b. * Who suggest a solution?

(13)   a. the man that suggests a solution
       b. * the man that suggest a solution

(14)   a. It is the man who suggests a solution.
       b. * It is the man who suggest a solution.

Now for the embedded examples.

(15)   You think the man suggests a solution.

(16)   a. Who do you think suggests a solution?
       b. * Who do you think suggest a solution?

(17)   a. the man that you think suggests a solution
       b. * the man that you think suggest a solution

(18)   a. It is the man who you think suggests a solution.
       b. * It is the man who you think suggest a solution.

We see from these sentences that English never exhibits an AAE.

2.1   Bantu

2.1.1   Ibibio

The first data are from Baker (2008). Ibibio requires a special morpheme *í-* when the subject is questioned, or relativized, instead of the canonical agreement displayed elsewhere. The accent on the morpheme denotes a high tone, which is lexical in Ibibio.

(19) Okon á- ke- dia ikpaŋ.
Okon 3.sg- PAST- eat porridge

'Okon ate porridge.'

(20) a. * Anie a- ke- dia ikpaŋ?
who 3.sg- PAST- eat porridge

'Who ate porridge?'

b. Anie í- k- i- dia ikpaŋ?
who ANTI.AGR- PAST- ANTI.AGR- eat porridge

'Who ate porridge?'

(21) a. * Ami m- ma- kɨt ebot se a- ke- ta udia.
I 1.sg- PAST- see goat that 3.sg- PAST- eat yam

'I saw the goat that ate the yams.'

b. Ami m- ma- kɨt ebot se í- k- i-
I 1.sg- PAST- see goat that ANTI.AGR- PAST- ANTI.AGR-
ta udia.
eat yam

'I saw the goat that ate the yams.'

Baker (2008) provides no clefts, nor embedded examples, except for some *wh*-questions.

(22) Owo a- ma- bo ke afɨt ebot e- ma- e- kpa.
person 3.sg- PAST- say that all goat 3.pl- PAST- 3.pl- die

'Someone said that every goat died.'

(23) Afɨt owo e- ke- bo ke anie i- k-
all person 3.pl- PAST- say that who ANTI.AGR- PAST-
i- kpa?
ANTI.AGR- die

'Who did everyone say died?'

(24) Okon a- kere ke anie i- di- dep ebot
Okon 3.sg- think that$_{([-\text{WH}])}$ who ANTI.AGR- FUT- buy goat
mkpɔŋ?
tomorrow

'Who does Okon think will buy a goat tomorrow?'

As apparent from these last examples, Ibibio utilizes *wh*-in-situ, but even embedded subjects do trigger an AAE upon extraction, in spite of the fact that the extraction is covert, according to standard assumptions. This is what makes the Ibibio evidence crucial to our research.

2.1.2 Kinande

The AAE in the Kinande language is studied in Schneider-Zioga (2000, 2007), amongst others. See also Henderson (2009a, 2011), where the language is treated in the context of other Bantu languages as well, such as Bemba and Dzamba. The following sentences are from Schneider-Zioga (2000, 2007).

(25) Kambale a-   alangira Marya
     Kambale AGR- saw   Mary
     'Kambale saw Mary.'

(26) a. *iyondi yo   a-   alangira Marya
        who   that$_{focus}$ AGR- saw   Mary
        'Who saw Mary?'

     b. iyondi yo   u-   alangira Marya
        who   that$_{focus}$ ANTI.AGR- saw   Mary
        'Who saw Mary?'

(27) omukali oyo u-   anzire Kambale
     woman   that ANTI.AGR- likes Kambale
     'the/a woman that likes Kambale'

(28) a. *si-   ha-   li mundo a-   kayenda
        NEG- there- be person AGR- left
        'Nobody left.'

     b. si-   ha-   li mundo oyo u-   kayenda
        NEG- there- be person that ANTI.AGR- left
        'There is nobody that left.' / 'Nobody left.'

Unfortunately, we found no ungrammatical counterpart of sentence 27 in the literature, but it was stated in Schneider-Zioga (2007) that this was the required form. The examples 28 are cleft sentences, which also require the AAE as expected. Of the few embedded examples we found, we provide a few from Baker (2003); Schneider-Zioga (2000).

(29) Marya a-   kabula Yosefu nga- mo-   a-   gulire
     Maria AGR- wonder Joseph if-   AFF(irmative)- AGR- bought
     amatunda.
     fruit
     'Maria wonders if Joseph bought fruits.'

(30) a. iyondi yo   Kambale a-   kabula ng' a-   kalangira
        who   that$_{focus}$ Kambale AGR- wondered if   AGR- saw
        Marya?
        Mary
        'Who did Kambale wonder if (he) saw Mary?'

     b. iyondi yo   Kambale a-   kabula nga- yo u-
        who   that$_{focus}$ Kambale AGR- wondered if-   that ANTI.AGR-
        kalangira Marya?
        saw   Mary
        'Who did Kambale wonder if (he) saw Mary?'

Oddly, both canonical agreement and anti-agreement are possible here, but note the difference in complementizer(s)[1]. From these examples, we can also see that

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[1]In Schneider-Zioga (2007), amongst others, the author argues that (30a) is a case of resumption and (30b) of successive-cyclic movement; see her complete analysis in section 3.1.2. Note that in Irish (see, e.g., McCloskey, 2002) a difference in complementizers reflects just this distinction.

we have overt subject extraction in Kinande, though non-subject *wh*-movement is normally performed covertly, like in this example of a *wh*-object.

(31) Kambale a-   alangira ndi?
      Kambale AGR- saw   who
      'Who did Kambale see?'

Baker (2003); Schneider-Zioga (2000, 2007) argue that Kinande subjects are canonically dislocated, that is, base-generated in a high position and resumed by a *pro* in a lower position (Spec-TP). For example, negative polarity items and (other) non-specific expressions cannot be subjects, unless they are clefted, like 'nobody' in (28). In addition, a *wh*-subject must be accompanied with an (agreeing) complementizer (see (26) as opposed to (32)), that normally functions as a focus marker (33); the only exception to this is when another constituent is also questioned, and focused instead (34).

(32) * (iyo)ndi a/u-   alangira Marya?
        who   AGR/ANTI.AGR- saw   Mary
        'Who saw Mary?'

(33) ekitabu kyo   Kambale a-   asoma
      book   that$_{focus}$ Kambale AGR- read
      '(It's) the book (that) Kambale read.'

(34) ekihi kyo   ndi a-   kalangira?
      what that$_{focus}$ who AGR- see
      'What (does) who see?'

Baker (2003); Schneider-Zioga (2000, 2007) take this focus position to be a position, distinct from the canonical subject position, to which the subject is moved when focused. So, we again see a correlation of agreement with resumption, and of anti-agreement with movement.

2.2 Berber

The following (Tamazight) Berber sentences are from Ouali (2011), but see also Ouhalla (1993, 2005); Ouali and Pires (2005); Ouali (2006, 2008).

(35) θəʕla   θamttut araw
      3.sg.F.see.PERF woman boys
      'The woman saw the boys.'

(36) a. * mani θamttut ag   θʕla   araw
          which woman COMP 3.sg.F.see.PERF boys
          'Which woman saw the boys?'

      b. mani θamttut ag   ʕlan   araw
         which woman COMP see.PERF.PART boys
         'Which woman saw the boys?'

(37) a. * θamttut ag   θʕla   araw
          woman   COMP 3.sg.F.see.PERF boys
          'the woman who saw the boys'

     b. θamttut ag   ʕlan   araw
         woman   COMP see.PERF.PART boys
         'the woman who saw the boys'

(38) a. * θamttut -a   ag   θʕla   araw
          woman   -this COMP 3.sg.F.see.PERF boys
          'It was this woman that saw the boys.'

     b. θamttut -a   ag   ʕlan   araw
         woman   -this COMP see.PERF.PART boys
         'It was this woman that saw the boys.'

