

Abstract

Dargwa languages have two types of agreement at clause level: gender and person agreement. In the general case, person agreement is hierarchical (speech act participants preferred to 3rd persons), while gender agreement is with the absolutive (S/P) argument. Two exceptions to this pattern have been observed in some dialects: first, some auxiliary verbs have a gender agreement slot which can be controlled by both ergative and absolutive arguments; second, adverbials agreeing in gender can agree with either ergative or absolutive if they are located at clause edges. A proposed explanation of this behaviour is through effectively splitting each clause into two layers, with the top layer having its own zero absolutive position, coreferential with either the subject or the direct object of the lower layer. In this way, the general rule that gender agreement is with the absolutive can be preserved. In this paper, I argue that the data of Ashti Dargwa do not support the Backward Control theory. Peripheral adverb agreement and auxiliary gender agreement are independent phenomena, while auxiliary agreement can be explained by splitting the 3rd person based on topicality, as in proximate-obviative systems. This allows us to preserve the conventional account of clause structure while framing the data of Dargwa in a wider typological context.

1 Introduction

Dargwa¹ is a group of East Caucasian languages spoken in central Daghestan (Russia). Like most East Caucasian languages, their key features include (non-rigid) SOV word order, morphological (dependent-marking) consistent ergativity, and a rather high degree of morphological complexity. Another feature of Dargwa that is shared with the majority of languages of this family is a system of grammatical gender agreement. Unlike most other branches of East Caucasian, Dargwa also has person agreement on the verb in finite clauses.

Person and gender agreement in Dargwa are largely morphologically distinct and governed by separate sets of rules. Gender agreement is, at clause level, straightforwardly controlled by the Absolutive argument (S/P), regardless of its position or grammatical function. The controller of person agreement is, in contrast, chosen between subject and object (A and P) by a complex set of rules that is mainly governed by the person hierarchy (1, 2 > 3 or 2 > 1 > 3, depending on the language).

In some varieties of Dargwa, however, gender agreement on the auxiliary verb and on adverbs in clause-peripheral positions can optionally be controlled by the Agent-like argument. Sumbatova (2014) has proposed to explain this behaviour by splitting all clauses into two tiers, the lower tier headed by the lexical verb and the higher tier, by the auxiliary. The thematic arguments of the verb are located at the “lexical” tier, while the auxiliary has its own (absolutive) subject position. This position is always filled by a PRO which is anaphorically backward controlled by either the subject or the object of the lower tier. It is this zero subject that the

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auxiliary and all peripheral adverbs agree with, thus allowing us to maintain a uniform absolutive-control rule for gender agreement.

In this paper, I will use the data of Ashti Dargwa to show that, at least for this dialect, the Backward Control hypothesis is redundant compared to a simpler solution that dispenses with a strict distinction between “gender” and “person” agreement, instead tying these phenomena to their syntactic positions. All agreement on auxiliaries is thus, in effect, conditioned by the same rules that govern “person” agreement, regardless of the features that they happen to display. The seemingly exceptional pattern of “gender agreement with A” is a purely morphological fact that follows from certain auxiliaries having a gender agreement slot. This solution allows us to maintain a traditional, single-tier f-structure, while capturing all the complexities of Dargwa agreement and making more generalizations than the Backward Control analysis.

2 Agreement in Ashti Dargwa

In this section, I will describe the core agreement system of Ashti, the main variety discussed in this paper. This system also serves as a representative example of agreement in Dargwa as a whole.

2.1 Gender

Like all other Dargwa languages, Ashti has a system of three genders, masculine, feminine and nonhuman. All of these are semantically transparent. In the plural, the distinction is only between human (masculine + feminine) and nonhuman. The gender markers have the same form across all morphological positions:

	SG	PL
M	<i>w</i>	<i>b</i>
F	<i>j</i>	
N	<i>b</i>	<i>d</i>

Gender agreement regularly occurs in several contexts, of which the most frequent are:

- prefix on most verb stems;
- suffix on attributive forms;
- suffix on essive nouns and certain adverbs.

Attributive forms generally agree with the head that they modify. Items appearing at clause level, i.e. verbs and adverbials, agree with the P/S (absolutive) argument.² For example, in (2), both the verb *j-us.aj* and the adverb *wac'ac:i-j* ‘in the forest’ agree with *pat'imat* ‘Patimat’ in feminine singular; the verbal agreement slot is prefixal, the adverbial agreement slot is suffixal.

2. The abbreviations in glossing follow the Leipzig Rules, apart from the following labels: ATTR: attributive, ESS: essive (static location), HPL: human plural, NPL: neuter plural, PTCL: particle. A list of abbreviations is found at the end of this paper. Morpheme boundaries are simplified to the extent that it does not affect the translation or the phenomena under discussion. Whenever existing morpheme boundaries in the first line have been suppressed for convenience, the dot (“.”) is used instead of the hyphen. The frame denotes the agreement controller: this helps to separate its annotation from the annotation of the agreement morphemes and other highlighted material, which uses boldface.

(1) Ashti

pat'imat j-id.až.i
P.(F) F-went.out

‘Patimat went out.’

(2) *murad-li* *wac'a.c:i-j* pat'imat j-us.aj
M.(M)-ERG in.forest-F P.(F) F-caught

‘Murad caught Patimat in the forest.’

2.2 Person

Person agreement morphology is found in most independent sentences and on certain dependent forms. There are several sets of synthetic (morphologically bound) person markers, and one clitic set that is used together with non-finite verbs to form periphrastic paradigms and in nonverbal predication. The clitic set only distinguishes number in the 2nd person; the 2nd person plural marker is homonymous with the 1st person, and the 2nd person singular marker is distinct. The 3rd person is marked by the so-called “copula” *sa-b* or by zero, depending on the paradigm. Importantly, the copula contains the gender marker as a suffix (in the table, neuter *-b* is used for illustration).

