The Categorical Status of (Anti-) (Anti-) Agreement

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1. Introduction

The goal of this paper is to provide empirical evidence that at least some forms of agreement are associated with a syntactic category. Specifically, we argue that this is not a dedicated agreement category (i.e., not Agr) but instead that we are dealing with categories that are independently attested in the nominal domain. Evidence stems from the distributional and interpretational behavior which indicates that we have to distinguish between at least three categories of agreement. In this paper, we focus on subject-verb agreement, but we expect that similar effects are to be found for other types of agreement.

It is a common place that languages display a phenomenon known as subject-verb agreement (henceforth S/V-agr): the form of the verb differs depending on certain well-defined features of the subject. This is exemplified below on the basis of English (1), Tarifyt Berber (2), Halkomelem Salish (3), and Standard Arabic (4).

(1) a. The boy play-s soccer. 
   b. The boys play soccer.

(2) a. i-sga w-arba ljub
   3SM-buy.PERF CS-boy.3SM books
   ’The boy bought books.’

b. θ-sqa tarbat ljub
   3SF-buy.PERF CS-girl.3SF books
   ’The girl bought books.’

1 We would like to acknowledge the Halkomelem consultant Dr. Elizabeth Herrling for sharing her language. We further wish to thank the following individuals for helpful comments and discussion: Strang Burton, Henry Davis, Johan Rooryck, Lisa Cheng, Aniko Liptak, Rose-Marie Déchaine, Lisa Matthewson Stella Grillia, Kristina Riedel and Luis Vicente. Research on this paper was supported by a SSHRC grant awarded to Martina Wiltschko (410-2002-1078).

Unless indicated and documented otherwise all the Berber data reported in this paper comes from the variety of Tarifyt Berber, spoken in the central north of Morocco. The Arabic data comes from Modern Standard Arabic variety as used in media sources: news papers, etc. The examples from Halkomelem reported in this paper are from the Upriver dialect of Halkomelem and are presented in the official orthography of the Stó:lo Nation (see Galloway 1980 for discussion). If not otherwise indicated, Halkomelem data are from original fieldwork by the second author. To the best of our knowledge, all properties discussed here also hold for the other two dialects (Downriver and Island Halkomelem, respectively).

Glosses we use for the data are as follows: SM=Singular masculine; PM=Plural masculine; SF=Singular feminine; CL=Clitics; FUT=Future marker; AOR=Aorist; NEG=Negation; IMPERF=Imperfective; PERF=Perfective; NOM=Nominative case; DAT=Dative case; ACC=Accusative case; CS=Construct state; AGR=Zero agreement; CM=Cleft marker; PTP=Past tense particle; RM=Relative particle; COP=Copular; ART=Article; AUX=Auxiliary; 1=1st Person; 2=2nd Person; 3=3rd Person; COMPLEMENTIZER; DET=Deteminer; ERG=Ergative agreement; INDEP=Independent pronoun; NOM=Nominalizer; O=Object agreement; PASS=Passive (agreement); PL=Plural; S=Subject agreement (indicative); SG=Singular; SS=Subjunctive Subject Agreement; TRANS=Transitivizer.
Given that such diverse languages display the same phenomenon of $S/V$-agr, we might ask whether we are dealing with a uniform phenomenon. However, if we look at different environments the apparent uniformity disappears. For example, in the context of subject A’-movement, $S/V$-agr displays different properties across languages. We begin to see certain distributional differences in the patterning of $S/V$-agr. Particularly, $S/V$-agr can be retained as in English (5); $S/V$-agr can be lost as in TB (6) or HK (7) – a phenomenon known as anti-agreement; and $S/V$-agr can change as in MSA (8), a process that we refer to as anti-anti-agreement:

(5) a. The boy plays soccer.  
   b. Which boy plays soccer?