The local extraction cases thus require a noninflected form of the verb, traditionally known as the 'participle'. Long-distance extraction, on the other hand, requires canonical agreement, as can be seen below. For completeness' sake, Tarifit Berber sentences 39 from Elouazizi (forthcoming) and 41 from Ouhalla (1993) were added, because Ouali (2011) only provided sentences 40 and 42. Consequently, different varieties (and transcriptions) of Berber are used here, but the agreement pattern is the same.

(39) nna   -n   qa aʳyaz y-   zra   Mohand
      say.PERF -3.pl that man   3.sg.M- see.PERF Mohand
      'They said that the/a man saw Mohand.'

(40) a. ma ag   inna   ʕli θəʕla   araw?
          who COMP 3.sg.M.say.PERF Ali 3.sg.F.see.PERF boys
          'Who did Ali say saw the boys?'

     b. * ma ag   inna   ʕli ʕlan   araw?
          who COMP 3.sg.M.say.PERF Ali see.PART boys
          'Who did Ali say saw the boys?'

(41) tamghart nni   nna   -n   qa t-   zra   Mohand
      woman   COMP say.PERF -3.pl that 3.sg.F- see.PERF Mohand
      'the woman that they said saw Mohand'

(42) a. ʕli ay   θənna   Məryəm yədda.
          Ali COMP 3.sg.F.say.PERF Miriam 3.sg.M.leave.PERF
          'It was Ali that Miriam said left.'

     b. * ʕli ay   θənna   Məryəm dan.
          Ali COMP 3.sg.F.say.PERF Miriam leave.IMP.PART
          'It was Ali that Miriam said left.'

2.3   Celtic

The AAE has been found in the Celtic languages Welsh, Irish[2] and Breton. Here, we use Breton examples from Borsley and Stephens (1989) and Ouhalla

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[2]Ironically, in an Irish context "Anti-Agreement" is a political term as well.

(1993). The agreeing verbs below have the so-called synthetic form, whereas the non-agreeing counterpart is known as the analytic form; the latter could be regarded as uninflected, or as inflected with 'default' agreement, which is also used for the third person singular. The following examples show that the analytic form (AAE) is required as a result of subject extraction in Breton.

(43) Levrioù a   lennont.
      books   COMP read.3.pl

      'They read books.'

(44) a. *Petore paotred a   lennent   al levrioù?
           which boys   COMP read.3.pl the books

           'Which boys read the books?'

      b. Petore paotred a   lenne al levrioù?
          which boys   COMP read the books

          'Which boys read the books?'

(45) a. *Ar vugale   a   lennent   al levrioù a   zo amañ.
           the children COMP read.3.pl the books   COMP is here

           'The children who read the books are here.'

      b. Ar vugale   a   lenne al levrioù a   zo amañ.
          the children COMP read the books   COMP is here

          'The children who read the books are here.'

(46) a. *Ar vugale   eo a   lennent   al levrioù.
           the children is COMP read.3.pl the books

           'It is children that read the books.'

      b. Ar vugale   eo a   lenne al levrioù.
          the children is COMP read the books

          'It is children that read the books.'

Breton is known for its requirement of a left dislocated constituent, but this need not be the subject; in sentence 43 it is the object that is placed at the front. Otherwise, it is a VSO language, like the other Celtic languages, which is most obvious from embedded clauses like in example 47 below. Embedded subjects in Breton also give rise to the AAE upon extraction. We again cite examples from Borsley and Stephens (1989), the latter of whom is a native speaker of (Tregor) Breton, but the typical sentence 47 had to come from a different source (Borsley and Kathol, 2000).

(47) Yann a   lavaras [e   lenn Anna al levr].
      Yann COMP said   COMP read Anna the book

      'Yann said that Anna reads the book.'

(48) a. *Petore paotred a   soñj deoc'h a   lennent   al
           which boys   COMP think to.2.sg COMP read.3.pl the
           levrioù?
           books

           'Which boys do you think read the books?'

b. Petore paotred a soñj deoc'h a lenne al levrioù?
which boys COMP think to.2.sg COMP read the books

'Which boys do you think read the books?'

(49) a. * Ar baotred a soñj din a lennent al levrioù
the boys COMP think to.l.sg COMP read.3.pl the books

a zo amañ.
COMP is here

'The boys that I think read the books are here.'

b. Ar baotred a soñj din a lenne al levrioù a
the boys COMP think to.l.sg COMP read the books COMP

zo amañ.
is here

'The boys that I think read the books are here.'

(50) a. * Ar baotred eo a soñj din a lennent al
the boys is COMP think to.1.sg COMP read.3.pl the

levrioù.
books

'It is the boys that I think read the books.'

b. Ar baotred eo a soñj din a lenne al levrioù.
the boys is COMP think to.1.sg COMP read the books

'It is the boys that I think read the books.'

However, the AAE is not attested in similar (long-distance) cases in Welsh and Irish. To illustrate this, we have adapted a Welsh example from Hendrick (1988) and an Irish example from McCloskey (1990), respectively.

(51) y dynion y gwn y don
the men COMP know.PRES.1.sg COMP come.FUT.3.pl

'the men that I know will come'

(52) cúpla muirear a bhféadfaí a rá go rabhadar bocht
a few families COMP one could say.INF COMP be.PAST.3.pl poor

'a few families that one could say (they) were poor'

2.4 Turkish

The following Turkish data are also taken from Ouhalla (1993). Turkish normally employs *wh*-in-situ and shows the AAE only with relativization; according to Kornfilt (1997), the language lacks genuine cleft constructions.

(53) Öğrenci -ler gel -di (-ler).
student -pl come -PAST -3.pl

'The students have arrived.'

(54) Hangi öğrenci -ler partyi -ye gel -di (-ler)
which student -pl party -DAT come -PAST -3.pl

'Which students came to the party?'

(55) a. *hoca   -yi   gör -en/dük   -ler öğrenci -ler
          lecturer -ACC see -PART/PART -3.pl student -pl

          'the students who saw the lecturer'

      b. hoca   -yi   gör -en   öğrenci -ler
          lecturer -ACC see -PART student -pl

          'the students who saw the lecturer'

The (third person) plural morpheme *-ler*, denoted optional above, is identical to the plural morpheme on nouns; both are used in sentence 53. In addition, the third person (singular) morpheme is a null morpheme, so *-ler* is probably better analyzed as a plural marker only, which then becomes redundant, hence optional (other person/number inflections are non-optional).

The embedded subject examples are from Kornfilt (1997); (58) originates from Ouhalla (1993), though, but we glossed it in accordance with Kornfilt (1997). We also provided some clarifying brackets and empty categories.

(56) (ben) [Ahmed -in   sinema -ya   git -tiğ   -in   ] -i   duy
      I   Ahmet -GEN cinema -DAT go -PART -3.sg   -ACC hear
      -du   -m.
      -PAST -1.sg

      'I heard that Ahmet went to the movies.'

(57) a. (sen) [kim -in   sinema -ya   git -tiğ   -in   ] -i   duy
          you   who -GEN cinema -DAT go -PART -3.sg   -ACC hear
          -du   -n?
          -PAST -2.sg

          'Who did you hear went to the movies?'

      b. *(sen) [kim -in   sinema -ya   gid/git -en/tiğ   ] -i
          you   who -GEN cinema -DAT go/go -PART/PART   -ACC
          duy -du   -n?
          hear -PAST -2.sg

          'Who did you hear went to the movies?'