	SG	PL
1	=da	
2	=di	
3	(=sa-b)	

The morphological structure of most synthetic paradigms is largely the same:³ there are separate exponents for person and number in the 1st and 2nd person and no number distinction in the 3rd person. In Ashti, the most widely used set of this type is the preterite set:

	SG	PL
1	-d	-d-a
2	-t:i	-t:-a
3	-aj, -in, -i	

Agreement in Ashti is hierarchical and fits into the general framework provided in Sumbatova (2011) and Belyaev (2013). Descriptively, the choice of the controller obeys the following rules:

- In intransitive clauses, person agreement is with S.
- In transitive clauses, the controller is chosen between A and P:
 - A=3, P=3 → 3 if both arguments are not speech act participants (SAPs), i.e. 3rd person, the verb is in the 3rd person;
 - A=1/2, P=3 → A if A is a SAP while P is 3rd person, the verb agrees with A;
 - A=3, P=1/2 → P if A is 3rd person while P is a SAP, the verb agrees with P;

3. The only exception is the so-called optative set, which follows the pattern of the clitic set: 1p., 2pl. -a, 2sg. -i, zero in third person.

$A=1/2, P=1/2 \rightarrow P$ if both arguments are SAPs, agreement is controlled by P (the absolutive argument).

This is illustrated by the following examples:

- (3) *[di-l]* *murad us.a-d*
me-ERG M.(M) [M]caught-1[SG]
'I caught Murad.' (A = 1, P = 3 \rightarrow agreement with 1)
- (4) *murad-li [du] us.a-d*
M.(M)-ERG I(M) [M]caught-1[SG]
'Murad caught me.' (A = 3, P = 1 \rightarrow agreement with 1)
- (5) *di-l [u] us.a-t:i*
I-ERG thou(M) [M]caught-2[SG]
'I caught you.' (A = 1, P = 2 \rightarrow agreement with 2)
- (6) *u-dil [du] usa-d*
thou-ERG I(M) [M]caught-1[SG]
'You caught me.' (A = 2, P = 1 \rightarrow agreement with 1)
- (7) *[murad-li] [rasul] us-aj*
M.(M)-ERG R.(M) [M]caught-3
'Murad caught Rasul.' (A = 3, P = 3 \rightarrow agreement with 3)

As a generalization, one can say that agreement in Ashti is controlled by two hierarchies: the person hierarchy (1, 2 > 3, or SAP > non-SAP) and the grammatical function hierarchy (OBJ > SUBJ), with the former being dominant. Hence, as a general rule, the highest-ranking argument on the person hierarchy controls agreement; if both subject and object have the same rank, the controller is the object. Naturally, since there is no number distinction in the 3rd person, there is no way to distinguish between the controllers, thus the last part of the rule is only observed when both arguments are SAPs.

It is worth mentioning that, for the purposes of agreement, Ergative and Dative-marked transitive subjects behave in the same way:

- (8) *[dam] murad ulh.i-d*
me.DAT M.(M) [M]saw-1
'I saw Murad.'
- (9) *murad.li-j [du] ulh.i-d*
M.(M)-DAT I(M) [M]saw-1
'Murad saw me.'

Thus, for the purposes of this paper, "ergative subjects", "ergative agreement", "A agreement" and similar terms should be understood as referring to both Ergative and Dative-marked arguments.⁴

4. Unlike some other languages with hierarchical agreement, only core arguments, i.e. S, A and P, can serve as controllers.

3 The Backward Control hypothesis

3.1 Tanti data

Most Dargwa dialects, with few variations, follow a pattern similar to the above. However, in certain varieties, this clear picture faces problems if one considers the behaviour of the gender agreement marker that is found on the copula. In particular, Sumbatova (2014) has shown that in Tanti Dargwa, which otherwise has exactly the same agreement syntax as Ashti, the copula⁵ can agree alternatively with the absolutive or the ergative:

(10) Tanti

murad-li t'ant'i-b qali b-irq'.u.le sa-j
M.(M)-ERG in.T-N house(N) N-building COP-M

(11) murad-li t'ant'i-b qali b-irq'.u-le sa-b
M.(M)-ERG in.T-N house(N) N-building COP-N

‘Murad is building a house in Tanti.’

Examples (10)–(11) represent periphrastic constructions that are typical for Dargwa. A non-finite lexical verb (participle or converb) is accompanied by an auxiliary, in this case the 3rd person “copula” *sa-b*. This form of the auxiliary is remarkable in that it incorporates a gender marker.⁶ Unlike most other elements agreeing in gender at clause level, this auxiliary can alternatively agree with the ergative or the absolutive argument of the clause.

Based on the data provided in Sumbatova (2014) and Sumbatova and Lander (2014), the choice of agreement controller in 3rd person contexts seems to be based mostly on topicality.⁷ More specifically, the “default” option seems to be subject agreement, with the object only “overtaking” agreement control only in case it possess a “higher degree of topicality” (there is no precise formulation of this notion given in the paper):

(12) a. se.li.ž se'li se'la χ:we it.u.se=de? – hi.ti-li dila uc:i
why thou:ERG thy dog(N) hitting=2 it(N)-ERG my brother(M)
uc.ib.le =sa-b / sa-j
bitten COP-N COP-M

‘Why are you hitting your dog? – It hit my brother.’ (Sumbatova and Lander 2014, 453)

5. “Copula” is a traditional term for what is essentially a 3rd person auxiliary in languages like Ashti, and an auxiliary stem (not limited to the 3rd person) in languages like Tanti. It does act as a copula in nonverbal predication, but so do the person markers =*da* and =*di*, for which the term is not usually employed.

6. The diachronic origin of the gender distinction in the copula is not clear. It is homonymous with the absolutive form of the 3rd person personal-“reflexive” pronoun *cai* (*sa-b* in Tanti). Such pronouns in East Caucasian are closer to personal pronouns (pronominals) than actual reflexives; hence, this may be an example of the transition from a pronoun to a copula (Li and Thompson 1977). However, the situation is far from clear, as the oblique forms of the “reflexive” come from a different source (sg. *cin-*, pl. *ču-*), which means that the absolutive form may itself be an innovation.