(6) a. säği-$n$  ða'bâthin  lkub  $TB$  
       bu$y$,PERF-3PLF  girl.3PLF  books  
       ‘The girls bought books.’
   b. mâñtha'bâthin  i (g) y-säği-$n$  lkub  
       which  girl.3PLF  RM X 0AGR-bu$y$,PERF-0AGR  books  
       ‘Which girls bought the books?’

(7) a. q’ó:y-$t$-$es$  te  Strang  te  qwá:l  $HK$  
       kill-trans-3ERG  DET  Strang  DET  mosquito  
       ‘Strang killed the mosquito.’
   b. tl’ó  te  ile  swiyeqe  q’óy-$t$  te  qwá:l  
       3Indep  DET  here  man-kill-TRANS  DET  mosquito  
       ‘This is the man who killed the mosquito.’

(8) a. ñfäjara  ða-ttulabuu  ðal-lkutuba  $MSA$  
       bu$y$,PERF-3SM  ART-student.3PLM.NOM  ART-books.ACC  
       ‘The students bought the books.’
   b. ða-ttulabuu  ñfäjaruu  ðal-lkutuba  ART-students.3PLM.NOM  bu$y$,PERF-3PLM  ART-books.ACC  
       ‘The students bought the books.’

Since $S/V$-agr displays distributional differences across different languages we can conclude that it is not a uniform phenomenon. What determines the behavior of $S/V$-agr in the context of A’-movement? We argue that it is the category of $S/V$-agr which determines its behavior. This argument rests on the common assumption that if sets of morphemes display different distributional properties they belong to different categories.

2. The category of subject-verb agreement

What syntactic category does agreement morphology instantiate? We explore the hypothesis that agreement is pronominal in nature (cf. Platzack 2003, Ritter 1995, Taraldsen 1992). However,
assuming that agreement is pronominal does not itself provide an answer to the question concerning the categorical status of agreement. We adopt the view that pronouns do not constitute a uniform category in their own right, but instead that pronominal forms instantiate independently attested nominal categories. In particular, we follow Déchaine and Wiltschko 2002, who argue that there are at least three types of proforms: proDP, proφP, and proNP. These pronouns have predictable distributional and interpretational properties that follow from their category.

(9)  
\[
\begin{align*}
\text{a. ProDP:} & \quad [\text{DP} \ D \ [\varphi P \ [\text{NP} \ N]]] \\
\text{b. ProφP:} & \quad [\varphi P \ [\text{NP} \ N]] \\
\text{c. ProNP:} & \quad [\text{NP} \ N]
\end{align*}
\]

Suppose that agreement is indeed pronominal; and suppose further that pronouns do indeed come in three different categories. It then follows that agreement also comes in three distinct categories: D-agreement, φ-agreement, and n-agreement. And each agreement category is associated with predictable distributional and interpretational properties.

(10)  
\[
\begin{align*}
\text{a. D-agreement:} & \quad [\text{CP} \ ZP \ [C \ D-agr]] \\
\text{b. φ-agreement:} & \quad [\text{TP} \ ZP \ [T \ φ-agr]] \\
\text{c. n-agreement} & \quad [\varphi P \ ZP \ [ν \ n-agr]]
\end{align*}
\]

As indicated in (10), we assume that D-agreement associates with C, φ-agreement associates with T, and n-agreement associates with ν. It goes beyond the scope of the present paper to discuss in detail what determines this distribution. We simply assume that it can be derived from a general principle along the lines of Williams’ 2003 level of embedding conjecture. Roughly, this principle determines that ‘like merges with like’: The highest projection in the nominal domain (D) merges with the highest projection in the clausal domain (C), and so on. In what follows we provide evidence for this claim. We discuss the cluster of properties associated with each type of agreement. And we show how the proposal derives the distributional properties of different kinds of S/V-agr.

3. φ-agreement: The case of English

To set the stage we start with the most familiar type of S/V-agr. This is the one we find in English and which we analyze as an instance of φ-agreement. As φ-agreement it is associated with T.