(58) a. [t_i hoca   -yi   gör -dük   -lerin] -i   söyle -diğ   -in
              lecturer -ACC see -PART -3.pl   -ACC say   -PART -2.sg
          öğrenci -ler$_i$
          student -pl

          'the students who you said saw the lecturer'

      b. *[t_i hoca   -yi   gör -en/düğ   ] -i   söyle -diğ   -in
              lecturer -ACC see -PART/PART   -ACC say   -PART -2.sg
          öğrenci -ler$_i$
          student -pl

          'the students who you said saw the lecturer'

The morpheme *-lerin* in (58a) can again be analyzed as split, in particular into a plural morpheme *-ler* and a possessive third person morpheme *-in*. Apparently, as Ouhalla (1993) concludes, no AAE arises in long distance extraction.

Some elaboration on Turkish embedded clauses may be in order, though. Most subordinate clauses in Turkish are represented in the form of a nominalized clause; sentence 56 is a textbook example of this, using the 'participial' suffix *-DIK*. However, the relative clauses that show the AAE require a different participial suffix *-(y)An*. Both these morphemes obey regular phonological rules, like vowel harmony, as usual in Turkish. To illustrate the two strategies more clearly, we constructed the following variants of (55b) using Kornfilt (1997).

(59) [t_i hoca   -yi   gör -en   ] öğrenci -ler$_i$
           lecturer -ACC see -PART   student -pl

    'the students who saw the lecturer'

(60) [öğrenci -ler -in t_j gör -dük   -leri] hoca$_j$
          student -pl -GEN   see -PART -3.pl   lecturer

    'the lecturer whom the students saw'

(61) öğrenci -ler -in   hoca   -ları
       student -pl -GEN lecturer -3.pl

    'the students' lecturer'

(62) (on   -lar -ın)   hoca   -ları
       he/she/it -pl -GEN lecturer -3.pl

    'their lecturer'

Example 59 is an annotated version of (55b) and shows the strategy using the morpheme *-(y)An* and no agreement. It comes as no surprise to us that it is used for subject relativization. However, it is also used for constituents of the subject, such as the object of a sentential subject, interestingly. So, Turkish actually does have cases of long-distance subject extraction co-occurring with the AAE, but the AAE is not shown in its expected place in those cases. We will see in (64) below that the AAE is not on the verb associated with the original position of the extracted (part of the) subject, but on the verb of the (outer) clause from which the extraction has taken place.

The next example, (60), shows the strategy using *-DIK* and agreement, which is used for all other kinds of constituents. In clauses nominalized according to the latter strategy, the (understood) subject bears genitive case; the nominalized verb agrees with it using suffixes identical to the possessive suffixes, as can be seen from example 61. This 'possessor', can (preferably) be left out in the case of a pronoun; sentence 62 shows this optionality. Thus, *pro*-drop also applies in these nominalized clauses: the possessive agreement is thought to imply a *pro* in the absence of an overt subject, as usual.

Additional evidence for this *pro* comes from the island sensitivity of relatives in Turkish. Relative clauses (amongst others) are called *islands*, since movement out of them is impossible cross-linguistically. The assumption is that one of the positions through which a moving constituent must pass is already taken, so movement is blocked.However, resumption does not require such a trail, so it is called *island-insensitive*, unlike the *island-sensitive* extraction by movement. The following standard examples from Kornfilt (1977), slightly differently glossed here, show the island sensitivity of both possible orders of relativization.

(63) * [[t_i t_j al -an   ] adam$_i$ -ı   sev -diğ   -im] araba$_j$
                buy -PART   man   -ACC love -PART -1.sg   car

       'the car that I love the man who bought (it)'

(64) [[*pro$_i$* t_j al -dığ -ı   ] araba$_j$ bozuk   çık   -an   ] adam$_i$
                buy -PART -3.sg   car   defective turn out -PART   man

       'the man who the car (which he) bought turned out to be defective'

Indeed, extracting the object from a relative clause is ungrammatical, as expected, but extracting the subject is possible. Consequently, Turkish non-subject relativization must be analyzed as a resumptive strategy: the agreement on the verb allows a resumptive pronoun to hold the subject position[3]. Once again, we can tie agreement to resumption, and the AAE to movement, though we have seen an interesting alternative AAE pattern in Turkish.

2.5   Summary

The following table summarizes the data we have presented in this chapter. Some characteristics of the languages are also listed, most of which were not previously mentioned. Since most rows concern binary choices, we omit the negative answers for clarity; bracketed answers denote optionality, though.

	English	Ibibio	Kinande	Berber	Breton	Turkish
local subject extraction		AAE	AAE	AAE	AAE	AAE
long-distance subject extraction		AAE	(AAE)		AAE	
AAE inflection		*í-*	*u-*	PART	(default)	PART
assumed word order	SVO	SVO	SVO	VSO	VSO	SOV
pro-drop		Yes	Yes	Yes	Yes	Yes
dislocated subject			Yes		(Yes)	
wh-in-situ		Yes	Yes			Yes
language family	Indo-European	Niger-Congo	Niger-Congo	Afro-Asiatic	Indo-European	Altaic

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[3]We have annotated most Turkish examples with resumptive *pro*'s and traces accordingly.

Chapter 3

Analyses

We have found six significant approaches to the AAE in the literature, which we have grouped in three categories: the two oldest are primarily based on locality restrictions, two ascribe the effect to the lack of features in certain circumstances, and the final two proposals relate it to some sort of complementizer agreement. Each analysis is first presented and then evaluated in light of the data presented above.

3.1 Locality restrictions

3.1.1 Ouhalla (1993)

Ouhalla (1993) analyzes the AAE as a strategy in some null subject languages to avoid a (Generalized) Principle B violation. He refers to (a precursor of) Aoun and Li (1996), who define the following dual disjointness requirement with respect to pronouns at LF.

(65) a. The A-disjointness Requirement: A pronoun must be A-free in the least Complete Functional Complex (CFC) in which it occurs (see Chomsky, 1986).
b. The A′-disjointness Requirement: A pronoun must be A′-free in the least CFC containing a c-commanding subject and the pronoun.

The Complete Functional Complex is a domain defined in Chomsky (1986) as follows: "... all grammatical functions compatible with its head are realized in it—the complements necessarily, by the projection principle, and the subject, which is optional unless required to license a predicate, by definition". So, requirement 65a corresponds to the traditional Principle B, which concerns A(rgument)-elements and rules out the bound reading in sentence 66a below; similarly, requirement 65b rules out sentence 66b and concerns non-argument (A′) elements. Aoun and Li (1996) suggest A′-elements comprise "modals, *wh*-operators, negation and negative polarity items, intermediate traces and quantificational elements." If another A′-element intervenes, the grammaticality improves, as shown for a modal in (66c) and for a *wh*-word in (66d).

(66) a. * He$_i$/Nobody$_i$ likes him$_i$.

  b. * Nobody$_i$ said that he$_i$ got the prize.

  c. Nobody$_i$ might say that he$_i$ got the prize.

  d. Nobody$_i$ wonders whether he$_i$ got the prize.

Returning to Ouhalla (1993), he argues that "there are also environments where a variable trace and a resumptive pronoun are in free variation." In particular, in null subject (i.e., *pro*-drop) languages, he assumes movement leaves a *pro* instead of a trace, in places where it is licensed by agreement. However, when agreement would require a resumptive pronoun too close to the moved constituent, according to the A$'$-disjointness Requirement, a trace is left instead; in the case of subject-verb agreement, this trace results in the AAE, like we have suggested in the previous chapter. This would also explain why an intervening negative operator or an embedding of the clause can undo the AAE in some languages. For example, sentential negation in Breton undoes the AAE; the following examples are again from Borsley and Stephens (1989).