7. It is emphasized that this is not a strict rule; in particular, even arguments explicitly marked by focus can control gender agreement. The authors provide no explanation for this behaviour.

- b. *ʃeˈla uc:i.li-ž se b-it.arg.ur.se? – [hi.t] ca*
 thy brother(M)-DAT what(N) N-happened that(M) one
*χːwe-li uc.ib =s:a-j / * =s:a-b*
 dog(N)-ERG bite COP-M COP-N

‘What happened to your brother? A dog bit him.’ (ibid.)

According to Sumbatova, in the answer in (12a), the topic is the subject ‘dog’, yet the direct object ‘brother’ can also control agreement because it nevertheless possesses a high degree of “topicality” due to its human reference. In contrast, in (12b), the topic is the direct object ‘brother’, and the subject ‘dog’ cannot control agreement because it is neither topical nor higher than the subject on the animacy hierarchy.

Overall, while the discussion of the conditions on agreement in Sumbatova and Lander (2014) is rather vague and ultimately unconvincing (as the authors themselves admit), it seems rather clear that gender agreement of the auxiliary in languages like Tanti is a syntactic phenomenon that is conditioned by information structure, in particular by topicality and relative prominence on the animacy hierarchy. The specific way these factors interact needs further elaboration, but the core of the phenomenon seems reasonably clear. It must also be observed that a similar conclusion is reached for Akusha gender agreement in van den Berg (2001).

It is important that in Tanti both options seem to be available even if one of the arguments is a SAP. The authors admit that absolutive control in the case of an SAP subject and a non-SAP object is only marginally possible if there is “emphasis” on the absolutive:

- (13) *[ʃaˈli] rurs:i quli-r r-alt.un.ne sa-j=de*
 thou:ERG girl(F) in.house-F F-keeping COP-M=2SG

‘You are keeping the girl at home.’

- (14) *ʃaˈli [rurs:i] quli-r r-alt.un.ne sa-r=de*
 thou:ERG girl(F) in.house-F F-keeping COP-F=2SG

‘You are keeping the girl home alone.’ (Sumbatova 2014)

Unfortunately, what is meant by “emphasis” in this case is not clear. It may be the adverb ‘alone’ in the translation of (14) that is responsible for the “emphatic” reading, but in this case the claimed association with gender agreement and topicality seems dubious at best: if anything, ‘alone’ is closer to a focus marker. Regardless of the interpretation, the grammaticality of this example shows that the controller of gender agreement on the auxiliary is independent from the controller of person agreement.

For Tanti there is no data on what happens when both arguments are SAPs, or when a SAP is in the direct object position.

3.2 Proposed solution

The solution proposed in Sumbatova (2014) is to divide the clause into two layers, one headed by the auxiliary (roughly corresponding to IP) and the other headed by the lexical verb (roughly corresponding to VP) and stipulate that the upper layer

has its own subject position. This position is always filled by a null PRO which is backward controlled by either the subject or the object of the lower layer:

(15) ergative agreement (= ex. 10)

$$\left[\Delta_{i(ABS)} \left[\text{murad-li}_i \text{ t'ant'i-b} \text{ qali} \text{ b-irq'ule} \right] = \text{sa-j} \right]$$

M.(M)-ERG T.-N[ESS] house(N) N-doing=COP-M

(16) absolutive agreement (= ex. 11)

$$\left[\Delta_{i(ABS)} \left[\text{murad-li} \text{ t'ant'i-b} \text{ qali}_i \text{ b-irq'ule} \right] = \text{sa-b} \right]$$

M.(M)-ERG T.-N[ESS] house(N) N-doing=COP-N

In this case, the seemingly exceptional pattern of ergative gender agreement on the auxiliary is fully regular: the copula agrees not with the ergative argument of the lower tier, but with its own absolutive subject that is coreferential with that argument.

Sumbatova's analysis mainly rests on two pieces of independent evidence: the behaviour of adverbs and the behaviour of non-finite forms.

3.2.1 Adverbs

In Tanti, an additional piece of evidence to confirm this theory is the behaviour of adverbial elements. While as a general rule adverbs agree with the absolutive argument, they can agree with the transitive subject NP if they are located at the left or right edge of the clause:

(17)
$$\left[\text{ma}^{\text{'ha}} \text{mmad.li.š:u-w} / \text{-b} \left[\text{rasul-li} \text{ dig} \text{ b-uk:-un-ne} \right] = \text{sa-j} \right]$$

chez.M.-M -N R.(M)-ERG meat(N) N-eating COP-M

'At Muhammad's place Rasul is eating meat.' (Sumbatova 2014)

This behaviour is easily explained if we assume that such adverbs are actually adjoined at the higher (IP) layer of the clause. Like the auxiliary, they agree with the absolutive argument within the domain, which happens to be the zero absolutive. Again, the advantage of this solution is that no additional agreement patterns have to be introduced.

However, the data of Ashti put the relevance of these data for the analysis of auxiliary gender agreement into doubt. Just like Tanti, Ashti allows "peripheral" adverbs to agree with the ergative argument:

(18) Ashti

$$\text{wac'a.c:i-w} / \text{wac'a.c:i-j} \left[\text{rasul-li} \right] \text{ pat'imat j-u:s-u} \text{ li-w}$$

in.forest-M in.forest-F R.(M)-ERG P.(F) F-catching be-M

'In the forest Rasul is catching Patimat.'

However, it seems that there is no direct connection between this phenomenon and auxiliary agreement. The Backward Control theory predicts that adverbs can only agree with the ergative argument if the auxiliary also agrees with this argument. Indeed, since every adverb that appears at the edge of the clause can be potentially identified as adjoined at either IP or VP level, absolutive agreement is predicted to always be available. Ergative agreement, in contrast, is only predicted to occur if the "zero absolutive" at the upper level is coreferent with the ergative argument, which should trigger ergative agreement on the copula as well. But this prediction is not borne out: ergative agreement on peripheral

adverbs is available even if the auxiliary agrees with the absolutive, as seen in (19).

