Clause chaining across the Sahara

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ABSTRACT

Clause chaining is a clause-linking strategy which stands in between coordination and subordination, combining the lack of embeddedness of the former with the dependence of the latter (Foley and Van Valin, 1984). A finite verb form may be either preceded or followed by one or several less-finite forms: these two options are referred to as medial-final and initial-medial clause chaining, respectively. While medial-final chaining is attested all over the world, initial-medial chaining was until recently deemed to be unattested; however, recent research has demonstrated its existence in several Niger-Congo and Nilo-Saharan languages. While Berber (Afroasiatic) was long neglected in the relevant typological literature, Mauri (in press) has shown that Berber's Chained-Aorist construction is an instance of initial-medial clause chaining. This paper highlights the similarities between Berber's Chained Aorist and the clause-chaining constructions of some genetically-unrelated sub-Saharan languages. These similarities might support an interpretation of initial-medial clause chaining in these languages as an areal feature.

KEYWORDS

Berber, clause linking, language contact, clause chaining, Niger-Congo

1. INTRODUCTION

Intense language contact and multilingualism have left evident marks in the linguistic landscape of the African continent, with a high degree of lexical borrowing and grammatical convergence (Dimmendaal, 2011:203ff.). In other words, contact between genetically-unrelated languages has resulted in a number of shared features, giving rise to several language areas, such as the "Ethiopian language area" (Dimmendaal, 2011:204). This work highlights the existence of some similarities in clause-linking strategies adopted by unrelated languages spoken across another region: the Sahara.

The Saharan area has been of interest to human beings since prehistorical times. Recent works show that trans-Saharan relations were far more intense than previously thought (Ross, 2011). Such relations were primarily of a commercial nature, with goods such as gold, salt, and slaves among the main commodities traded across the region. Several trade routes served the necessities of people living on the desert's northern and southern shores. Such routes experienced changing fortunes, depending on a web of economic and political factors.

As for its current linguistic landscape, the peoples living in and around the region speak languages belonging to different families and/or phyla. Berber languages (Afroasiatic) are spoken north of and across the Sahara, over a vast territory stretching from Mauritania in the West to Egypt in the East, and from the Maghrebi countries in the North down to the lands inhabited by the Tuareg, who speak some distinctive Berber varieties. In addition to Berber, Arabic (Semitic, Afroasiatic) is widely spoken throughout the region, both natively and as a lingua franca, being widely used for mainly administrative and religious purposes. The southern edge of the Sahara constitutes a sort of transitional area between Berber and languages belonging to the Chadic family (Afroasiatic) as well as to genetically-unrelated language families such as Songhay (Nilo-Saharan) and several subgroups of Niger-Congo (Lewis et al., 2014).

Some important works on language contact in the Sahara have been published in recent years, such as Souag (2010), Kossmann (2013b), and Souag (2015), among others. Souag (2010) is a detailed account of how extensive language contact with Arabic has differently affected two genetically-unrelated languages spoken in the Sahara, namely in the Egyptian oasis of Siwa (Siwi Berber) and the Algerian town of Tabelbala (Korandjé, Songhay). Kossmann (2013b) is an analysis of the impact of Arabic on Northern Berber. Finally, Souag (2015) digs deep into history to unravel the web of relations accounting for the idiosyncratic nature of the Berber-influenced variety of Songhay spoken in Tabelbala.

Ross (2011:1) states that, as a field of enquiry, "Saharan Studies […] is still in its infancy". Despite the presence of the notable exceptions mentioned above, the investigation of language contact in and across the Sahara is simi-

larly in its early stages. The present work contributes to studies of language contact by focusing on *clause-chaining* constructions. The observation that this clause-linking type plays a role as an areal feature on the African continent is not new. For instance, Dimmendaal states that the widespread use of converbs[1] in genetically-unrelated languages should be conceived of as a feature confirming the existence of the Ethiopian linguistic area (Dimmendaal, 2011:207). Similarly, this paper shows that initial-medial clause chaining may well be an areal feature too: despite its seemingly cross-linguistic rarity, this chaining type is attested in both sub-Saharan languages and further north in Berber, as the Ayt Atta Tamazight data presented here show.

The paper is structured as follows: a typology of clause linking is given in 2; the illustration of clause-chaining structures through numerous examples from a number of sub-Saharan languages is provided in 3; Ayt Atta Tamazight's *Chained-Aorist* construction is illustrated in section 4; finally, section 5 concludes the paper indicating some directions for future research.