(67) a. Petore paotred ne   lennent ket al levrioù?
      which boys   COMP read.3.pl not the books

      'Which boys did not read the books?'

  b. * Petore paotred ne   lenne ket al levrioù?
      which boys   COMP read not the books

      'Which boys did not read the books?'

(68) a. Ar vugale ne   lennent ket al levrioù a   zo amañ.
      the children COMP read.3.pl not the books COMP is here

      'The children who did not read the books are here.'

  b. * Ar vugale ne   lenne ket al levrioù a   zo amañ.
      the children COMP read not the books COMP is here

      'The children who did not read the books are here.'

(69) a. Ar vugale eo ne   lennent ket al levrioù.
      the children is COMP read.3.pl not the books

      'It is the children who did not read the books.'

  b. * Ar vugale eo ne   lenne ket al levrioù.
      the children is COMP read not the books

      'It is the children who did not read the books.'

With respect to embedded subjects, the Italian dialects Fiorentino and Trentino are the only cases in Ouhalla (1993) where long-distance extraction of a subject yields the AAE; as such, they are treated as exceptions: long-distance extraction would take place from the marked, post-verbal position, which is properly governed, to avoid a *that*-trace effect (cf. Rizzi and Shlonsky, 2007); that way, the usual pre-verbal position would not need to be visited, such that the AAE is implied. Finally, in null subject languages that do not exhibit the AAE, the subject is assumed not be moved locally at all.

Apart from the fact that binding theoretic notions are somewhat problematic under minimalism, the Ibibio data present a problem to this analysis, as Baker

(2008) has pointed out. By definition, a *wh*-in-situ does not leave an empty category. Also, we have seen that the Italian varieties are not the only exceptions: long-distance subject extraction also triggers an AAE in Ibibio, Breton and, in some cases, Kinande. Still, all languages under consideration are null subject languages, where a *pro* is assumed to occupy the subject position by default. If the Ibibio data can be explained otherwise, the analysis holds up relatively well (even though Ouhalla (2005) has abandoned it), if only overt subject extraction can generally (alternatively) be viewed as a resumptive strategy in these languages. We will get back to that in the following section.

3.1.2 Schneider-Zioga (2000, 2007)

These papers describe the AAE as "a phenomenon that occurs in languages with a rich left periphery" (referring to Rizzi, 1997). More specifically, it would come about in languages where subjects are canonically (left) dislocated. Since dislocation of subjects is believed to involve resumption (see section 2.1.2 on Kinande), resumption is taken to be first resort (and movement last resort) with respect to subject extraction in these languages. This is an important implication of the analysis: "the last resort strategy in a language is relativized to what is first resort: if resumption is first resort, movement is last resort, and vice versa." In addition, movement is said to be subject to an anti-locality constraint adopted from Grohmann (2003), viz. movement must involve at least two domains; the following table is cited with respect to these "clausal domains."

(70)	Θ-Domain	VP/vP	part of derivation involving thematic relations
	Φ-Domain	TP (and its articulation)	part of derivation involving agreement processes
	Ω-Domain	CP (and its articulation)	part of derivation involved with discourse information

Let us see how this results in the AAE. Structure 71a below is the supposed structure of a typical sentence in an AAE language; here, Ω is used to summarize (part of) the articulation of CP. So, subjects would canonically be located in the Ω-Domain, as well as the position a *wh*-subject has to move to. If a subject would locally move from the former to the latter position, only one domain would be involved, which would violate the above anti-locality constraint, as depicted in (71b). As a last resort, subjects then start out in one of the lower domains so as to permit movement to the higher Ω-Domain, as depicted in (71c); subsequently, in the absence of a *pro*, the AAE results. Embedded subjects can simply be moved from their canonical position, since in that case the movement involves more than one (Ω-)Domain, as depicted in (71d); thus, the AAE need not occur in the long-distance case. It is not excluded, though, that the subject may be moved successive-cyclically, such that the inner clause in (71d) looks like (71c); long-distance extraction in that fashion would also trigger the AAE in embedded clauses.

(71) a. $[_{\Omega}$ NP$_i$ $[_{TP}$ *pro*$_i$ $[_{v\text{P}}$ ...]]]
      b. *$[_{\Omega}$ *wh*$_i$ $[_{\Omega}$ t_i $[_{TP}$ *pro*$_i$ $[_{v\text{P}}$ ...]]]]

  c. $[_\Omega \; wh_i \; [_{TP} \; t_i \; [_{vP} \; t_i \; \ldots \;]]]$

  d. $[_\Omega \; wh_i \; [_{TP} \; [_{vP} \; \ldots \; [_\Omega \; t_i \; [_{TP} \; pro_i \; [_{vP} \; \ldots \;]]]]]]$

However, as we can see in the table in paragraph 2.5, most of our languages do not conform to these predictions. Ibibio and Kinande are SVO languages, Berber is VSO and Turkish SOV; the Celtic languages are also considered VSO languages, but subjects in Breton are sometimes dislocated. This crude examination of our AAE languages already poses a problem to this analysis, as ('strong') VSO languages don't have dislocated subjects. Even in Schneider-Zioga (2002), where the Austronesian AAE languages Chamorro and Palauan are studied on this topic, the former being a VSO language (and the latter a VOS language), no solution to this problem seems to be offered. In the same vein, Ibibio's *wh*-in-situ subjects are assumed to occupy just the position where the subject can otherwise simply AGREE with the verb.

Another strong prediction that seems easily falsifiable is the fact that, according to this approach and the previous one (Ouhalla, 1993), the AAE implies movement, whereas subjects are otherwise supposed to be extracted by resumption. Thus, we expect that (long-distance) extraction of a subject from an island is possible in these languages, without the AAE occurring. We therefore now present the island sensitivity of subject extraction in some AAE languages: Kinande (Schneider-Zioga, 1995, 1996, 2007), the Bantu language Lubukusu (Diercks, 2009), (Tarifit) Berber (Smith et al., 1993) and Turkish (Kornfilt, 1977) respectively.

(72) a. iyondi$_i$ yo   Yosefu a-   kabula [ekihi$_j$ nga ky' e_i
          who   that$_{focus}$ Joseph AGR- wonders what if   that$_{focus}$
          a-   kalangira e_j]
          AGR- sees

          'Who does Joseph wonder what (he) sees (it)?'

  b. * iyondi$_i$ yo   Mary'anzira [$_{NP}$ ebialya$_j$ [$_{CP}$ ebyo [$_{TP}$ e_i
          who   that$_{focus}$ Mary liked   food   that
          a/u-   huka e_j]]]
          AGR/ANTI.AGR- cooked

          'Who did Mary like the food that (she) cooked?'

(73) naanu$_k$ ni   -ye Joni a-   a-   bona [si- i- tabu$_i$ ni   -syo
      1.who   COMP -1 John AGR- PAST- see   7- 7- book COMP -7
      e_k a-   a-   soma e_i]
          AGR- PAST- read

      'Who$_i$ is it that John saw the book which s/he$_i$ read (it)?'

(74) U   ay   ur   t- ssn -t   magha y-   ukwta aqzin?
      who COMP NEG 2.sg- know -2.sg why   3.sg.M- hit   dog

      'Who don't you know why (he) hit the dog?'