(11)  
\[
\text{English S/V-agr} = \varphi\text{-agreement:} \quad [\text{TP} \ ZP \ [T \ φ-agr]]
\]

That English S/V-agr is associated with T is of course a standard assumption which receives support from its distributional properties. φ-agreement appears on the verb (12) unless an auxiliary is present (13).

(12)  
\[
\begin{align*}
\text{a. The boy plays soccer.} \\
\text{b. *The boy have plays soccer}
\end{align*}
\]

(13)  
\[
\begin{align*}
\text{a. The boy has played soccer.} \\
\text{b. The boys have played soccer}
\end{align*}
\]

Assuming that S/V-agr in English is associated with T, thus, derives its apparent mobility with respect to the verb: it can only suffix to the verb if the verb itself can be associated with T (14)a. If there is an auxiliary present, the association of the verb with T is blocked by some version of the Head-Movement Constraint (Travis 1984) (14)b. As a result, S/V-agr is suffixed to the auxiliary (14)c:

(14)  
\[
\begin{align*}
\text{a. [T V-φ-agr] \ ν] } \\
\text{b. *[T V-φ-agr] \ Aux \ ν] } \\
\text{c. [T Aux-φ-agr] \ Aux \ V] }
\]
Next, since φ-agreement is associated with T, we expect it to be sensitive to tense distinctions. This prediction is indeed borne out. English S/V-agr is used in the present and present perfect tense (15), while it is not used in the past and past perfect tense (16).

(15) a. The boy plays soccer. \textit{Present}
    b. The boy has played soccer. \textit{Present perfect}

(16) a. The boys played soccer. \textit{Past}
    b. The boy had played soccer. \textit{Past perfect}

For the purposes of this paper, we assume that agreement can arise under Specifier-Head agreement. φ-agreement, which is associated with T will consequently agree with the constituent in SpecTP: the grammatical subject. It is a well-known fact that this is indeed the case: it is the grammatical subject (and not the thematic subject) which triggers S/V-agr in English. This is shown on the basis of the difference between active and passive sentences.

(17) a. The boy kicks the balls. \textit{Active}
    b. The balls are/*is kicked by the boy. \textit{Passive}

Finally, since we analyze agreement as pronominal, we predict that agreement should display binding-theoretic properties just like any other pronominal forms. Déchaine & Wiltschko 2002 argue that the category of a given pronominal form determines its binding-theoretic properties. Specifically, φ-pronouns are treated as variables and as such they support bound variable anaphora as in (18).

(18) a. Everyone, thinks he is the best soccer player.
    b. Who, said that he is the best soccer player?

Consequently, φ-agreement should also be treated as a variable. It is its categorical identity as φ which allows English S/V-agr to remain present in the context of subject A'-movement: φ-agreement can support bound variable anaphora. Consequently, φ-agreement can be bound by a constituent in SpecCP:

(19) a. \begin{array}{c}
\text{TP}\quad \text{[the boy]}\quad \text{[play-s]_{T}\quad \text{soccer}}
\end{array}
    b. \begin{array}{c}
\text{CP[who]}\quad \text{TP}\quad \text{[who]}\quad \text{[play-s]_{T}\quad \text{soccer}}
\end{array}

We have now established the nature of the criteria that can be used when considering the categorial status of a given agreement form: i) the distribution of S/V-agr in the presence of an auxiliary; ii) sensitivity to information encoded in the head with which S/V-agr associates; iii) the constituent it establishes an agreement relation with; and iv) its binding-theoretic properties. With these criteria we can now go on to investigate the less familiar types of agreement: \textit{n-agreement} and D-agreement.