2. CLAUSE CHAINING AS A CLAUSE LINKING STRATEGY

The domain of clause linking has gathered some conspicuous interest in recent decades, notably in works such as Stassen (1985), Longacre (1985, 2007), Foley and Van Valin (1984), Dixon and Aikhenvald (2009), Haspelmath (1995, 2004), Bril (2010), Gast and Diessel (2012), among others. What follows provides a typology of clause-linking strategies (2.1) as well as an investigation of the syntactic properties of clause chaining (2.2).

2.1 CO-RANKING AND CLAUSE-CHAINING STRATEGIES

Cross-linguistic variation is attested in the way the predicates of two juxtaposed clauses can be encoded. This essentially revolves around two strategies. The first strategy consists in the use of two verbs of equal rank, i.e. each of them could be used in an independent clause. This means that the juxtaposition of two (or more) clauses does not cause any inflectional effect on their verbs: this is a *balanced construction* (Stassen, 1985:76)[2] or a *co-ranking* structure (Haspelmath, 1995, Longacre, 1985, Longacre, 2007).

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[1]   Cf. Haspelmath (1995) for a discussion of the difference between converbs and medial verbs (also discussed in section 4, below).

[2]   Stassen's work concerns temporal relations between clauses, but his analyses seemingly applies to other semantic types of linking.

This is seen in a sentence such as *John jumped out of his chair and grabbed a gun* (Stassen, 1985:76), in which both predicates are finite. Co-ranking structures are common in most contemporary European languages, but are also widely attested elsewhere, as the following example from Ibaloi (a language spoken in the Philippines) shows:

1) Co-ranking structure in Ibaloi (Longacre, 2007:389)

Binoshasan	*sha*	*sota*	*kapi*	*jet*	*indaw*	*sha'd*	*San Fernando*
harvested	they	the	coffee	and	took	they to	San Fernando

'They harvested the coffee and took it to San Fernando'

Two clauses are here coordinated with the help of the conjunction *jet* and there is no structural difference between them.

The second clause-linking strategy consists in lowering the rank of one of the two predicates, turning it into a nonfinite form. This means that the main diagnostic feature of this clause-linking type is the presence of just one fully-inflected verb form in a clause chain, with the other verb displaying reduced marking and deriving aspectual or temporal interpretation from the former. This structure is a *deranked construction* (Stassen, 1985:77) or a *clause-chaining* structure (Foley and Van Valin, 1984, Longacre, 2007:375, Payne, 1991): the latter is also the label adopted in this paper.

Clause chaining is illustrated via the following examples from Selepet, a language spoken in Papua New Guinea:

2) Clause-chaining structure in Selepet (Longacre, 2007:375-376)

a.
kawa	*ari-op*
Kawa	leave-3SG.REM

'Kawa left'

b.
kiap	*ya*	*taka-op*
patrol.officer	that	arrive-3SG.REM

'That patrol officer arrived'

c.
kawa	*ari-mu*	*kiap*	*ya*	*taka-op*
Kawa	left-3SG.DSU	patrol.officer	that	arrive-3SG.REM

'Kawa left and that patrol officer arrived'

In (2a) and (2b), the morpheme *-op* is suffixed onto the predicate to mark remote past tense. On the other hand, (2c) shows that the juxtaposition of the former two clauses causes *-op* to be dropped from the first predicate; this predicate is also interesting for it is marked by *different subject* (see 3.1, below).

2.2 THE SYNTACTIC NATURE OF CLAUSE CHAINING

Once the basic characteristics of clause-chaining constructions have been introduced, one may wonder what their syntactic properties are. A possible answer is found in Foley and Van Valin (1984). Their theory of syntactic linkage (aka nexus) stems from a fundamental distinction between *embeddedness* and *dependence*, since "whether a clause is dependent in some way upon another clause is independent of whether it is embedded as an argument of another clause" (Foley and Van Valin, 1984:243). The role of *operators*[3] such as tense and aspect is central in determining whether a dependence relation between two clauses exists or not, since these may be independently specified by operator (i.e. both clauses being – *dependent*), or such a dependence relation may exist instead (i.e. one of the two clauses being + *dependent*).