(75) [[pro$_i$ t_j al -dığ -ı   ] araba$_j$ bozuk çık   -an   ] adam$_i$
              buy -PART -3.sg car   defective turn out -PART   man

      'the man who the car (which he) bought turned out to be defective'

Sentences 72a, 73 and 74 indeed behave as predicted, but (72b) is ungrammatical; sentence 75 shows an AAE, though in the matrix clause, but there is a rationale behind that, as we have seen in section 2.4. The grammaticality of (72a) and (74) might be explained by the fact that only one CP is crossed, if we accept the conclusions reached in Rizzi (1982), viz. that Subjacency is parameterized by either CP or TP; however, the NP island examples cannot be explained this way. With respect to (72b), Schneider-Zioga (2007) regards relative clauses in Kinande "set aside as special", since even overt resumption cannot rescue a complex NP island violation, while it can rescue *wh*-island violations in that language. We conclude that resumption of an extracted subject by a *pro* has indeed been attested in (at least some) AAE languages. This adds to the evidence, in favor of both Ouhalla (1993) and Schneider-Zioga (2000, 2007), that the AAE is associated to movement.

3.2   Lack of features

3.2.1   Ouhalla (2005)

Ouhalla (2005) considers agreement not only a reflex of feature-matching and deletion, but also a computational mechanism of categorization. He proposes that "the role traditionally assigned to specialized categorial features such as [V] and [N] is performed by independently needed features, some of which are agreement features." The categorial features would reduce to which of these independent features are not deleted; for example, T would reduce to the verbal feature [PAST]. Only conflicting features have to be deleted; the verbal [PERSON] and the nominal [CLASS] are considered conflicting, but [NUMBER] would be a neutral feature. Looking at morphological and syntactical facts about Berber, Ouhalla (2005) tries to reduce the different kinds of predicates in the language to agreement features. In particular, he suggests a that verbal, participial and nominal predicates are represented by [PERSON], [NUMBER] and [CLASS], respectively (the last of which comprises [GENDER] in Berber).

Although agreement implies movement, movement is also allowed to occur for independent reasons, like morphology; in particular, if the predicate contains [PERSON], it invariably attracts the verb. Since the predicate is distinguished from the verb, subject-verb agreement is assumed to possibly consist of two separate relations: the first relation is obligatory, between the predicate and the subject, which is why all predicates are proposed to include [CLASS] and minimal subject-verb agreement is said to involve [CLASS] only; secondly, only in the case of a verbal predicate, caused by its feature [PERSON], a relation is established between the predicate and the verb. Thus, participial predicates are held responsible for the AAE; this correlates with the fact that, in some varieties of Berber, participles are inflected for [NUMBER] and [CLASS], but never for [PERSON]; hence, the AAE is restricted to the feature [PERSON].

To account for the observed variety between languages, several parameters are postulated that determine the distribution of agreement features. The first one is whether a verbal predicate resides in the "upper" CP/TP phase (in T), like in English, or in the "lower" *v*P/VP phase (perhaps AgrP or *v*P, but labeled

Pred below), like in Berber. The second parameter is to account for languages where the subject is moved to the upper phase, but the verb is not, e.g., English; consequently, languages with a verbal predicate in T are further divided into those that include [PERSON] in the verbal predicate and those that do not. In sum, the following three options are available with respect to verbal predicates.

(76)   a. T contains [PERSON, CLASS] (verb and subject raise)
      b. T contains [CLASS] (only the subject raises, English)
      c. Pred contains [PERSON, CLASS] (verb and subject do not raise, Berber)

Since T holds an independent verbal feature [PAST] in English, [CLASS] is deleted to resolve the conflict by agreeing with the subject.

Let us now see how the AAE can be triggered according to this analysis (at least in Berber). It is proposed to be the consequence of a participial predicate, as follows.

(77)   [$_{\text{TP}}$ SUBJ$_{\text{[CLASS, NUMBER]}}$ [T$_{\text{[\sout{CLASS},PAST]}}$
        [$_{\text{PredP}}$ [Pred$_{\text{[NUMBER, CLASS]}}$
            [$_{v/\text{VP}}$ (SUBJ$_{\text{[CLASS, NUMBER]}}$) [V …]]]]]]

The predicate is situated in Pred, analogous to (76c). However, a participial predicate is assumed to be accompanied by a verbal predicate (necessarily in T) containing [CLASS] only; this is in accordance with the raising of the subject in these constructions, and with the observation in Ouhalla (1996) that subject extraction takes place from Spec-TP in Berber. So, the subject raises to resolve the conflict in T between the nominal [CLASS] and the verbal [PAST]. Thus, [PERSON] is never involved in a categorization conflict in these constructions, hence never involved in agreement, from which the AAE results.

Although the analysis appears to be not fully developed yet, there seem to be some problems. The local subject extractions seem to be covered by assuming a participial predicate, but it is not explained why English has subject-verb agreement at all, since verbal predicates are said to lack [PERSON]. Moreover, it is not clear what the distribution of predicates is with respect to complex sentences. It seems to make the most sense to assume that clauses to which a subject is extracted have a participial predicate; however, we would expect an AAE in the matrix clause to result from long-distance subject extraction, which is never attested (except for some cases in Turkish). If we assume that clauses from which a subject is extracted have a participial predicate, long-distance subject extraction should always result in an AAE in the embedded sentence, which is not even the case in Berber. The Ibibio *wh*-in-situ data would possibly be covered, since Baker (2008) does position the *wh*-word in Spec-TP in Ibibio. The other *wh*-in-situ language in our dataset, Turkish, does not display an AAE in similar sentences, though. Still, positing participial predicates in the inner clause seems to explain our dataset best, compared to other possible distributions.

3.2.2 Baker (2008)

Baker (2008) rejects previous accounts by introducing Ibibio data that display

wh-in-situ like Turkish, but at the same time the AAE unlike Turkish. The alternative explanation offered involves a parameter determining whether ϕ-features are deleted in a movement chain along with semantic (scope-defining) features (Ibibio) or phonological features (Turkish) or neither (English). Additional support is offered by the fact that, in Ibibio, quantified subjects never (need) undergo Quantifier Raising, and negative clauses also trigger the AAE if(f) the visible position of the subject does not correspond to the intended semantic scope. To exemplify the latter remark, here are some examples of negative clauses.

(78) Okon a-   yem ke   Emem á-   di.
      Okon 3.sg- want NEG Emem 3.sg- come

      'Okon wants Emem not to come.'

(79) Owo ndomo ke:t i-   k-   i-   di -ghe.
      person any   at all ANTI.AGR- PAST- ANTI.AGR- come -NEG

      'Nobody at all came.'

As can be seen from the translation of (78), its constituents can be interpreted in place; sentence 79, on the other hand, cannot be taken to mean "someone didn't come", so the semantic features must be deleted from the copy of the subject in Spec-TP, above the negative operator, and not from the copy below in Spec-vP, where the phonological features are deleted. So, since the ϕ-features are taken to be "caught in the cross fire" at Spec-TP, as shown in the following representation, this process yields the AAE, unlike in the former sentence.

(80) $[_{\text{TP}}$ $\langle$person...$\rangle$ Agr-T+come [Neg $[_{v\text{P}}$ $\langle$person...$\rangle$ v $[_{\text{TP}}$ $\langle$come$\rangle$]]]]
            $\exists x \dots [\text{3.sg}]$ /í/ $\exists x \dots [\text{3.sg}]$

Although Baker (2008) provides no explanation for this "cross fire" effect, it appears to be a relatively simple, even elegant solution. Still, as he notes, "it remains to be seen more fully how this approach generalizes to other languages." He states the analysis holds for Ibibio, Kinande, Turkish and English, which we confirm (accepting that sub-constituents of subjects pattern like subjects in Turkish relative clauses). The expected patterns are depicted in this table.

