**Bi-absolutives Problem**

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## 1 Bi-Absolutive Construction

- distinct case marking patterns for Ergative, Absolutive, Affective and Biabsolutive constructions
- BAC involves two ABS arguments
- occurs only in a subset of the periphrastic verbal constructions, involving a present tense (or past?) copula and a *-ši* IPFV.CVB or a *-mat* IPFV.CVB
- the Aux agrees with the SUBJ absolutive, the lexical verb with the OBJ absolutive
- the data given suggests that other agreement targets are controlled by the OBJ absolutive: (13) for Adverb, (15) for DAT.PN and (16) shows an emphatic pt on/associated with OBJ absolutive. MC suggests that agreement on non-verbal elements is always controlled by the OBJ absolutive (but see Forker (2012)).

## 2 Conditions and Constraints on BAC: Questions

1. **Classes of Verbs**: The literature suggests that BAC is found with Erg-Abs and ditransitive verbs, but not Experiencer or Potential verbs. (Forker (2012) states this is true of Archi, Bexhta, Khwarshi, Tsez, Hinuq, Avar, Godoberi, Lak, Icari Dargwa). Given that BAC is **obligatory** for Erg-Abs verbs with the *-mat* IPFV.CVB tense(s), then the existence of (1) [= your (22)] shows that it either is not found with Affective constructions or is optional with them.

   (1) *tu-w-mi-s* *to-r* *d-oko-r-mat* *d-i*
   that-1.SG-SG.OBL-DAT that-II.SG.ABS II.SG-hear-IPFV-CVB II.SG-be.PRS
   He does here her.

2. **Constraints on Arg1?** All the examples involve animate, agentive Arg1: this may be a restriction.
3. Given the claim that *for the relevant class(es) of verbs (Ergative and Ditransitive predicates)*, the BAC is obligatory with the *-mat* IPFV.CVB verbal periphrasis, what happens when such verbs have Inanimate or Nonhuman or Nonagentive Arg1s?
4. All your examples involve Pres1 and Pres2. However other literature suggests that the BAC also occurs with the Imperfect1 and Imperfect2. Is this correct and are the conditions and constraints precisely the same?
5. the literature shows Ditransitive examples for other languages: here the Arg3 recipient may (incidentally) intervene between Arg2 and verb. Forker (2012) lists Archi as allowing ditransitive BACs. Are there Archi examples of BAC ditransitives?

6. Can e.g. Adv intervene between Arg2 and Verb

7. Forker (2012, 88) states that external possessors and adverbs agree with the Agent (absolutive) in Archi: on the other hand, your notes suggest that the non-verbal agreement targets agree with the Arg2 ABS. See below for more on this.

8. Forker suggests that the Aux may not precede the lexical verb in the BAC, even though (under certain conditions) this is possible for Ergative constructions. Languages disallowing this word order include Chechen, Archi, Avar, Tsez, Codoberi and Icari Dargwa. Is this claim confirmed?

9. What motivates the BAC? Typical functions are agent topicalization and patient demotion, characterising the subject in terms of the action, with the object being less important or de-individuated. Is this the case in Archi?

## 3 Role of the Verbal Periphrasis

Synthetic TAM forms: Perfective, Imperfective and Potential.
Analytic TAM forms: MC: Pres1/Imperfect1 permits BAC, Pres2/Imperfect2 requires it.[1] I think the intended interpretation of this claim is restricted in scope to EA/Ditransitive verbs.
Summary of TAM forms involving a converb +copula periphrasis:

(2)

| Converb | Present Cop | Post Cop |
|---|---|---|
| IPFV-ši | *Pres1* | *Imperfect1* |
| IPFV-mat | **Pres2** | **Imperfect2** |
| PFV-li | Perf1 | Pluperf1 |
| PFV-mat | Perf2 | Pluperf2 |
| POT-ši | Inceptive | Past inceptive |

- **Agreement**: on the data given, it is only the copula verb in the BAC which shows agreement with the ABS Arg1.

- **Negation**: although a converb is able to inflect for negation, in the periphrastic BAC construction negation is only expressed on the copula: (3) [= your (11)] shows that BAC periphrastic with a negative copula.

(3) *Pat'i* *k'ob* *o<r>c'u-r-ši*
Pati(II)[SG.ABS] clothes(IV)[SG.ABS] [IV.SG]<IPFV>wash-IPFV-CVB
*d-i-t'u*
II.SG-be.PRS-NEG
Pati is not washing the clothes

[1] Note however that Forker refers to examples in *ši* as the second Present (also claims that BAC is found in the second Imperfect but does not give examples of this. These are presumably the Pres1 and Imperfect1 of the table above.)