- (19) *wac'a.c:i-w / wac'a.c:i-j rasul-li pat'imat j-u:s.u li-j*
 in.forest-M in.forest-F R.(M)-ERG P.(M) F-catching be-F

In this example, the auxiliary agrees in feminine with the absolutive argument, which, in the Backward Control analysis, means that the zero absolutive in the higher clause is coreferent with the direct object. This should make ergative agreement of peripheral adverbs with the ergative argument impossible, yet it seems to be no less grammatical than in examples like (18).

Thus, while the phenomenon is interesting, it does not seem to have any relation to the issue of auxiliary agreement — or at least, this is not true for all varieties. A possible explanation is that such adverbs head secondary predications with their own internal subjects. An alternative explanation, suggested by an anonymous referee, might be an analysis along the lines of the Constructive Case approach used in Nordlinger (1998), on the assumption that the adverb in (19) adjoins not at clause level, but to one of the arguments. Whatever conclusion is eventually reached, we may say that, whatever the merits of the Backward Control analysis in explaining auxiliary agreement, adverb agreement has no direct connection with this phenomenon.

3.2.2 Relative clauses

One of the arguments that seems to favour the Backward Control analysis is the fact that in Tanti participial relative clauses with nonverbal predicates, the copula can agree either with the ergative of the embedded clause or the head noun of the NP:

- (20) Tanti

- a. [*rasul-li waw-ne d-ič:ible sa-r-se*] *rursi*
 R.(M)-ERG flower(N)-PL NPL-gave COP-F-ATTR girl(F)
- b. [*rasul-li waw-ne d-ič:ible sa-w-se*] *rursi*
 R.(M)-ERG flower(N)-PL NPL-gave-COP-M-ATTR girl(F)
- c. * [*rasul-li waw-ne d-ič:ible sa-d-se*] *rursi*
 R.(M)-ERG flower(N)-PL NPL-gave-COP-NPL-ATTR girl(F)
- ‘the girl to whom Rasul gave flowers’ (Sumbatova and Lander 2014, 469)

It is claimed that the Backward Control hypothesis explains this better than possible alternatives. In a “conventional” view, one would have to assume a separate set of agreement rules for relative clauses, whereas the Backward Control hypothesis allows to assume anaphoric control uniformly.

However, without an explicit analysis, it is not clear how exactly the Backward Control hypothesis makes analyzing such examples simpler. The control pattern in (20b) has to be different from the control patterns used in finite clauses in any case. Both probably have to be construction-specific. Furthermore, the ungrammaticality of (20c) can be due to the fact that the NP ‘flowers’ is neither

animate nor a topic, and thus it is outranked by ‘girl’: the same explanation is provided by the authors for (12b), and it is not clear why it would not work in this case. Thus the examples do not provide enough data for reaching any valid conclusions.

Perhaps more importantly, the agreement of the verb in a participial relative clause with the head seems to be independent from agreement of the copula in Dargwa in general. The relevant evidence comes from another Dargwa variety, Shiri (field data). In this language, under no circumstances can the copula agree with the ergative:

(21) Shiri

*rasul-li pat'imat.li-ž [waw-ni] d-ik:ib.li ca<d>i / * ca<w>i*
 R.(M)-ERG P.(F)-DAT flower(N)-PL NPL-gave COP<NPL> COP<M>

‘Rasul has given flowers to Patimat.’

Thus, apparently, the Backward Control analysis is not applicable to this Dargwa variety. However, the attributive marker *-zi-b* on the relative clause can alternatively agree with the absolutive argument of the relative clause or the head of the relative clause:

- (22) a. [*rasul-li [waw-ni] d-ik:ib-žu-d*] *rursi*
 R.(M)-ERG flower(N)-PL NPL-given-ATTR-NPL girl(F)
 b. [*rasul-li waw-ni d-ik:ib-zi-r*] [*rursi*]
 R.(M)-ERG flower(N)-PL NPL-given-ATTR-F girl(F)

‘The girl to whom Rasul gave flowers.’

In (22a), the gender marker on the attributive suffix agrees with the absolutive argument of the relative clause, while in (22b), it agrees with the head of the relative clause. The distribution of controllers is different — ergative vs. NP head in Tanti and absolutive vs. NP head in Shiri — but the phenomena seem to be of the same nature. They require further exploration, but, given the absence of ergative gender agreement in finite clauses in Shiri, probably have no direct bearing on the question discussed in this paper.

4 Ergative gender agreement in Ashti

In the previous section, I have attempted to demonstrate that neither the behaviour of non-finite forms nor the agreement of adverbs — the hallmarks of the Backward Control analysis — seem to be valid arguments in favour of the Backward Control hypothesis. The latter, therefore, only serves to explain the auxiliary gender agreement and some of its properties. It is therefore preferable to integrate these data into one of the prior analyses rather than propose a new one. In this section I will test the Backward Control hypothesis on the data of Ashti Dargwa, which overall seems to have the same system of both gender and person agreement as Tanti does.

4.1 Preliminary remarks

For all the similarities, there is an important difference between Ashti and Tanti verb systems that makes the study of gender agreement somewhat more complicated in Ashti. The difference consists in the fact that, unlike Tanti which allows

the gender-marked copula in all persons, most paradigms in Ashti only use it in the 3rd person under negation:

(23) Ashti

*du w-ax.ul =da / *sa-w=da*

I(M) M-going 1 COP-M=1

‘I **am** going.’

(24) *u w-ax.ul =di / *sa-w=di*

thou(M) M-going 2 COP-M=2

‘You **are** going.’

(25) *murad w-ax.ul (*sa-w)*

M.(M) M-going[3] COP-M

‘Murad **is** going.’

(26) *murad w-ax-ul a-sa-w*

M.(M) M-going NEG-COP-M

‘Murad **is not** going.’

This means that the number of forms where one can test for gender agreement on the auxiliary is limited to 3rd person negative contexts, which is obviously not enough for establishing a definitive analysis.