(81)

	deletion along with semantic features	deletion along with phonological features	no deletion
wh-in-situ	Ibibio	Kinande[1], Turkish	
wh-ex-situ		Breton	English

Breton seems to fall nicely in one of the predicted language groups, as shown in the table, since traces of overt *wh*-movement trigger the AAE; but then, we would expect an AAE in negated sentences like (67) as well, contrary to the facts. Still worse, other Celtic varieties and Berber do not even show a unified pattern in *wh*-ex-situ situations, but local extraction yields an AAE, as opposed to no AAE in long-distance cases. This does not fit the predictions of the proposed analysis, because both semantic and phonological features are

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[1]That is, though Kinande generally displays *wh*-in-situ, subjects are normally ex-situ and when they are in-situ, no AAE results, like in (34).

deleted in all associated positions. Of course, the approach can be saved if we can postulate resumptive *pro*'s in all empty subject positions accompanying no AAE, but it seems unlikely, for one thing, that long-distance extraction prohibits movement in these languages; successive-cyclic movement is considered cross-linguistically universal; likewise, resumption and movement do not generally exclude each other, for instance in sentences 30 for Kinande (which are cases of both, respectively, if we reason along these lines, or along the lines of Schneider-Zioga (2000, 2007); see also sources like (McCloskey, 1990, 2002) on Irish).

3.3   Complementizer agreement

3.3.1   Boeckx (2003); Henderson (2009a,b)

Following Boeckx (2003), Henderson (2009a,b) assumes movement chains may only possess one "strong" position (a position with a "strong" feature, i.e. one that must be pronounced); movement to a position implies that the position is strong, so Spec-TP is a strong position in English, for example. If the same movement chain contains more than one strong position, the chain must be repaired by agreement between the (two) positions, or, if that fails, by resumption. The agreement would make the two positions count as one strong position for computational purposes, and resumption is regarded as the (most costly) last resort strategy. The AAE is a by-effect of this general hypothesis in sentences where both the specifiers of C and T are strong positions on the same movement chain, and minimality allows for the establishment of an AGREE relation between C an T. Let us see in more detail how the AAE would be triggered.

(82) $[_{\text{CP}} \text{NP}_i \text{ C}_{[\phi]} [_{\text{TP}} t_i \text{ T}_{[\phi]} [_{v\text{P}} t_i \dots]]]$

This structure shows the situation in which agreement between C and T is supposed to repair the "strong chain violation" that is assumed to occur. However, [PERSON] is never encoded in C, so Henderson (2009a,b) hypothesizes, after Longobardi (2008), that "[PERSON] takes on referential values in the nominal domain", which encompasses C as well. Particularly, the nominal feature referred to as [DEF(initeness)] or [REF(erentiality)] would be essentially the same feature as the verbal feature [PERSON], such that they can match and AGREE. When C and T do AGREE like that, they possibly only differ in [PERSON] (not in [CLASS] or [NUMBER]); then [PERSON] on T is assigned the value of [PERSON/REF] on C, such that any canonical agreement is canceled: hence, the AAE results. In the context of relativization, to account for the complementizer agreement in (certain) Bantu languages, an additional AGREE relation is said to form between the extracted NP and C. Additional support for this AAE analysis is provided by the fact that only Bantu noun classes that are specified for [PERSON] are involved in the AAE in Bantu; other noun classes would not be affected by the above process.

This account of the AAE is fairly attractive, since the whole analysis can be motivated by computational efficiency. Furthermore, agreement and resumption naturally complement each other in the general approach suggested by Boeckx (2003). Upon closer evaluation, we do find some difficulties though. Firstly,

the absence of an AAE in English, which definitely employs some definiteness feature, is not explained, since both C and T are strong positions when it comes to *wh*-subject extraction. The presence of an AAE in Ibibio, secondly, while the *wh*-word remains in-situ, seems unaccounted for (C is not a strong position). In addition, why would AGREE fail in Breton (local) negation (67), yet succeed in long-distance extraction (48), but fail again in other Celtic languages (51)? More fundamentally, Boeckx (2003) does not seem to offer an explanation for the apparent free variation between movement and resumption in Kinande (30) and other languages, but we have not studied this in depth. Apart from these issues, our data seem to be covered.

3.3.2 Ouali and Pires (2005); Ouali (2006, 2008, 2011)

Ouali and Pires (2005); Ouali (2006, 2008, 2011)[1] adhere to the minimalist paradigm. The operation AGREE is defined as in Chomsky (2000) and applies at the end of each phase (the phases being CP and vP).

(83) Agree
The probe P agrees with the closest matching goal in D.
   a. Matching is feature identity.
   b. D is the sister of P. [D = c-command Domain of P]
   c. Locality reduces to closest c-command.

Both the probing head and the target goal need to be "active" in order for the AGREE operation to take place, which is the case when the associated constituent bears at least one uninterpretable feature. When AGREE succeeds, uninterpretable features that match are "valued and deleted"; if uninterpretable features remain, the derivation crashes. Then, an idea developed in Chomsky (2001, 2004, 2007, 2008) is adopted: T is assumed to be merged without bearing ϕ-features, but inheriting them from C. However, this idea is refined in proposing three logical possibilities (the first of which is equivalent to the original proposal).

1. DONATE: Transfer ϕ-features from C to T without keeping a copy.

2. KEEP: Transfer no ϕ-features from C to T.

3. SHARE: Transfer ϕ-features from C to T and keep a copy.

The hypothesis is that, at least in Berber, if DONATE leads to a crash of the derivation, KEEP is tried; if KEEP fails too, SHARE is the last resort. As a result, it is argued that DONATE normally succeeds, KEEP is responsible for the AAE and SHARE is used in long-distance extraction. Let us work this out in detail.

DONATE. Initially, the subject (in Spec-vP) bears an uninterpretable Case feature and C bears uninterpretable ϕ-features, but transfers those to T,

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[1] Of these, Ouali (2008) offers the most concise overview of the developed approach.

so the subject and T are now active. In a normal sentence AGREE applies and we are done: all uninterpretable features are matched and deleted. If C would have kept a copy of the ϕ-features, it would still be active and crash the derivation; T is closer to the subject, so DONATE is considered the most efficient choice.

KEEP. Now, if the subject were to bear an additional, uninterpretable *wh*-feature, the above course of events would leave it unmatched; next, the subject would be the only active constituent, thus crashing the entire derivation (since only C is assumed to bear merely an interpretable *wh*-feature). To save the derivation, the next most efficient option is tried: do nothing and KEEP the uninterpretable ϕ-features. Now the subject and C are active, AGREE applies and all three kinds of (uninterpretable) features can be deleted; T is thus skipped, resulting in the AAE in Berber.

SHARE. In an embedded clause, DONATE would succeed as usual (hence, no AAE). As the derivation continues, an active subject moves to Spec-CP. The top CP would fail at trying DONATE as before, since the subject remains active. KEEP is tried, but the matrix subject is still closer to C then the embedded subject. Hence, the embedded subject is bound to stay active and crash the derivation. Finally, the last resort SHARE is tried; now T and the matrix subject AGREE, next C and the embedded subject AGREE and we are rid of uninterpretable features.

Supporting evidence comes from the fact that Berber has a complementizer exactly at every instance of C-agreement assumed in the above analysis. Although it is conjectured that the three alternatives are universal (but perhaps parameterized), whether the approach generalizes cross-linguistically is left for further research. Nevertheless, it is motivated that English subject *wh*-questions invoke KEEP, albeit with different morphological consequences; alternatively, it is suggested in Ouali (2008) that DONATE might transfer also its *wh*-feature to T in English, such that KEEP (and an AAE) is not necessary.

To start our evaluation of this approach with the last remark: this seems easily falsified[2]. It is duly noted (and left unexplained), for example in Ouali and Pires (2005), that there is a subject/object asymmetry in English *wh*-questions.