**Negation**: there are some unclarities about which forms have corresponding negatives.

Your (10a) has a converb construction (ie not a verbal periphrasis) with a PFV.CVB inflected for negation: *kunne-ši (*PFV-CVB*)* → *kunne-t'u-ši* (PFV-NEG-CVB) : it turned out this was a POT. But the sketch shows three forms of negative CVB and no POT.NEG.

| | |
|---|---|
| INF: | *irχ$^{w}$mus-ši* (INF-CVB) → *irχ$^{w}$mus-t'u-ši* (INF-NEG-CVB) |
| IPFV: | *irχ$^{w}$na:-t'-ši* (IPFV-NEG-CVB)<br>(corresponding to affirmative *ši* SIMUL or *-mat* CONT, or both?) |
| PFV: | *irχ$^{w}$ni-t'aw* listed as Negative Perfective Converb but relation to affirmative CONS1, CONS2 and CONT unclear<br>also different from form listed above |

Some data points are unclear/not shown:
1. we have no examples showing that the IPFV-CVB also inflects for NEG, in the (adverbial) CVB construction.
2. We have no examples showing that negation of other (non-BAC) periphrastic clauses are formed on the pattern of (11) by negating the copula.

### 3.1 Questions

- what is the appropriate analysis of Synthetic TAM forms in the language
- is there any reason for treating BAC ones as structurally different (or just as a case of differential subject marking)
- Are BAC biclausal? Rajabov (1997)(eg) assumes that Arg1 is ABS argument of the copula and Arg2 is argument of the lexical verb (presumably with a null Arg1 identified with the Arg1 of the copula - the details are unclear). Moreover evidence that BAC and non-BAC periphrases differ is not given. Other evidence (e.g. adverb) suggests they are mono-clausal.
- **assume that all verbal periphrases are the same in Archi**

### 3.2 Verbal Periphrasis

Basically two approaches to syntactic verb forms in LFG: Aux-pred and Aux-feature approach. See e.g. Falk (2008)
*The children have taken syntax*

$$\begin{bmatrix} \text{PRED} & \text{`TAKE}\langle \text{SUBJ OBJ} \rangle\text{'} \\ \text{TENSE} & \text{PRES} \\ \text{ASP} & \text{PERF} \\ \text{OBJ} & \begin{bmatrix} \text{PRED} & \text{`SYNTAX'} \end{bmatrix} \\ \text{SUBJ} & \begin{bmatrix} \text{DEF} & + \\ \text{PRED} & \text{`CHILDREN'} \end{bmatrix} \end{bmatrix}$$

(4) *have: I* (↑ TENSE) = PAST
(↑ ASP) = PERF
($\hat{*}$compl) ⇒ $\lambda$($\hat{*}$ compl) =$_c$ VP[part]

(5) *taken: V[part]* (↑ PRED) = 'TAKE <SUBJ OBJ >'

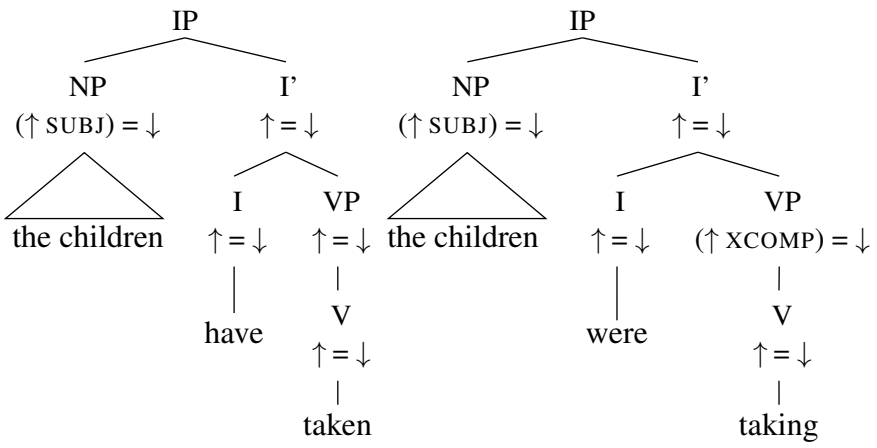
*The children were taking syntax.*

$$\begin{bmatrix} \text{PRED} & \text{'BE} < \text{XCOMP} > \text{SUBJ'} \\ \text{TENSE} & \text{PAST} \\ \text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{'CHILDREN'} \\ \text{DEF} & + \end{bmatrix} \\ \text{XCOMP} & \begin{bmatrix} \text{ASP} & \text{PROG} \\ \text{PRED} & \text{'TAKE} < \text{SUBJ OBJ} > \text{'} \\ \text{OBJ} & \begin{bmatrix} \text{PRED} & \text{'SYNTAX'} \end{bmatrix} \\ \text{SUBJ} & \end{bmatrix} \end{bmatrix}$$