Thankfully, Ashti also possesses a series of periphrastic forms utilizing the so-called existential verbs in the position of auxiliaries. There are altogether four existential verbs in Ashti, which consist of a stem marking the location of the object or action relative to the speaker and a gender marker (*le-b* ‘near speaker or hearer’, which is also the neutral existential form; *te-b* ‘away from speaker and hearer, on the same level’; *k’e-b* ‘away from speaker and hearer, above’; *χe-b* ‘away from speaker and hearer, below’). Existential verbs additionally agree in person and number by attaching auxiliaries from the clitic set, the 3rd person being zero-marked.

When used without an additional lexical verbs, existentials are used in a number of sentence types with nonverbal predications, in particular, in expressions of existence, location, and predicative possession. Existentials can also serve as auxiliaries in place of the more widespread person clitics. Periphrastic forms using such auxiliaries are structured exactly like their corresponding “unmarked” versions, for example:

(27) *murad ʔuqː.ʔn li-w*

M.(M) [M]going be-M[3]

‘Murad **is** going.’

(28) *du ʔuqː.ʔn li-w=da*

I(M) [M]going be-M=1

‘I **am** going.’

Using existential periphrastic forms provides the extra advantage of having the gender marker on the auxiliary in each person, not just in the 3rd person. In Sumbatova (2014), it has been demonstrated that existential forms have exactly

the same agreement behaviour as ordinary periphrastic verb forms. To the extent that it can be tested, the same seems to apply in Ashti, so using these forms appears justified.

4.2 Auxiliary agreement

4.2.1 3rd person

Just like in Tanti, the auxiliary in Ashti can agree in gender with A in the 3rd person:

- (29) rasul-li pat'imat *j-u:s.u* *li-j* / *li-w*
 R.(M)-ERG P.(F) F-catching be-F be-M
 'Rasul is catching Patimat.'

Again, as in Tanti, this seems to correlate with topicality, although more research is needed in order to establish the specific factors that are responsible for the choice of agreement controller. In Ashti, a further complication is that, as mentioned above, the number of forms which exhibit auxiliary gender agreement is rather low, and they are rarely found in natural texts, hence there is not enough data to test the topicality hypothesis.

However, Kubachi Dargwa, a much larger variety that is very closely related to Ashti, has generally the same verbal system and agreement rules, but, unlike Ashti, does use the copula in the 3rd person in all periphrastic verb forms. There is also a large number of texts available in Kubachi. From the collection of stories about Mullah Nasruddian (Šamov 1994), the relation between 3rd person auxiliary gender agreement and topicality is readily seen, such as in the following examples.

- (30) a. *na q:ala.l saʁ.ib, wagzal.li-b čumqdan sa*
 now to.Mamedkala when.he.reached at.station-N[ESS] bag(N) one
hambal.li.c:e b-ič:.ib=sa-w
 to.porter N-gave=COP-M
 'When he [Mullah Nasruddin] reached Mamedkala, at the station he
 gave his bag to a porter.'
- b. *jiš.te* χulžin *d-ač:.ib kʷi<d>ič:.ib.li=sa-d*
 these(HPL) bag(NPL) NPL-having.found return<NPL>=COP-NPL
mall.a.c:e
 to.Mullah

'Having found the bag, they returned it to the Mullah.'

The sentences in (30), although they are from different texts and thus not a "minimal pair", illustrate the difference between the two agreement patterns rather clearly. The first sentence is in the very beginning of the text, which, like all texts in the collection, about Mullah Nasruddin; the bag, in contrast, has not been mentioned in the preceding context. Hence it is rather clear that here Mullah is the topic (the sentence is about his actions), while the bag is part of the focus.

Conversely, the second sentence is among the final sentences of the text, which detail the fate of a bag that had earlier been stolen from the Mullah. The subject, "they", refers to the people of Amuzgi, and it is inconsequential to the

narrative, which in this case concerns the fate of the bag. Thus the bag is the topic, accordingly triggering gender agreement.

- (31) *du-dil ha.ʔ.ila-žu-d [si.k'al.dix] ʔa:ʔa-dil duč.i.al haʔ.ib-žu-d=sa-d*
 I-ERG said-ATTR-NPL the.matter hen-ERG at.night said-ATTR-NPL=COP-NPL
 (Mullah, why has the judge acquitted you without you even saying anything?) 'At night the hen has already explained the matter for me.'

The agreement pattern in (31) is easily explained by information structure. The nighttime event that the Mullah refers to is his giving the chicken to the judge as a bribe. In the context of the question and his answer, it is clearly part of the focus, not the topic, which is the Mullah or the event of his acquittal.

- (32) a. *wah, malla, si uk'.u.t.nu, allah-le [duna] e:k*
 oh mullah(M) what(N) art.thou.saying Allah(M)-ERG world(N) six
bac.le a-sa-b=q'al, e:k:-il sa-b b-a:q'.ib-zi-b
 in.month NEG-COP-N=PTCL six-day COP-N N-done-ATTR-N
 'Oh, Mullah, what are you saying, God created the world in six days, not months!'
 b. *e:k:-il b-a:q'.ib-zi-w=sa-w b-uk'.ne dammi=ja=q'el*
 six-ATTR N-done-ATTR-M=COP-M N-that.is.said to.me=also=PTCL
b-ak'u.q'a.nnu
 N-is.known

'I do also know that it is said that He has created the world in six days.'
 (... but would you believe me if I told you that?)

The sentences in (32) are from the same text. The one in (a) is a statement made by a pious worshipper in response to the Mullah's sermon on God creating the world in six months. Here, the topic under discussion is the world and the timeline of its creation. Consequently, the copula and the predicative attributive form all agree with the absolutive argument 'world'.

The sentence in (b) is the Mullah's reply; in it, he quotes the traditional Biblical/Quranic statement 'God created the world in six days', as clear from the embedding of this clause under *b-uk'-ne*, the masdar (verbal noun) form of the verb 'to say'. This traditional narrative concerns God and his actions, and not the world in particular; thus, the copula agrees in the (overtly unexpressed) ergative subject 'God'.