(84) a. Who saw Mary?

   b. * Who did see Mary?

(85) a. * Whom John saw?

   b. Whom did John see?

The lack of *do*-support in the former case (subject question) is generally taken to prove that no T-to-C movement takes place, where it does in the latter case (object question). If DONATE would also transfer its *wh*-feature from C to T in English, we would expect similar behavior (no *do*-support) in either case; moreover, embedded *wh*-subjects and -objects should also not trigger *do*-support, but they do.

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[2]Which is probably why Ouali (2011) does not seem to mention it.

The other possible explanation for the fact that no AAE shows up in English questions was that, perhaps, complementizer agreement looks like subject-verb agreement in English. This seems hard to imagine; for one thing, there are languages (e.g., some Dutch varieties; see Haegeman and van Koppen, 2009) where the two co-occur. More fundamentally, it would undermine the whole argument that the T is skipped over in Berber AAE cases.

Thus, it appears that non-AAE languages are not accounted for by this analysis, but perhaps AAE languages are. We know by now that there is some variation with respect to long-distance subject extraction: it causes an AAE in Ibibio and Breton, but not in Berber and Turkish; both seem legitimate in Kinande. Can AGREE or feature transfer be responsible for this in some way? If the uninterpretable features in question are the same, we expect the same outcome; however, if their are other uninterpretable features in play, they may provide for more matching active elements that can alter the course of events. This may actually be a promising direction, since if the left edge can be as elaborated as Rizzi (1997); Schneider-Zioga (2000, 2007) suggest, there are several possible interveners, like Topic and Focus. To investigate this in any further detail is beyond the scope of this thesis.

Another direction hinted at is a possible different ordering of operations, though this appears somewhat contradictory, because the given ordering was motivated by computational efficiency. Here is an attempt to explain the AAE pattern of Breton. For the AAE to show up in an embedded sentence, KEEP must come before DONATE. However, if KEEP is tried first in the matrix clause, we would expect the AAE in normal sentences as well. SHARE cannot help in an ordinary sentence, since it would make any such sentence crash. Concluding, parameterizing the order of operations does not seem like a fruitful attempt to solve our problems.

All in all, this interesting solution does encounter some problems, most importantly that non-AAE languages are now the odd case. Hopefully, it is just a matter of the approach not being fully developed yet.

Chapter 4

Discussion

In this chapter, we will be concerned with the comparison and discussion of the six analyses we treated in Chapter 3 with respect to the data we presented in Chapter 2. This implies we will generally not take negation data like (67) into account, since we did not include any in our dataset. While this may be considered unfortunate, we regard it fortunate if the dataset can somehow be reconciled as it is; see section 2.5 for a concise overview of the data.

As for the analyses, we regard the most recent sources as the best developed advocates of their respective proposals. It appears that most of them are relatively focused on one particular language: Schneider-Zioga (2007) on Kinande, Ouhalla (2005) on Berber, Baker (2008) on Ibibio, Henderson (2009b) on Bantu and Ouali (2011) again on Berber. Ouhalla (1993) is a positive exception to this general trend. In order to get a better impression of how well the analyses generalize, we now present a table that summarizes our judgments of their coverage with respect to our dataset.

	English	Ibibio	Kinande	Berber	Breton	Turkish
Ouhalla (1993)	Full	Relatives	Full	Full	Local[1]	Full
Schneider-Zioga (2007)	Full	No	Full	No	Full	No
Ouhalla (2005)[2]	Full	Full	Local	Local	Full	Relatives
Baker (2008)	Full	Full	Full	Local	Full	Full
Henderson (2009b)	No	Relatives	Perhaps	Full	Perhaps	Full
Ouali (2011)	No	Relatives	Perhaps	Full	Perhaps	Full

legend	Full	Full coverage of all cases of (anti-)agreement is offered.
	Local	Only the local subject extractions are covered.
	Perhaps	Local coverage, but long-distance coverage depends on whether the supposed success or failure of AGREE can be accounted for.
	Relatives	Only relatives are explained by the approach.
	No	(Basically) no coverage is offered.

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[1]But in our perception the language is reminiscent of the Italian varieties that Ouhalla (1993) regards as exceptions, in which case full coverage is offered.

[2]We have assumed full coverage when the clause from which extraction takes place yields the same (anti-)agreement effect throughout the language, since it is not clear in Ouhalla (2005) how participial predicates are distributed in a complex sentence.

Some remarks are in place here. Needless to say, we made these judgments accepting all assumptions made by the associated proposals. It must be noted that we only had local Ibibio relative clauses, the coverage of which is not surprising, since most strategies aim for the local AAE. With respect to the optional AAE in Kinande long extractions, we have assumed any agreement to be evidence of a resumptive strategy (first resort or not). With respect to the Turkish data, we have disregarded the intricacies of subject-from-subject extraction. Details on most of the entries in the table are provided in the previous chapter.

There are some surprising findings in the table. Kinande is the best covered language and Ibibio the worst, though both are Bantu languages, but the latter complicates the issue greatly by its *wh*-in-situ. Shockingly, even if we do not take the footnote on Breton into account, Ouhalla (1993) still provides for the second best numbers; Binding Theory is abandoned by most researchers though, and the Ibibio data seem hard to accommodate for. Schneider-Zioga (2007) fails on half our data, mostly because of her strong dislocation prediction. The best covering approach is Baker (2008), but to obtain full coverage of all data, we do need to postulate obligatory (covert) resumption in (long-distance) agreement cases; resumption has indeed been attested in Berber (see sentence 74; see also sentence 52 with respect to Irish), so we judge this proposal to be the most promising one. Ironically, the complementizer agreement approaches seem to have overshot the mark, since even well known languages like English are now unaccounted for. Although they are not equivalent, they end up showing identical, rather disappointing results. A study of the implications of AGREE in particular cases may yet improve this outcome.

Except for Baker (2008), we consider most (if not all) of these proposals to be beyond repair. The only analysis we have hope for is Ouhalla (2005), since it is unclear to us how the analysis extends to complex sentences. The ideas appear to be not fully developed yet, so some parameters, for example, may yet rescue the approach.

Chapter 5

Conclusion

In this thesis, we have considered data from five Anti-Agreement Effect languages, and from English. These cross-linguistic data exhibit a considerable amount of variety; the only certainty seems to be that AAE languages are *pro-drop* languages, but this was noted from early on. Also, the data strongly suggest that it has to do with movement as opposed to resumption. We have weighed six proposals to account for this data, but found only one possible explanation of the phenomenon.

And the winner is Baker (2008), who suggests, in short, that there is a parameter determining whether ϕ-features are deleted in a movement chain along with semantic (scope-defining) features or phonological features or neither. Additionally, it must be assumed that apparent exceptions to this rule involve (covert) resumption, such that agreement is again required. The languages displaying these exceptions, Berber and Kinande in particular, have indeed been shown to exhibit covert resumption of the subject in certain circumstances.

The only other approach that may not be beyond repair is Ouhalla (2005), whose ideas have not been fully developed yet. He proposes that agreement correlates with the category of the predicate, regulated by certain parameters that determine the distribution of features in a language. Admittedly, the coverage of the data is considerably inferior to Baker's (2008), but this primarily results from the fact that it is not clear to us how to extend the analysis to complex sentences.

Bibliography

Aoun, J., Li, Y.-H. A., 1996. Two cases of logical relations: Bound pronouns and anaphoric relations. In: Freidin, R. (Ed.), Current issues in comparative grammar. Kluwer Academic Publishers, pp. 346–373.

Baker, M. C., 2003. Agreement, dislocation, and partial configurationality. In: Carnie, A., Harley, H., Jelinek, E., Willie, M. (Eds.), Formal Approaches to Function in Grammar. John Benjamins, pp. 107–132.