4. \textit{n-agreement}: The case of Berber and Halkomelem

We propose that S/V-agr in both Berber and Halkomelem are best analyzed as instances of \textit{n-agreement}. Given the “like-merges-with-like”-principle, we expect \textit{n-agreement} to associate with \textit{ν}. 3

(20) \textit{Berber and Halkomelem S/V-agr = n-agreement: }\begin{array}{c}
\text{[ν}\quad \text{ZP}\quad [ν-n-agr]]
\end{array}

\footnote{2 We do not exclude the possibility that there are other structural relations under which agreement can arise.}

\footnote{3 The assumption that agreement can be associated with \textit{ν} runs counter a claim made in Chomsky 2002 according to which agreement is not possible in a position of external merge. However, the data discussed below indicate that agreement on \textit{ν} is indeed an option that languages can make use of. See also Ghomeshi 2001 and d’Allessandro & Roberts 2006 for a discussion of other cases of \textit{ν}-agreement.}
That S/V-agr in Berber and Halkomelem is associated with v is supported by its distributional properties: it appears on the verb (21)-(22) even in the presence of an auxiliary (23)-(24).

(21) a. y-s̪a wa-rba lkab TB
   3SM-buy.PERF CS-boy book
   ‘The boy bought the book.’
b. t̪o-s̪a t̪a’bat lkab
   3SF-buy.PERF CS-girl book
   ‘The girl bought the book.’

(22) q’ó:y-t-es te Strang te qwá:l HK
   kill-TRANS-3 DET Strang DET mosquito
   ‘Strang killed the mosquito.’

(23) a. aD y-ġa’ w-arba lkab TB
   FUT 3SM-read.AOR CS-boy book
   ‘The boy will read the book.’
b. *aD y-ġa’ w-arba lkab
   FUT.3SM read.AOR CS-boy book
   ‘The boy will read the book.’

(24) a. li q’ó:y-t-es te Strang te qwá:l HK
   AUX kill-TRANS-3ERG DET Strang DET mosquito
   ‘Strang killed the mosquito.’
b. *li-s q’ó:y-t te Strang te qwá:l
   AUX-3ERG kill-TRANS DET Strang DET mosquito
   ‘Strang killed the mosquito.’

Assuming that S/V-agr in Berber and Halkomelem is associated with v, thus, derives the lack of mobility with respect to the verb, contrasting with the apparent mobility of S/V-agr that associates with T. S/V-agr on v can only suffix to the verb, independent of the presence of an auxiliary.

(25) a. V–n-agr
b. * Aux–n-agr V
c. Aux V–n-agr

Next, since n-agreement is associated with v, we expect it to be sensitive to distinctions encoded in v, such as for example transitivity. This prediction is indeed borne out. Halkomelem S/V-agr is only used in transitive but not in intransitive clauses. In other words, this type of agreement displays “ergative” behaviour.

(26) a. q’ó:y-t-es te Strang te qwá:l HK
   kill-TRANS-3ERG DET Strang DET mosquito
   ‘Strang killed the mosquito.’
b. í:mex te Strang
   walking DET Strang
   ‘Strang is walking.’

In contrast to π-agreement, which is sensitive to tense distinctions, n-agreement does not display any sensitivity to tense. It can be used in the absence of tense marking, as well as in the presence of either a past or a future marker:

(27) a. q’ó:y-t-es te Strang te qwá:l HK
   kill-TRANS-3ERG DET Strang DET mosquito
   ‘Strang killed the mosquito.’/’Strang is killing the mosquito.’
b. i-lh q’óy:t-es te Strang te qwá:l
   AUX-PAST kill-TRANS-3ERG DET Strang DET mosquito
   ‘Strang killed the mosquito.’

c. q’oyt-es cha te Strang te qwá:l
   kill-TRANS-3ERG-FUT DET Strang DET mosquito
   ‘Strang will kill the mosquito.’

Furthermore, we expect S/V-agr that is associated with v to indicate an agreement relation with the thematic subject (as opposed to the grammatical subject). Again, this prediction is borne out. n-agreement is lost in the absence of a thematic subject, as for example in the context of a passive construction:

(28) a. 3SF-sell.PERF girl book
   ‘The girl sold the book.’

(29) help- TRANS-EM DET Konrad
‘Konrad was helped.’