4.2.2 1st and 2nd persons

When only 3rd person participants are considered, nothing in Ashti or Kubachi seems to contradict the Backward Control hypothesis. However, when one of the arguments is 1st or 2nd person, and the other is 3rd person, gender agreement can only be with the SAP argument:

- (33) a. $\boxed{di-l}$ *pat'imat j-u:s.u* *li-w=da* / **li-j=da* / **li-w* / **li-j*
 me(M)-ERG P.(F) F-catching be-M=1 be-F=1 be-M be-F
 'I (m.) am catching Patimat (f.)' (1 > 3)
- b. *pat'imat-li* \boxed{du} *u:s.u* *li-w=da* / **li-j=da* / **li-w* / **li-j*
 P.(F)-ERG I(M) [M]catching be-M=1 be-F=1 be-M be-F
 'Patimat (f.) is catching me (m.)'

Similarly, when both arguments are SAPs, gender agreement can only be with the absolutive:

- (34) a. *di-l* \boxed{u} *j-u:s.u* *li-j=di* / **li-w=di* / **li-w=da* / **li-j=da*
 me(M)-ERG thou(F) F-catching be-F=2 be-M=2 be-M=1 be-F=1
 'I (m.) am catching you (f.)'
- b. *u-dil* \boxed{du} *u:s.u* *li-w=da* / **li-j=da* / **li-j=di* / **li-w=di*
 thee(F)-ERG I(M) [M]catching be-M=1 be-F=1 be-F=2 be-M=2
 'You (f.) are catching me (m.)'

This means that, when one of the arguments is a SAP, the controller of gender agreement on the auxiliary must be the same as the controller of person agreement: in (33), the non-3rd-person argument; in (34), where both arguments are SAPs, the direct object.

This behaviour is not predicted by the Backward Control hypothesis. If gender agreement on the auxiliary were triggered by a zero absolutive argument that is backward controlled by an NP in the lower layer of the clause, there would be no direct connection between person agreement and gender agreement. While (33) could be explained by SAPs being more likely topics than 3rd person participants, no such explanation is available for (34): there is no reason why, among two SAP participants, the absolutive is somehow more inherently topical than the ergative. In fact, the pattern here directly contradicts what is observed in the 3rd person, where the default option is subject, not object agreement.

What we see from the examples above is that, whenever the person agreement controller is clearly visible (i.e. when one of the arguments is an SAP), gender agreement on the auxiliary must be controlled by the same argument. This strongly suggests that in the 3rd person as well, the competition between A and P agreement does not involve a separate syntactic mechanism, but is based on the same pattern as person agreement in other instances.

4.3 Generalization

To conclude, there seems to be no positive evidence in favour of the "Backward Control hypothesis" in Ashti. Rather, as a general rule, the controller of gender agreement on the auxiliary is identical to the controller of person agreement.⁸

8. A similar line of reasoning can be found as early as Magometov (1963, 155), with the exception of outdated terminology. Following traditional grammar, Magometov considers subject person agreement as the unmarked case, and object agreement as a passive construction. Person agreement with the absolutive, and gender agreement of the copula in the absolutive, are thus treated in the same way.

This is true for all examples where SAP controllers compete with non-SAP controllers, or when two SAP controllers compete with each other. Extrapolated to the topicality split in the 3rd person, it means that we also have to split 3rd-person controllers into two classes, giving the following general rule:

SAP vs. non-SAP SAP wins

- A = 1, P = 3 : 1
- A = 2, P = 3 : 2
- A = 3, P = 1 : 1
- A = 3, P = 2 : 2

SAP vs. SAP P argument wins

- A = 1, P = 2 : 2
- A = 2, P = 1 : 1

non-SAP vs. non-SAP “topic” wins

- A = 3_{TOP}, B = 3 : 3_{TOP}
- A = 3, B = 3_{TOP} : 3_{TOP}

In terms of the person hierarchy, this can be captured by splitting the 3rd person into two “persons”: the topical and the non-topical 3rd person. This gives us the following two hierarchies, with the same agreement rule as described above:

Person 1,2 > 3_{TOP} > 3

Grammatical relations P > A

If we call the “topical” third person *proximate* and label it as “3”, and rename the “non-topical” third person to *obviative*, labeling it as “3’”, the Ashti system looks like a typical proximate-obviative system, typologically well-known, especially in North America, cf. e.g. Aissen (1997). The only difference from a typical proximate-obviative system is that in Ashti, the distinction is not marked on NPs, but is only relevant for selecting the agreement controller. But the latter is also encountered in proximate-obviative systems, and it is typical to find topicality play a role for 3rd persons, but not for SAPs.

5 Analysis

5.1 “Person” vs. “gender”

The generalization provided in the preceding section does not resolve a key problem for the traditional view of agreement in Dargwa languages. Under this account, “person” (i.e. hierarchical) agreement reflects not only person and number, but also gender features. This means that we can no longer provide simple separate rules for person and gender, but have to explicitly state the pattern that is used for each individual agreement morpheme.

However, it is well-known that at least the term “gender agreement” is somewhat misleading in East Caucasian anyway. In particular, “gender” agreement may involve person, as has been convincingly argued for Archi in Corbett (2013). Exactly the same phenomenon that is described by Corbett occurs in Dargwa, including Ashti. This phenomenon consists in the fact that the neuter pl. marker *-d-* is used for 1/2PL arguments instead of the expected human pl. marker *-b-*:⁹

9. Even though the morpheme is *-d-* both for 1st/2nd person plural and for neuter plural, I gloss

- (35) *rasul.li-j* [*du*] *j-ulh.i-d*
 R.(M)-DAT I(M) F-saw-1
 ‘Rasul saw me (f).’
- (36) *rasul.li-j* [*nus:a*] *d-ulh.i-d-a* / **b-ulh.i-d-a*
 R.(M)-DAT we 1PL-saw-1-PL HPL-saw-1-PL
 ‘Rasul saw us.’
- (37) *rasul.li-j* [*du=ba murad*] *d-ulh.i-d-a* / **b-ulh.i-d-a*
 R.(M)-DAT I=and M.(M) 1PL-saw-1-PL HPL-saw-1-PL
 ‘Rasul saw me and Murad.’