Baker, M. C., 2008. On the nature of the antiagreement effect: Evidence from wh-in-situ in Ibibio. Linguistic Inquiry 39 (4), 615–632.

Boeckx, C., 2003. Islands and Chains: Resumption as Stranding. John Benjamins.

Borsley, R. D., Kathol, A., 2000. Breton as a V2 language. Linguistics 38 (4), 665–710, 4th International Conference on Head-Driven Phase Structure Grammar.

Borsley, R. D., Stephens, J., 1989. Agreement and the position of subjects in Breton. Natural Language and Linguistic Theory 7 (3), 407–427.

Chomsky, N., 1986. Knowledge of Language. Praeger.

Chomsky, N., 2000. Minimalist inquiries: The framework. In: Martin, R., Michaels, D., Uriagereka, J. (Eds.), Step by Step: Essays on Minimalist Syntax in honor of Howard Lasnik. MIT Press, pp. 89–155.

Chomsky, N., 2001. Derivation by phase. In: Kenstowicz, M. (Ed.), Ken Hale: A Life in Language. MIT Press, pp. 1–52.

Chomsky, N., 2004. Beyond explanatory adequacy. In: Belletti, A. (Ed.), Structures and Beyond. The Cartography of Syntactic Structures. Vol. 3. Oxford University Press, pp. 104–131.

Chomsky, N., 2007. Approaching UG from below. In: Sauerland, U., Gärtner, H.-M. (Eds.), Interfaces + Recursion = Language? Chomskys Minimalism and the View from Syntax-Semantics. Vol. 89 of Studies in Generative Grammar. Mouton de Gruyter, pp. 1–29.

Chomsky, N., 2008. On phases. In: Freidin, R., Otero, C., Zubizaretta, M.-L. (Eds.), Foundational Issues in Linguistic Theory. Essays in Honor of Jean-Roger Vergnaud. MIT Press, pp. 133–166.

Diercks, M. J., 2009. Subject extraction and (so-called) anti-agreement effects in Lubukusu: A criterial freezing approach. In: Proceedings of the 45th Annual Meeting of the Chicago Linguistics Society. Chicago Linguistics Society.

Elouazizi, N., forthcoming. On copy (mis-)matching in the A-bar movement contexts of WH-questions and relatives in berber. University of Leiden Ms.

Grohmann, K. K., 2003. Prolific Domains. On the Anti-Locality of Movement Dependencies. John Benjamins.

Haegeman, L., van Koppen, M., 2009. The non-existence of phi-feature dependency between C^0 and T^0. Presented at the 40th annual meeting of the North East Linguistic Society.

Henderson, B., 2009a. Anti-agreement and [person] in Bantu. In: Matondo, Masangu, e. a. (Ed.), Selected Proceedings of the 38th Annual Conference on African Linguistics. Cascadilla Proceedings Project, pp. 173–181.

Henderson, B., 2009b. Anti-agreement: Locality of movement or agreement? In: Proceedings of the 45th Annual Meeting of the Chicago Linguistics Society. Chicago Linguistics Society.

Henderson, B., 2011. Agreement, locality, and OVS in bantu. Lingua 121, 742–753.

Hendrick, R., 1988. Anaphora in Celtic and universal grammar. Kluwer Academic Publishers.

Kornfilt, J., 1977. Against the universal relevance of the shadow pronoun hypothesis. Linguistic Inquiry 8 (2), 412–418.

Kornfilt, J., 1997. Turkish. Routledge.

Longobardi, G., 2008. Reference to individuals, person, and the variety of mapping parameters. In: Müller, H. H., Klinge, A. (Eds.), Essays on Nominal Determination: From Morphology to Discourse Management. Vol. 99 of Studies in Language Companion Series. John Benjamins, pp. 189–211.

McCloskey, J., 1990. Resumptive pronouns, Ā-binding, and levels of representations in Irish. The Syntax and Semantics of Modern Celtic Languages 23, 199–248.

McCloskey, J., 2002. Resumption, successive cyclicity, and the locality of operations. In: Epstein, S. D., Seeley, T. D. (Eds.), Derivation and Explanation in the Minimalist Program. Vol. 6 of Generative Syntax. Blackwell, pp. 184–226.

Ouali, H., 2006. Agreement suppression effects and unification via Agree. In: Baumer, D., Montero, D., Scanlon, M. (Eds.), Proceedings of the 25th West Coast Conference on Formal Linguistics. Cascadilla Proceedings Project, pp. 320–327.

Ouali, H., 2008. On C-to-T phi-feature transfer: the nature of agreement and anti-agreement in Berber. In: D'Alessandro, R., Hrafnbjargarson, G. H., Fischer, S. (Eds.), Agreement Restrictions. Mouton de Gruyter, pp. 159–180.

Ouali, H., 2011. Agreement, Pronominal Clitics and Negation in Tamazight Berber: A Unified Analysis. Continuum studies in theoretical linguistics. Continuum Publishing Corporation.

Ouali, H., Pires, A., 2005. Complex tenses, agreement and wh-extraction. In: Cover, R. T., Kim, Y. (Eds.), Proceedings of the 31st Annual Meeting of the Berkeley Linguistics Society: General Session and Parasession on Prosodic Variation and Change. Berkeley Linguistics Society, pp. 253–264.

Ouhalla, J., 1993. Subject-extraction, negation and the anti-agreement effect. Natural Language and Linguistic Theory 11 (3), 477–518.

Ouhalla, J., 1996. The construct state in Berber. In: Lecarme, J., Lowenstamm, J., Shlonsky, U. (Eds.), Studies in Afroasiatic Grammar: Papers from the Second Conference on Afroasiatic Languages. Holland Academic Graphics, pp. 278–301.

Ouhalla, J., 2005. Agreement features, agreement and antiagreement. Natural Language and Linguistic Theory 23, 655–686.

Rizzi, L., 1982. Issues in Italian Syntax. Foris.

Rizzi, L., 1997. The fine structure of the left periphery. In: Haegeman, L. (Ed.), Elements of Grammar: A Handbook of Generative Syntax. Kluwer Academic Publishers, pp. 281–337.

Rizzi, L., Shlonsky, U., 2007. Strategies of subject extraction. In: Sauerland, U., Gärtner, H.-M. (Eds.), Interfaces + Recursion = Language? Chomsky's Minimalism and the View from Syntax-Semantics. Vol. 89 of Studies in Generative Grammar. Mouton de Gruyter, pp. 115–160.

Schneider-Zioga, P., 1995. Specifier/head agreement in Kinande. Cahiers linguistiques d'Ottawa 23, 67–96.

Schneider-Zioga, P., 1996. An argument in favor of Agreement Phrase. In: Montapayne, V., Green, A. D. (Eds.), Proceedings - Eastern States Conference on Linguistics (ESCOL). Vol. 13. pp. 294–301.

Schneider-Zioga, P., 2000. Anti-agreement and the fine structure of the left periphery. University of California Irvine Working Papers in Linguistics 6.

Schneider-Zioga, P., 2002. The case of anti-agreement. In: Rackowski, A., Richards, N. (Eds.), Proceedings of AFLA 8: The eighth meeting of the Austronesian Formal Linguistics Association. Vol. 6. MIT, pp. 325–339.

Schneider-Zioga, P., 2007. Anti-agreement, anti-locality and minimality. the syntax of dislocated subjects. Natural Language and Linguistic Theory 25, 403–446.

Smith, N. V., Tsimpli, I.-M., Ouhalla, J., 1993. Learning the impossible: The acquisition of possible and impossible languages by a polyglot savant. Lingua 91 (4), 279–347.