The combination of these two features yields three nexus types, namely *coordination*, *subordination*, and *cosubordination* (from Foley and Van Valin, 1984:242). Coordination is characterised by lack of embeddedness and lack of dependence, whereas subordination has opposite values for both parameters. The novelty of Foley and Van Valin's approach consists in recognising that the traditional classification of sentences into coordinate and subordinate structures cannot account for those structures in which a clause is not embedded into the other while somehow being dependent on it. These are best represented by clause-chaining and serial-verb constructions, which are then analysed as instances of *cosubordination*, a notion first introduced in Olson (1981).

To summarise, clause-chaining constructions display some idiosyncratic behaviour which sets them apart from the traditional classification of sentences into coordinate and subordinate, prompting the recognition of cosubordination as a syntactic category in its own right. Some tests for distinguishing subordination from cosubordination in Berber are discussed in 4.2.

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[3]   Operators are grammatical categories which modify the three levels of the clause mentioned above: they "are not constituents of the layer but are operators *over* the entire layer" (Foley and Van Valin, 1984:208).

3 CLAUSE-CHAINING CONSTRUCTIONS ACROSS THE SAHARA

What follows further illustrate the typological characteristics of clause-chaining constructions, with the help of data from sub-Saharan languages. It is shown that these constructions can be pooled into two groups depending on the directionality of chaining: these are referred to as *medial-final* and *initial-medial* chaining, depending on the location of the independent verb. These two chaining structures have also been named *anterior* and *posterior deranking* (Stassen, 1985), *anterior* and *posterior chaining* (Haspelmath, 1995), and *pre-nuclear* and *postnuclear dependency* (Dooley, 2010), respectively.

3.1 MEDIAL-FINAL CLAUSE CHAINING

Medial-final chaining refers to structures in which the independent-verb clause comes last in the chain, whereas each preceding clause has a dependent form, aka *medial verb*[4] (as in the Selepet example above). A distinctive feature of medial-final chaining is the presence of *switch-reference*, "a discourse tracking device, whose main function is to monitor the subject" (Fedden, 2012:393), i.e. it usually indicates whether any one medial clause has the same subject as the final, independent clause or not.

Medial-final chaining is found in languages spoken in many parts of the globe, such as Papua New Guinea and South America (Longacre, 1985, Longacre, 2007). An instance of medial-final chaining was given in (2c) above. Further examples from a Papua New Guinea language are provided below:

3) Medial-final chaining

   a. Kewa (Franklin, 1971: quoted in Foley and Van Valin 1984:257)

ní	*réka-no*	*ágaa*	*lá-a*
1SG	stand-DSU.SMP	talk	say-3SG.PST

   'I stood up and he talked'

   b. Kewa (Franklin, 1971: quoted in Foley and Van Valin 1984:257)

ní	*réko-a*	*ágaa*	*lá-lo*
1SG	stand-SSU.SMP	talk	say-1SG.PRS

   'I stood up and am speaking'

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[4]   Several alternative labels refer to similar verb types in the literature, for example "gerunds", "participles", and "coverbs" (Longacre, 1990:11). Haspelmath (1995) shows the fundamental difference between medial verbs and "converbs" (see section 4, below).

Sentences (3a) and (3b) show polar marking for switch reference: the first example shows that the medial clause has a different subject (DSU) from the fully-marked final clause; the second sentence shows that the opposite holds true (SSU).

Medial-final clause chaining is also a common feature of genetically-unrelated languages spoken in the Ethiopian region, where converb constructions may often be used in clause-chaining constructions (Amha and Dimmendaal, 2006, Amha, 2010). This is shown in the following example from Wolaitta (Omotic, Afroasiatic), a language spoken in Ethiopia:

4)   Medial-final chaining in Wolaitta (Amha, 2010:120)

yaát-ídí	*káwa*	*miz-ídí*	*hiittá-a*
that.do-SSU.SQ.CNV$_2$	dinner.ACC	feed-SSU.SQ.CNV$_2$	bed-M.ACC

hiit't'-ídí		*ʔaíss-ídósona*
make.bed-SSU.SQ.CNV$_2$		spend.night.CAUS-3PL.PST.AFF.DCL

'Having done that, they gave dinner (to the man), made a bed (for him) and hosted him for the night'

In (4), only the final verb is overtly marked by tense, whereas the preceding verb forms display one of the converbs attested in the language.