While there have been attempts to describe this phenomenon by stipulating a special “fourth gender” specifically for the pronouns ‘we’ and ‘you (pl.)’, (37) shows that this solution does not work: the marker *-d-* surfaces even if 1st person plural is resolved syntactically and not provided in the lexicon. Therefore, we have to conclude that “gender” markers in Ashti do genuinely mark person in addition to gender and number.

This conclusion having been made, the claim that “person” agreement markers encode gender features does not seem as radical. In fact, it seems that a view that connects agreement rules with agreement features is not adequate for Dargwa. It seems more productive to speak of two kinds of agreement *patterns*: the “absolute” pattern and the “hierarchical” patterns. While the former typically involves gender and number features and the latter, person and number, this is merely a tendency that can be overridden by individual morphemes being specified for additional features. In this way, while singular absolutive-controlled (“gender”) morphemes in Dargwa are only marked for gender and number, plural ones are also marked for person. Similarly, most hierarchically controlled (“person”) morphemes only mark person and number, but certain auxiliaries also have a slot for gender.

Having two different patterns of agreement might be a problem in some approaches, but LFG allows us to use two different mechanisms: feature sharing and co-specification of agreement features.

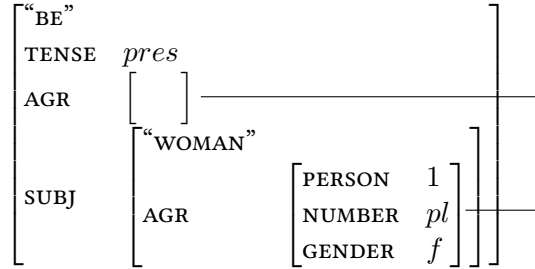
5.2 Feature sharing

Feature sharing is a syntactic mechanism that has been most recently elaborated in Haug and Nikitina (2015), specifically in an LFG framework. This approach assumes that certain kinds of agreement are better described not in the traditional LFG co-specification approach, but by the controller and target having separate AGR features that are equated using the LFG mechanism of structure sharing, as in the following example:¹⁰

it as 1PL or 2PL in the former case, because in this function it does not in any way encode the neuter feature.

10. To simplify the discussion, I am using labels in double quotation marks, such as “be”, as a shorthand for complete f-structures, or those parts of f-structures that are not shown in the example (including PRED features).

- (38) *¡Qué desgraciad-as somos las mujer-es!* ‘How unfortunate we women are!’
(Ackema and Neeleman 2013)



The lexical entry for the verb does not specify the features of the SUBJ directly, as in traditional LFG accounts, but rather specifies the clause-level AGR feature, which is syntactically equated (shared) with the AGR feature of the subject:

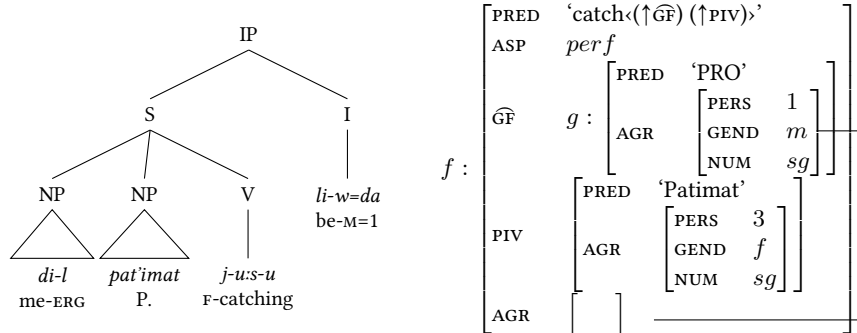
- (39) *somos* (\uparrow PRED) = ‘be<(\uparrow SUBJ) (\uparrow PREDLINK)>’
 (\uparrow AGR PERS) = 1
 (\uparrow AGR NUM) = *pl*
 (\uparrow SUBJ AGR) = (\uparrow AGR)

This allows us to separate the (lexical) specification of agreement features themselves from the (possibly syntactic or postsyntactic) identification of the agreement controller.

Using this advantage of feature sharing, Alsina and Vigo (2014) have used feature sharing to describe systems where the agreement controller is selected based on a competition of several candidates. Indeed, such systems pose a problem for the codescription approach, as the controller is not tied to a particular grammatical function. Using feature sharing allows us to relegate the job of choosing the controller from the LFG grammar itself to some external filter; in this case, Optimality Theory.

Within this system, absolutive (“gender”) agreement in Dargwa would be treated in the conventional, “co-descriptive” way, because it is always tied to a particular grammatical function and thus there is no need for a separate mechanism. For simplicity, I will assume that Dargwa is syntactically ergative in the sense of Falk (2006), such that A/S is identified with \widehat{GF} , and P/S, with PIV; in a transitive clause, the latter is always structure shared with OBJ, which is not shown here for simplicity. Then gender agreement merely specifies the features of PIV. This decision does not have any bearing on the phenomena under discussion.

The hierarchical (“person”) agreement, in contrast, involves the sharing of the clause-level AGR feature bundle with the AGR feature of either of the two core participants, as in the following f-structure:



The choice of the particular agreement controller is not part of the LFG grammar, but is relegated to Optimality Theory in a way similar to the earlier analysis proposed in Belyaev (2013). The motivation for OT as discussed in that earlier paper is that an alternative analysis would require complex disjunctions on the agreement markers in order to capture the patterns. This would make the description of cross-dialectal variation more difficult, while also lacking the intuitive appeal of the OT approach.

The use of feature sharing allows us to simplify the earlier version of the OT approach, which relied on an m-structure feature TH to carry the features of the person agreement controller because there is no appropriate position at f-structure. This role is now assigned to the clause-level AGR feature, eliminating the need for a special position at m-structure or any other level.