Finally, we propose that the binding-theoretic properties of n-agreement derive the anti-agreement pattern in the context of subject A’-movement (see, Ouhalla 1993 and Elouazizi 2005b). In particular, Déchaine & Wiltschko 2002 argue that N-pronouns, like for example English one, cannot function as bound variables since they act as nominal constants.

(30) a. *Everyone i thinks onei is the best soccer player.
b. *Who i said that onei is the best soccer player?

In the context of Subject A’-movement, S/V-agr would be bound from the constituent in SpecCP, which is excluded if it cannot function as a bound variable. To circumvent this invalid binding configuration, n-agreement is dropped deriving the anti-agreement pattern introduced in section 1.

5. D-agreement: the case of Standard Arabic

The last type of agreement to consider is D-agreement, which according to the principle of ‘like-merges-with-like” associates with C.4

(31) Standard Arabic = D-agreement [CP ZP [C –D-agr]]

Consistent with the claim that S/V-agr in Modern Standard Arabic associates with C is the fact that it can appear on complementizers:

(32) a. ART-students.3PLM.NOM who.3PLM buy.PERF.3PLM
   ?al-kutuba wassalu ART-books.ACC arrive.PERF.3PLM
   ‘The students who bought he books arrived.’

---

4 That S/V-agr can associate with C is not a new claim. See for example Bayer 1984, Carstens 2003, Chung 2003, Haegeman 1992 among others. However, it appears that complementizer agreement in Flemish and Bavarian displays different properties than the kind of D-agreement discussed here. We speculate that this might reflect Lasnik’s 1995 distinction between “affixal agreement” (which is pronominal in our sense) and “featural agreement” (which has different properties).
b. qal-a | cllaowi | ?nnahu | najj-a | mina | ?al-giatan
say.PERF-3SM | A. | that.3SM | escape.PERF-3SM | from | ART-assassination
‘Allaowi said that he escaped an assassination attempt.’

Furthermore, D-agreement appears on the verb only if the verb moves to C:

(33) a. fahim-a | ?a-tttulab-u | ?a-ddarsa
understand.PERF.3SM.NOM | ART. students.3PLM-NOM | ART-lesson.ACC
‘The students understood the lesson.’

b. ?a-ttublu | fahim-uu | ?a-ddarsa
ART. students.3PLM.NOM | understand.PERF.3PLM-NOM | ART-lesson.ACC
‘The students understood the lesson.’

Finally, D-agreement appears on elements which can appear in the C domain, as shown on the basis of wh-relatives (34), relatives (35), clefts (36), and embedded declarative clauses (37). This establishes that D-agreement is sensitive to information encoded in C, namely clause-typing.

(34) [wh-relative]
man.humu | ?a-tttulab-u | ?llaolina | fahim-uu
which.3PLM | ART-student.3PLM-NOM | who3PLM | understand.PERF.3PLM-NOM | ?a-ddarsa | ?
ART-lesson.ACC
‘Which students understood the lesson?’

(35) [Relative]
?a-ttalibat-u | ?llawati | fahimmna
ART-student.3PLF-NOM | who3PLF | understand.PERF.3PLF-NOM | ?a-ddarsa | ?
ART-lesson.ACC
‘The students understood the lesson.’

(36) [Cleft]
?a-ttalib-u | huwa | ?llaöi | fahim-a
ART-student.3SM-NOM | him | who3SM | understand.PERF.3SM-NOM | ?a-ddarsa | ?
ART-lesson.ACC
‘It is the student who understood the lesson.’

(37) [Embedded declarative clause]
ya-wadu | ?ann | ta-fahama
3SM-wish.IMPERF.NOM | that | 3SF-understand.IMPERF.NOM | ?a-ttalibat-u | ?a-ddarsa
ART-student.3PLF-NOM | ART-lesson.ACC
‘He wishes that the students understand the lesson.’

Assuming that S/V-agr in Modern Standard Arabic associates with C predicts that it encodes an agreement relation with the constituent in SpecCP. Following Williams 2003 we consider this to be the “discourse subject”. We propose that this explains the fact that in Modern Standard Arabic the form of S/V-agr differs depending on the position of the subject, i.e., the anti-anti-agreement effects. Only if the subject occupies SpecCP does the verb display full agreement.