3.2 INITIAL-MEDIAL CLAUSE CHAINING

The second chaining type consists in the combination of an *initial* clause having a finite verb form and one or more *medial* clauses characterised by less-finite verb forms, which are dependent on the initial predicate. While called *initial-consecutive* clause chaining by Longacre (2007), this structure is here referred to as *initial-medial*, for the label 'consecutive' would generate the wrong expectation that these medial verbs only occur in the expression of temporal sequentiality (Mauri, 2015, in press).

Initial-medial clause chaining reportedly has less widespread currency than medial-final chaining cross-linguistically: Longacre (1985:285) claimed that this chaining type was unattested, although he speculated that such a structure could in principle exist. Recent research has demonstrated its existence in several sub-Saharan languages mainly belonging to Niger-Congo and Nilo-Saharan (Creissels et al., 2008, Longacre, 1990, Longacre, 2007).

Initial-medial chaining languages vary as to whether their initial forms are always obligatory (Longacre, 2007:417). In Mündü (Eastern Niger-Congo), a medial form may be used without any initial form in narrative discourse, whereas such obligatory initial forms are required in other genres (Longacre,

1990:111, Longacre, 2007:419). A similar situation is attested in Sabaot and Jur-Luwo, two Nilotic languages (Longacre, 2007:419). However, it seems to be more normal for initial-medial chaining languages to display obligatory initial forms, as in Obolo (Lower Cross Group, Niger-Congo), a language spoken in Nigeria (Longacre, 2007:418). This is also the case in Nzema (Kwa, Niger-Congo), a language spoken in southwest Ghana and southeast Ivory Coast, which has a "consecutive tense whose occurrence is dependent on the prior occurrence either of a past tense or of an historical present" (Longacre, 1990:125).

This chaining type is also attested in Wolof (Atlantic Congo, Niger-Congo) a language mainly spoken in Senegal. Wolof has a verb form known as 'Null tense' or 'Aorist', which is especially frequent in narratives, although it can also be used in proverbs and stage directions (Robert, 2010:490). The Null tense is "the only non-tensed conjugation" in Wolof's verbal system (Robert, 2010:478): it is a verb which has no tense of its own, so it needs what Robert calls "situational anaphora": its tense is derived from the temporal specifications given by the tensed predicate of a preceding clause. An example is given in (5):

5) Initial-medial chaining in Wolof (Robert, 2010)

dafa	*sàcc,*	*ñu*	*kaaf*	*ko*
VBFOC.3SG	steal	NULL.3SG	imprison	him

'He stole (therefore) he was put in jail.'

Similar instances of initial-medial clause chaining are found elsewhere in Niger-Congo. Tem (Kotokoli – Gur, Niger-Congo) is a language spoken in Togo, Ghana, and Benin. An example of initial-medial chaining is given below:

6) Initial-medial chaining in Tem (Kotokoli) (Niger-Congo: Longacre, 2007:418)

mɔ́ɔ́gbɔ́ɔ	*Yɛlívɔ́ɔ*	*níbááwʋ*	*mɛɖéɛ*	*Wasáára-déɛ*
1SG.take.PFV	the.Yelivo	road	1SG.go	to-Wasaara

'I took the Yelivo road and then I went to Wasaara'

In (6), the initial verb *mɔ́ɔ́gbɔ́ɔ* shows person-number agreement in addition to being marked as Perfect, as opposed to the medial verb *mɛɖéɛ*, an aspectually-unmarked form which relies on the initial form for its TAM interpretation. A similar situation is attested in another Gur language, namely Yom (Pila-Pila) (Longacre, 2007:418).

Moving further east one encounters Toposa (Nilo-Saharan), a strict VSO language spoken in South Sudan (Longacre, 1990:65). In narrative discourse, this language makes use of initial-medial clause chaining to encode events on the main storyline, but also to provide some background information and express flashbacks.

3.3 CHAINING DIRECTION AND CONSTITUENT ORDER

One last point to be mentioned before discussing the Berber data is the existence of a correlation between chaining direction and constituent order (Dooley, 2010, Haspelmath, 1995, Longacre, 2007, Roberts, 1997, Stassen, 1985). On the one hand, languages having medial-final chaining typically show SOV constituent order: this means that their full marking of the last verb in the chain corroborates their head-final nature (Longacre, 2007:417).

