

Sentence mood in the tense system of the Alabama language

Tanya Bondarenko (Harvard • tbondarenko@fas.harvard.edu)
& Jacob Fernandes (jjfgiratina@gmail.com)

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Introduction

Alabama

- Muskogean family
- currently spoken on the Alabama-Coushatta reservation in Texas
- Subject-Object-Verb
- rich verbal morphology
- system of switch-reference (Jack B Martin 2024a)
- system of two cases (NOM-OBL), active agreement alignment (Hardy & Davis 1993)

Tab. 1: Classification of Muskogean languages

Muskogean
Western Muskogean
Choctaw
Chickasaw
Alabama-Koasati
<u>Alabama</u>
Koasati
Apalachee
Mikasuki (Hitchiti)
Muskogee (Creek)

(Jack B. Martin 2024b)

Introduction

The data presented here comes from a collaborative project on language documentation and preservation between the WOLF-Lab at Harvard and the Alabama-Coushatta tribe.

<https://www.alabama-coushatta.com/>

<https://fieldlinguistics.github.io/>



Introduction



Bigger goals

- grammatical description of Alabama and more detailed study of different aspects of its grammar;
- development of teaching materials and curriculum;
- improving the existing dictionary, creating new online language resources and apps;
- linguistic workshops and training in the community.

Today: Sentence mood & the Tense-Aspect-Modality (TAM) system

1. Background & Questions
2. Versatile Morphemes
3. Picky Morphemes
4. Other properties of the TAM system
5. Discussion

Background & Questions

Background & Questions

- Very rich TAM-morphology, very little existing description.
- Lupardus (1982) lists 7 temporal suffixes (+ 8 aspectual):

<u>Time category</u>	<u>Form</u>	<u>Gloss</u>
Future	{ -lo	(definite) future
	-la	indefinite future
Present	{ -ci	continuous
	-o/-bi	perfect
Past	{ -ti	proximate time
	-kha	remote time
	-to(ha)	narrative past

Table 17: Simplified analysis of tense/aspect affixes.¹

Background & Questions

(Lupardus 1982):

- interrogative mood is expressed by word-final nasalization + intonational change
- sometimes *“interrogative mood restricts the occurrence of...tense affixes”*

<u>Tense/aspect</u>	<u>Declarative</u>	<u>Interrogative</u>
Future	-lo	-lo + ~
Present {	cont. -ci	-ci + ~
	perf. -o/-bi	+ ~
Past {	Prox. -ti	-co + ~
	Remote -kha	

Table 19: Cooccurrence of tense/aspect and mood suffixes

Unlike in languages like English, declarative and interrogative forms are not distinguished based on some syntactic operation.

- (1) a. **Is** Jane ready?
- b. Jane **is** ready.

Unlike languages like Chicasaw (see *-ta* below), there does not seem to be a dedicated question marker in Alabama.

- (2) a. Hashi'at aloota chokma.
 moon full good
 'The moon is good and full.'
- b. Chokma-**ta**?
 good-Q
 'Is it good?' (Munro & Willmond 1994)

Unlike in languages like Koasati, declarative forms in Alabama in many cases are not predictable from interrogative forms.

- (3) a. hačà:lí-ⁿ
 stand.SG.LGR-SG
 ‘Is he/she standing up?’
- b. hačà:l
 stand.SG.LGR
 ‘He/she is standing up.’ (Jack B. Martin to appear)

Our key questions

- What temporal and aspectual meanings are expressed by the Alabama TAM morphemes?
- What is the role of the sentential mood in the TAM system—how (and why) does it restrict the distribution of TAM different morphemes?

Preview

A much richer TAM system than described before;
morphemes fall into 2 classes:

- **“versatile” morphemes** that can occur with both declarative and interrogative mood.
- **pairs of “picky” morphemes**: one member of the pair is restricted to declarative contexts, and the other to interrogative contexts.

Versatile TAM Morphemes

Versatile Morphemes

There are 5 morphemes that can be used in an independent sentence with both interrogative and declarative mood.