(6) *was: I* (↑ TENSE) = PAST
(↑ PRED) = 'BE< XCOMP> SUBJ'
(↑ SUBJ) = (↑ XCOMP SUBJ)
VP ∈ CAT (↑ XCOMP) ⇒ (↑ XCOMP ASP) =$_c$ PROG

(7) *taking: V[prog]* (↑ PRED) = 'TAKE <SUBJ OBJ >'
(↑ ASP) = PROG

(8)




## 4 Analysis

I assume that the BAC is unlikely to involve Noun Incorporation, rather the case alternation (Ergative to Absolutive) essentially encodes some sort of Information Structure distinction. It is not a passive and is probably not biclausal.

Analytic constructions: c finite EA transitive verbs assign Erg to SUBJ and Abs to OBJ and agree with OBJ:

(9) *zari* *noʕš* *darc'-li-r-š* *e(b)t'ni*
1SG.ERG horse(III)[SG.ABS] post-OBL.SG-CONT-ALL (III.SG)tie.PFV
I tied the horse to the post EA CONSTR

(10) *e(b)t'ni/tied* (↑ PRED) = 'TIE< SUBJ OBJ >'
(↑ TNS) = PFV
(↑ SUBJ CASE) = ERG
(↑ OBJ CASE) = ABS
@III.SG(↑ OBJ IND)

(11) *to-w-mi-s* *Ajša* *d-ak:u*
that.one-1.SG-OBL.SG-DAT Aisha(II)[SG.ABS] II.SG-see.PFV
He has seen Aisha AFF CONSTR

(12) *d-ak:u/tied* (↑ PRED) = 'SEE< SUBJ OBJ >'
(↑ TNS) = PFV
(↑ SUBJ CASE) = DAT
(↑ OBJ CASE) = ABS
@II.SG(↑ OBJ IND)

We now need to develop a treatment of periphrastic constructions which accomodates both the BAC case marking pattern and the associated agreement facts.

(13)

| Converb | Present Cop | Post Cop | BAC | FEAT |
|---|---|---|---|---|
| IPFV-ši | *Pres1* | *Imperfect1* | allows BAC | IPFV.SIMUL |
| IPFV-mat | **Pres2** | **Imperfect2** | req BAC | IPFV.CONT |
| PFV-li | Perf1 | Pluperf1 | no BAC | PFV.CONSEC |
| PFV-mat | Perf2 | Pluperf2 | no BAC | PFV.CONT |
| POT-ši | Inceptive | Past inceptive | no BAC | POT.SIMUL |

(14)

| GEN | PRES SG | PRES PL | PAST SG | PAST PL |
|---|---|---|---|---|
| I | wi | bi | iwdi | ebdi |
| II | di | bi | ewdi | ebdi |
| III | bi | i | ebdi | edi |
| IV | i | i | edi | edi |

Note that because of the re-entrancy in the Aux-Pred analysis of periphrastic forms, the ABS arguments *are* found in a single f-structure. We assume an Aux-feat approach, with the copula introducing values for TNS and the CVB values for ASP. Using the features listed above as a proxy for an eventual worked-out analysis of the TAM system, the CNVB lexical entries would be along the following lines, where the verb'work' is an EA assigner.

The following converbs do not permit the BAC construction. Here I give the forms without the agreement prefixes, but show the agreement template information associated with the II.SG agreement morphology.

(15) *irχ$^{w}$ni-li (*PFV-CONSEC*)*
(↑ PRED) = 'WORK< SUBJ OBJ >'
(↑ ASP) = PFV.CONSEC
(↑ SUBJ CASE) = ERG
(↑ OBJ CASE) = ABS
@II.SG(↑ OBJ IND)

(16) *irχ$^{w}$ni-mat (*PFV-CONT*)*
(↑ PRED) = 'WORK< SUBJ OBJ >'
(↑ ASP) = PFV.CONT
(↑ SUBJ CASE) = ERG
(↑ OBJ CASE) = ABS
@II.SG(↑ OBJ IND)

(17) *irχ$^{w}$niqu-še (*POT-SIMUL*) V*
(↑ PRED) = 'WORK< SUBJ OBJ >'
(↑ ASP) = POT.SIMUL
(↑ SUBJ CASE) = ERG
(↑ OBJ CASE) = ABS
@II.SG(↑ OBJ IND)

According to the description the IPFV.CONT form requires BAC (for EA verbs) when it occurs with the copula. The implication is that it may occur in an EA construction when it is in a dependent clause, but I don't see this illustrated. This would be the most complicated situation: we might separate out the dependent and the periphrastic uses of the converb: here the information relevant to the periphrastic uses (note (↑ TENSE).