On the other hand, initial-medial chaining languages have head-initial structure, showing VO order, i.e. either SVO or VSO: a paradigmatic example of this is Toposa (Eastern Nilotic: Longacre, 1990:65).[5] This is also seen in Tem (see (6), above) as well as in languages such as Nzema (Kwa, Niger-Congo: Longacre, 1990:125) and Anywak (Northern Nilotic: Longacre, 1990:88) among others. Once again, the structure of their clause-chaining constructions is consistent with more general typological properties displayed by these languages (Longacre, 1990:174, Longacre, 2007:417, Stassen, 1985:88ff.).

4 CLAUSE CHAINING IN AYT ATTA TAMAZIGHT (BERBER)

Ayt Atta Tamazight (henceforth AAT) belongs to the Tamazight dialect continuum (ISO 639-3: *tzm*), a cluster of closely-related Berber varieties spoken from the Middle Atlas down to the Anti Atlas region, in South-East Morocco (Amaniss, 2009, Hart, 1981, Hart, 1984, Mauri, 2015, Taïfi, 1991). The AAT variety described here is the one spoken by the Ayt Lfrsi community in the eponymous village situated in the Jbel Saghro area. The Ayt Lfrsi are a small fraction of the larger Ayt Atta "supertribe" (Hart, 1981, Hart, 1984).

AAT displays a number of morphosyntactic characteristics which make it similar to many other Berber varieties, notably the use of non-concatenative morphology, the presence of a *state* alternation, and VSO order. The AAT verbal system includes several stems. The Perfective, the Imperfective, and the Imperative stems are TAM-marked forms, as opposed to the so-called Aorist which can be either preceded by TAM particles or used alone, in its bare

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[5] Longacre (1990:65) states that Toposa "is the strictest VSO language [he has] ever encountered."

form. It is precisely the latter use of the Aorist which is relevant to this paper (for a sketch grammar of the language, see Mauri, 2015).

In Berber dialects allowing for the bare Aorist to be used, this generally follows a TAM-marked verb form (henceforth TAM-V). Several varieties display the Chained-Aorist construction (henceforth C-AOR), although some dialects only show it to a marginal extent or heavily constrain its use.[6] As shown in Mauri (in press), this pattern can be reinterpreted according to the conceptual and terminological tools discussed in the previous sections: AAT's Chained-Aorist construction is an instance of *initial-medial clause chaining*. This structure links two clauses, namely an *initial* clause having a TAM-marked verb and a *medial* clause with a bare-Aorist form. The medial clause is dependent on the initial one for its aspectual interpretation.

The Chained-Aorist construction has at least some marginal presence in many Berber dialects. A few examples from a score of Berber dialects are displayed below (for further examples, see Mauri, 2015, in press):[7]

7) IMP (V_1) – AOR (V_2) in Kabyle (Chaker, 1983:229)

Fɣ[IMP]*, t-fk-ḍ*[AOR] *as t!*

'Go out[IMP] and give[AOR] it to him!'

8) IMP (V_1) – AOR (V_2) in Tamashek Tuareg (Heath, 2005:720-721)

ɣas ìnnas[PFV]*æ̀yy*[IMP] *aman tə̀tkəlæ̀d*[AOR] *terɛ̀witt d ˀæ̀kǽbar təkkə̀d*[AOR] *ebǽɣæw én*

'Well, he said[PFV] to him: "leave[IMP] the water, and pick up[AOR] the hide cord and the wooden milk bucket, and go[AOR] to that bull over that way […]'

9) PFV (V_1) – AOR (V_2) in Figuig (Kossmann, 1997:350)

lmalik y-uzen[PFV] *i-ɛessas-en af-en*[AOR] *din ta-meṭṭu-t*

'The king sent[PFV] guards and they found[AOR] a woman there'

10) PFV (V_1) – AOR (V_2) in Tamashek (Heath, 2005:698)

əndǽr i-wæt[PFV] *ˀə̀-jənna ənḍnǽšel, ə̀zjər*[AOR]*-æɣ*

'If it had rained[PFV] yesterday, I'd have gone[AOR] out'

11) IPFV (V_1) – AOR (V_2) in Ghadames Berber (Kossmann, 2013a:166)

asəf n ălarəbɛa, assăswónăt[IPFV] *təmănṣabén msəkkərăn*[AOR] *(ă)lgrágəš*

'on Wednesday the "dames d'honneur" put[IPFV] on henna and pastry is prepared[AOR]'

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[6]   For example, a bare-Aorist verb form cannot be used after an initial Perfective in Ghadames Berber (Kossmann, 2013a:162).