(38) a. ?itara-a | ?at-tullaab-u | ?al-kutub-a
buy.PERF-3SM.NOM. | ART.student.3PLM-NOM | ART-book.PL-ACC.
‘The students bought the books.’
b.  ?at-tullaab-u  ?iǦtar-u  ?al-kutub-a
   ART.student.3PLM-NOM  buy.PERF-3PLM-NOM  ART-book.PL-ACC.
   ‘The students bought the books.’ (Full agreement)

Finally, we turn to the binding theoretic effects associated with D-agreement. According to Déchaîne & Wiltschko 2002, D-pronouns function as definite R-expressions and as such they cannot be bound. This is shown on the basis of German D-pronouns in (39).

(39) a. *Jeder  Bubi  glaubt  dass  der  beste  Fussbalspieler  ist  
   ‘Every boy believes that d-pron the best soccer-player is’
   b. *Wer(i)  hat  gesagt  dass  der  beste  Fussbalspieler  ist?  
   ‘Who has said that d-pron the best soccer-player is’  

German

We observe that D-agreement cannot occur in the context of A'-binding, consistent with the present analysis. Witness the examples in (40) from Modern Standard Arabic:

(40) a. *kullu  muCllimini  ya-Ctaqid-u  ?anna-hui  ?ahmaq-an  
   ‘Every teacher thinks that he is crazy.’
   b. *man(i)  ya-Ctaqid-u  ?anna-hui  ?ahmaq-an  ?
   ‘Who thinks that he is crazy?’  

MSA

Furthermore, the definite character of D-agreement also derives the fact that preverbal subjects (which are the ones that trigger D-agreement) have to be definite.

(41) a.  tahadaθ-a  rijaal-un  mac-i  MSA  
   speak.PERF.3SM.NOM  man.3PLM.NOM  with-me  
   ‘Men spoke with me.’
   b.  ?ar-rijaal-u  tahadaθ-uuu  mac-i  
   ART-man.3PLM.NOM  speak.PERF.3PLM.NOM  with.me  
   ‘The men spoke with me.’

6. Conclusion

We have argued that there are at least three types of S/V-agr: D-agreement, ϕ-agreement, and n-agreement. Each of these agreement types is associated with a cluster of predictable distributional and interpretational properties. Our findings are summarized in table 1 below.

<table>
<thead>
<tr>
<th>Agreement category</th>
<th>N</th>
<th>ϕ</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distribution:</td>
<td>on V</td>
<td>on T</td>
<td>on C</td>
</tr>
<tr>
<td>sensitive to:</td>
<td>transitivity</td>
<td>tense</td>
<td>clause-typing</td>
</tr>
<tr>
<td>Agreement with:</td>
<td>thematic subject</td>
<td>grammatical subject</td>
<td>discourse subject</td>
</tr>
<tr>
<td>Binding-Theoretic properties:</td>
<td>nominal constant</td>
<td>variable</td>
<td>(definite) operator</td>
</tr>
<tr>
<td>Pattern in subject A'-mvt</td>
<td>lost</td>
<td>retained</td>
<td>changed</td>
</tr>
</tbody>
</table>

Table 1: The distributional and interpretational properties of different types of S/V-agr.

What could be responsible for the choice of an agreement type in any given language? While we do not have a definite answer to this question, we can eliminate the possibility that we are dealing with a parameter. In particular, it turns out that Halkomelem Salish does in fact have all three types of agreement, each associated with the cluster of properties expected under the current proposal. For reasons of space we cannot discuss the empirical evidence to this effect (see Wiltschko 2005, 2006, Elouazizi & Wiltschko 2006a).
References


Taraldsen, Knut Tarald. 1992. Agreement as pronoun incorporation. Paper presented at Talk delivered at GLOW.