The following lexical entries can achieve the needed behaviour:¹¹

- (40) *b-i:q'-ul* V $(\uparrow \text{PRED}) = \text{'do<(\uparrow GF PIV)>'}$
 $(\uparrow \text{PIV AGR GEND}) = {}_c n$
 $(\uparrow \text{PIV AGR NUM}) = {}_c sg$
- (41) *li-w=da* I $(\uparrow \text{PRED}) = \text{'be<COMP>'}$
 $\{(\uparrow \text{AGR}) = (\uparrow \text{GF AGR}) \mid$
 $(\uparrow \text{AGR}) = (\uparrow \text{PIV AGR})\}$
 $(\uparrow \text{AGR PERS}) = {}_c 1$
 $(\uparrow \text{AGR GEND}) = {}_c m$
 $(\uparrow \text{AGR NUM}) = {}_c sg$

Gender agreement is thus done in the traditional way, through codescription, while person agreement is handled by AGR feature sharing. The choice between two alternative options for identifying the controller of hierarchical agreement is then relegated to Optimality Theory (Bresnan 2000; Lee 2004). The input is an incomplete f-structure without the clause-level AGR features. The constraints of Belyaev (2013) have to be redefined to refer to this AGR instead of the m-structure feature TH. A further constraint for preferring 3rd person topics to non-topics,¹²

11. The rules for S and IP are trivial: I assume that S and I are co-heads of IP; I contains the auxiliary or the finite verb, while the last constituent of S is either a non-finite verb form or a nonverbal predicate.

12. Another possibility is to literally introduce a “fourth person”, as is done in traditional Algonquian linguistics, cf. e.g. Akmajian and Anderson (1970). This would make the OT constraints

AGR-3_{TOP}, should also be added:

AGR-2 (f AGR PERS) = _c 2

AGR-1 (f AGR PERS) = _c 1

AGR-3_{TOP} (f AGR PERS) = _c 3

$((\text{AGR}(f \text{ AGR}))_{\sigma} \text{ DF}) = \text{c TOPIC}$

AGR- $\widehat{\text{GF}}$ ($\widehat{\text{GF}}$ AGR(f AGR))

AGR-PIV (PIV AGR(f AGR))

These constraints can be illustrated by the f-structure at the previous page. Since they have to be evaluated for clausal f-structures, f in the constraints is identified with f in the sample f-structure. The first two constraints, AGR-1 and AGR-2, are trivial in that they simply specify the person feature of the agreement controller.

The third constraint, AGR-3_{TOP}, is more complicated. It consists of two statements. The first statement defines the controller as 3rd person. The second statement is meant to constrain the information structure function of the agreement controller. This is done by using the inside-out Functional Uncertainty equation ($\text{AGR}(f \text{ AGR})$). Since ($f \text{ AGR}$) is structure shared with the AGR feature of the agreement controller, this equation can in principle lead to two different f-structures: f (trivially returning back to the starting point) and g , i.e. the subject f-structure. The feature DF of the resulting f-structure's projected s-structure is then constraint. On the assumption that only arguments and adjuncts, but not finite clauses, have discourse functions, this means that the f-structure defined by the equation ($\text{AGR}(f \text{ AGR})$) can only be g . Effectively, what this equation does can be restated in the following way: “the f-structure whose AGR feature is shared with the clausal AGR feature must be a topic”.

The use of inside-out Functional Uncertainty in the fourth and fifth constraints is similar, but these are existential equations: they check whether the argument with which agreement is shared is a $\widehat{\text{GF}}$ or a PIV.

The rankings for individual varieties mostly stay the same, with the exception of AGR-3_{TOP}. This constraint dominates AGR-PIV and AGR- $\widehat{\text{GF}}$ in languages like Ashti and Tanti, and at the end of the hierarchy for those languages where there is no competition between 3rd person controllers. The ranking for Ashti is thus $\text{AGR-1} \vee \text{AGR-2} > \text{AGR-3}_{\text{TOP}} > \text{AGR-PIV} > \text{AGR-}\widehat{\text{GF}}$ (on constraint disjunction see Crowhurst and Hewitt 1997).

The following tableaux illustrate how these constraints work to ensure correct agreement patterns (I am using sentences as shorthand for underspecified f-structures in the input field):

- A = 1sg.m, P = 3sg_{TOP}.f

di-l pat'imat j-us-u ...	AGR-1 \vee AGR-2	AGR-3 _{TOP}	AGR-PIV	AGR- $\widehat{\text{GF}}$
☞ li-w=da (A)		*	*	
li-j (P)	*!			*

simpler by relegating the choice between “third” and “fourth” person to the lexicon.

- A = 1sg.m, P = 2sg.f

di-l u j-us-u ...	AGR-1 \vee AGR-2	AGR-3 _{TOP}	AGR-PIV	AGR- \widehat{GF}
li-w=da (A)		*	*!	
☞ li-j=di (P)		*		*

- A = 3sg_{TOP}.m, P = 3sg.m

rasul-li pat'imat j-us-u ...	AGR-1 \vee AGR-2	AGR-3 _{TOP}	AGR-PIV	AGR- \widehat{GF}
☞ li-w (A)	*		*	
li-j (P)	*	*!		*

6 Conclusions

In this paper, I have analyzed exceptional patterns of gender agreement in Ashti Dargwa. While it has been proposed to analyze similar facts in other varieties through a complex two-tiered clause structure with anaphoric backward control, my data do not support this hypothesis, and a simpler solution seems preferable. While exceptional gender agreement on adverbs seems to be a completely independent phenomenon, gender agreement on the auxiliary in Ashti merely reflects the gender feature of the person agreement controller, and thus requires only a modification of the hierarchical account by splitting the 3rd person based on topicality, such that the person hierarchy in Ashti is $1, 2 > 3 > 3'$. The OT approach of Belyaev (2013) can then be applied with only minor modifications. It can also be simplified by using agreement sharing, dispensing with a separate position at m-structure proposed in that earlier paper.

Apart from being conceptually simpler, this analysis also has the advantage of being typologically more well-motivated. A split of the 3rd person based on topicality is well-known as obviation, and having the obviative vs. proximate distinction is typical for languages having hierarchical agreement or alignment systems.

However, the analysis is still preliminary to the extent that we do not have enough information on the information structure conditions on agreement, and not enough data on different Dargwa varieties is available.

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