[7] V_1 and V_2 indicate the predicate of the first clause and the predicate of the second clause, respectively.

12) IPFV (V$_1$) – AOR (V$_2$) in Ayt Ndhir Tamazight (Penchoen, 1973:86)

    la ittəddu[IPFV] *xirḷḷah ddaw n wašal t̲ili*[AOR] *nnigas yut̲ n ṛṛut̲t̲*

    'It goes[IPFV] a very long way beneath the earth. There is[AOR] a cemetery above it'

In all of these data, a bare-Aorist verb form is preceded by a TAM-marked form. The aspectual value of the initial TAM-V determines the aspectual interpretation of the bare Aorist which follows.

    Despite its presence in several Berber dialects, nowhere is the Chained-Aorist construction more widely used than in AAT (and, presumably, in other dialects from South-East Morocco). Its role is especially prominent in narration, where it mainly carries storyline information. However, it is also found in non-storyline contexts as well as in non-narrative texts. As the following data show, the bare Aorist can be found after any TAM-marked form in Ayt Atta Tamazight. Similarly to the sub-Saharan languages discussed in 3.2, the Aorist is often used to express main storyline information, continuing the function of a preceding verb. This can be seen in the following examples:

13) IMP (V$_1$) – AOR (V$_2$)

asj	*t-a-mlal-t = nnk*	*t-kk-t*
take.IMP	F-AS-gazelle-F = 2SG.M.POSS	2SG-take.AOR-2SG
a-brid	*ajffas*	
AS-road	right	

    'Take your gazelle, take the road on the right […]'

14) PFV (V$_1$) – AOR (V$_2$)

t-wt = ttit	*t-Ø-srdun-t*	*t-mmt*
3SG.F-hit.PFV = 3SG.F.ACC	F-DS-mule-F	3SG.F-die.AOR

    'A mule hit her, she died'

15) IPFV (V$_1$) – AOR (V$_2$)

ass = a	*lʕid*	*aχatar*	*da*	*j-ttddu*
day = PROX	Eid	big	TAM	3SG.M-go.IPFV
simana	*j-ili*	*w-jdud*	*n*	*lḥart*
week	3SG.M-be.AOR	DS-Ajdud	of	Lḥart

    'Today it is Eid al-Adha: a week goes by, the Ajdud of Lḥart starts'

The Aorist is chained to a preceding Imperative in (13), whereas it comes after a Perfective verb and an Imperfective verb in (14) and (15), respectively.

The previous data show that the C-AOR is a construction which shows operator dependence, since the aspectual value of the initial verb has scope over the non-initial verb: in other words, the latter is dependent on the former. Incidentally, the fact that the independent form precedes the dependent one is also compatible with the observed correlation between chaining direction and a language's constituent order (Berber is a VSO language; see 3.3, above).

Dependence is one of the defining features of cosubordinate clauses (see section 2). This shows that C-AOR is not an instance of coordination, for the latter is a nexus type characterised by independent clauses. As far as embeddedness is concerned, this can be tested on the basis of criteria for subordination, such as the ones devised by Haspelmath (1995). The behaviour of AAT's Chained Aorist vis-à-vis some of those criteria is discussed in what follows.

The first criterion concerns the possibility for a subordinate clause to be placed either before or after its superordinate clause without any significant semantic change, at least when temporal sequentiality is not involved (Haspelmath, 1995:13-14). AAT Aorist-marked clauses do not behave like subordinate clauses in this respect, since their position is fixed, as they necessarily follow the initial clause:

16)   No variable position for C-AOR clauses

    a.   *j-dda*   *ħmad*   *s*   *ssuq*   *j-ddu*   *iʃʃu*   *s*   *iʁrm*

        3SG.M-go.PFV Ahmed to market 3SG.M-go.AOR Yousef to village

        'Ahmed went to the market and Yousef went to the village'

    b.   **j-ddu*   *iʃʃu*   *s*   *iʁrm*   *j-dda*   *ħmad*   *s*   *ssuq*

        3SG.M-go.AOR Yousef to village 3SG.M-go.PFV Ahmed to market

        'Yousef going to the village, Ahmed went to the market'

This shows that it is simply impossible for an Aorist-marked clause to be freely placed before the TAM-marked clause.