(18) *irχ$^{w}$im-mat (*IPFV-CONT*) V*
(↑ PRED) = 'WORK< SUBJ OBJ >'
(↑ ASP) = IPFV.CONT
(↑ SUBJ CASE) = ABS
(↑ OBJ CASE) = ABS
(↑ TENSE)
@II.SG(↑ OBJ IND)

(19) *irχ$^{w}$in-ši (*IPFV-SIMUL*) V*
(↑ PRED) = 'SEE< SUBJ OBJ >'
(↑ ASP) = IPFV.SIMUL
(↑ SUBJ CASE) = ERG|ABS
(↑ OBJ CASE) = ABS
(↑ TENSE)
@II.SG(↑ OBJ IND)

Clearly, just introduced a CASE value disjunction is too general: I assume further (semantic/i-structure) information is associated with the mapping under which the SUBJ is in ABS case.

**Copula** : the generalisation seems to be that it agrees with the highest absolutive argument. One way of stating this is using a conditional. The following are alternative possibilities for the lexical information associated with a copula occurring in a periphrastic construction.

(20) *d-i: I*
(↑ TENSE) = PRES
(↑ ASP)
(↑ SUBJ CASE) = ABS ⇒ @II.SG(↑ SUBJ IND)
(↑ SUBJ CASE) = ¬ ABS ⇒ @II.SG(↑ OBJ IND)

(21) *d-i: I*
(↑ TENSE) = PRES
(↑ ASP)
{(↑ SUBJ CASE) = ABS ∧ @II.SG(↑ SUBJ IND) |
(↑ SUBJ CASE) = ¬ ABS ∧ @II.SG(↑ OBJ IND) }

Again, fuller information might suggest alternative approaches, perhaps expressing some of the information constructionally rather than lexically, once a fuller range of copula constructions is considered.

### 4.1 Other Agreement Targets

We have examples showing an adverb and a dative pronoun agreeing with the OBJ absolutive (and not the SUBJ absolutive) in the BAC construction. The starting point is our previous account of these agreement targets.
Dataset 1 examples (9) and (10 showed clause level dative pronominal arguments (1SG, 1PLINCL and 1PLEXCL) agreeing with the single absolutive argument in the clause (and also ergative 1PLINCL pronouns and genitive 1PLINCL pronouns?) My previous questions:

- is there always an absolutive argument in a clause:
- is the process strictly local to the clause: Probably yes

I treated it as CONC (pending evidence on IND/CONC): see constraints in (23). The idea here is that a dative pronoun (in the relevant subparadigm) requires one of its co-arguments to be ABS and agrees with that argument. Further constraints could be stated on e.g. GF if required.

(22) *to-r-mi* *b-ez* *χʕošon* *a(b)u*
that.one-II.SG-ERG III.SG-1SG.DAT dress(III)[SG.ABS] (III.SG)make.PFV
She made me a dress =MC:9

(23) *b-ez*/me ( ( GF ↑ ) GF1) = %AGRC
(% AGRC CASE) = ABS
@III.SGIII(% AGRC CONC)

A similar approach was suggested for the adverbial cases:

(24) *dit:a(b)u/soon* (↑ PRED) = 'SOON'
( ( ADJ ∈ ↑ ) GF1) = %AGRC
(% AGRC CASE) = ABS
@III.SG(% AGRC CONC)

If a clause may have two ABS, this approach suggests that either ABS may be the agreement controller. This is the behaviour illustrated for Avar in (25):[2]

(25) a. *emen xer hani-b b-ec-ule-w w-uk'ana.*
father(I) hay(III) here-III III-mow-PTCP.PRS-I I-be.PST
Here father was mowing the grass

b. *emen hani-w xer b-ec-ule-w w-uk'ana.*
father(I) here-III hay(III) III-mow-PTCP.PRS-I I-be.PST
Here father was mowing the grass Avar: Forker(2012):88

Forker (2012, 88) claims the distribution in (26) (controllers of ADV and external possessor agreement). But her table (P89) gives an A/P pattern for Archi and Icari Dargwa.

(26)

| Controller | Languages |
|---|---|
| P | Tsez, Hinuq, Bezhta |
| A | Archi |
| A or P | Lak, Tsakhur, Avar |

If Archi is P, and not A/P (or A): a further constraint must be added.

- the *lowest* ABS controls agreement
- some thematic property of the ABS argument is relevant (e.g. it does not agree with a highly agentive ABS argument)

## References

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[2]According to Forker (2012, 88) , an adverb inserted between the P and the lexical verb obligatorily agrees with P, and otherwise, with A.