The second criterion concerns some extraction constraints on coordinate structures. Two coordinate clauses do not allow for the extraction of a main clause's argument; conversely, if two combined clauses allow for extraction to take place, this shows that only one of them is independent, whereas the other clause is subordinate (Haspelmath, 1995:16). In this respect, AAT medial clauses do not behave like subordinate clauses, since they do not allow for the extraction of an initial clause's argument. This is seen below:

17) No extraction is possible in TAM-V (V$_1$) + AOR (V$_2$) constructions

a. *j-dda*   *s* *t-a-ddar-t* *afad* *ad* *j-swunfu*

 3SG.M-go.PFV to F-AS-house-F in_order_to TAM 3SG.M-rest.AOR

 'He went home in order to rest'

b. *ma-s*   *j-dda*   *afad*   *ad* *j-swunfu*

 Q-to   3SG.M-go.PFV in_order_to TAM 3SG.M-rest.AOR

 'Where did he go in order to rest?'

c. *j-dda*   *ħmad* *s* *ssuq* *j-ddu*   *iʃʃu* *s* *iʁrm*

 3SG.M-go.PFV Ahmed to market 3SG.M-go.AOR Yousef to village

 'Ahmed went to the market and Yousef went to the village'

d. **ma-s* *j-dda*   *ħmad* *j-ddu*   *iʃʃu* *s* *iʁrm*

 Q-to 3SG.M-go.PFV Ahmed 3SG.M-go.AOR Yousef to village

 'Where did Ahmed go and Yousef went to the village?'

Sentence (17a) has a main clause followed by a purposive, subordinate clause. Extraction of the noun *taddart* is allowed, as shown in (17b). On the other hand, (17c) is an instance of C-AOR construction: extraction is not allowed, as shown by (17d). This demonstrates that C-AOR does not involve subordination, since *jddu iʃʃu s iʁrm* (in 17c) is not embedded into the clause which precedes it.

  This section has discussed the syntactic status of C-AOR in AAT. Lack of embeddedness and dependence on the preceding TAM-V for its aspectual interpretation jointly support an interpretation of the C-AOR in terms of clause chaining, i.e. as an instance of cosubordination. This seems to mirror the situation attested in the Saharan languages discussed in section 3.2.

5 CONCLUSIONS

Initial-medial clause chaining has wider distribution in African languages than it was previously thought, being found in genetically-unrelated languages spoken across the Sahara. While it was documented in Niger-Congo and Nilo-Saharan, this paper has showed that initial-medial clause chaining is also attested in Berber, notably in Ayt Atta Tamazight, a language where this chaining type plays a prominent role in clause linking.

Just like converbs are deemed to be a significant areal feature in the Ethiopian linguistic area, so it might be the case that the widespread use of initial-medial clause chaining across the Sahara support the hypothesis of the Sahara itself as a linguistic area. More evidence is certainly necessary in order to define the Sahara as a linguistic area. A larger number of grammatical features of Saharan languages should be taken into consideration. Moreover, it is also necessary to further investigate the cross-linguistic distribution of initial-medial clause chaining, for the apparent rarity of this phenomenon might only be due to lack of data from other regions and language families. Nevertheless, the analysis put forward here arguably leads to a better mapping of clause-chaining languages in the Sahara, which will hopefully contribute to a better understanding of language contact in the region.

* * *

ABBREVIATIONS

-	morpheme boundary		NULL	Null Tense
=	clitic boundary		O	object
1	first person		PFV	Perfective
2	second person		PL	plural
3	third person		POSS	possessive
AAT	Ayt Atta Tamazight		PROX	proximal
ACC	accusative		PRS	present
AFF	affirmative		PST	past
AOR	Aorist		PTCP	participle
AS	absolute state		Q	question word
CAUS	causative		REM	remote past tense
C-AOR	Chained Aorist		S	subject
CNV$_2$	converb type 2		SG	singular
DCL	declarative		SMP	semantic pivot
DSU	different subject		SQ	sequential
DS	dependent state		SSU	same subject
F	feminine		TAM	tense-aspect-mood
IMP	Imperative		TAM-V	TAM-marked verb
IPFV	Imperfective		V	Verb
M	masculine		VBFOC	Verb-focusing conjugation

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