Morpheme	Gloss	Meaning/Uses
<i>-hchi</i>	IPFV	present progressive, habituals
<i>-la</i>	FUT1	proximate future ('there's a plan')
<i>-lo</i>	FUT2	more certain future, modal
<i>-tah</i>	PST3	past tense, uncommon
<i>-hcho.tah</i>	HAB.PST3	habitual past, uncommon

Table 1: "Versatile" morphemes

Questions are often marked with nasalization (*la*, *lo*—always, with others there is variation) and special intonation.

hchi: present progressive/habitual

- (4) Q: chin-sista-k kaano-**hchi**(ⁿ)?
2.SG.POSS-sister-NOM good-**IPFV**
'Is your sister doing well?',
'Is your sister a good person?'
- A: an-sista-k kaano-**hchi**.
1.SG.POSS-sister-NOM good-**IPFV**
'My sister is doing well',
'My sister is a good person.'

la: proximate ('there's a plan') future

- (5) Q: cha-ta⁴4a-wiika-y-ok mobil-on
1SG.PAT-side-live-REL-CONV2 car-OBL
choopa-**la**?
buy-FUT1

'Is my neighbor planning to buy a car
(in the next day or two)?'

- A: nihtamaan cha-ta⁴4a-wiika-y-ok
tomorrow.OBL 1SG.PAT-side-live-REL-CONV2
mobil-on choopa-**la**.
car-OBL buy-FUT1

'My neighbor is planning to buy a car tomorrow.'

lo: certain future/modal

- (6) Q: niihtama Ava-k bitli-**lo**ⁿ?
tomorrow Ava-NOM dance-FUT2
'Will Ava dance /be able to dance tomorrow?'
- A: ay, Ava-k bitli-**lo**.
tomorrow Ava-NOM dance-FUT2
'Yes, Ava will dance.'

Context#1: I know the program for tomorrow.

Context#2: I am giving my permission for Ava to dance.

-tah: remote past (rare)

(probably from *-toha*)

- (7) Q: Ava-k bokko-chaaha-n oḷa-**tah**⁽ⁿ⁾?
Ava-NOM hill-tall-OBL arrive-PST3
'Had Ava already made it to the mountain before?'
- A: Ava-k bokko-chaaha-n oḷa-**tah**.
Ava-NOM hill-tall-OBL arrive-PST3
'Ava had made it to the mountain before.'

-hcho.tah: past tense habitual

(might be analyzed as *-hcho* + *-tah*)

(8) Q: Ava-k bitli-**hchotah**(ⁿ)?

Ava-NOM dance-HAB.PST3

‘Did Ava use to dance?’

A: Ava-k bitli-**hchotah**.

Ava-NOM dance-HAB.PST3

‘Ava used to dance.’

Picky Morphemes

Picky Morphemes

Other independent verb forms in the language end on “picky” TAM morphemes: they come in declarative-interrogative pairs.

Decl.	Gloss	Interr.	Gloss	Uses
<i>-o/bi</i>	AUX	$\emptyset^n$	—	present/resultative
<i>-ti</i>	PST1	<i>-choⁿ</i>	PST1.Q	most common past
<i>-kha</i>	PST2	<i>-toskaⁿ</i>	PST2.Q	‘more remote’ past
<i>-sso</i>	EVID.PST	<i>-ssaⁿ</i>	EVID.PST.Q	‘being surprised’ past
<i>-hcho.ti</i>	HAB.PRS	<i>-hcho.ssoⁿ</i>	HAB.PRS.Q	present habitual

Table 2: Declarative-Interrogative TAM morpheme pairs

-o/bi — $\emptyset^n$: present/resultative

- (9) Q: Ava-k holisso-n hossoⁿ?
Ava-NOM letter-OBL write
'Is Ava writing/has Ava written the letter?',
'*Ava is writing/has written the letter.'
- A: (ay,) Ava-k holisso-n hosso-**bi**.
yes Ava-NOM letter-OBL write-**AUX**
'Yes, Ava is writing/has written the letter',
'*Is Ava writing/has Ava written the letter?'
(nasalization/intonation do not help)

Both forms share the same lexical aspect restriction to past tense with *achievements* like *oɬa* 'arrive, reach':

- (10) Q: Ava-k bokko-chaaha-n oɬaʔ?
Ava-NOM hill-tall-OBL reach
*‘Is Ava reaching the mountain?’,
‘Has Ava reached the mountain?’
- A: ay, Ava-k bokko-chaaha-n oɬ-o.
yes Ava-NOM hill-tall-OBL arrive-AUX
*‘Yes, she is reaching the mountain’,
‘Yes, she has reached the mountain.’

-ti — choⁿ: past tense

- (11) Q: ava-k (piyaako /*himaakaya /*niihtama)
Ava-NOM (yesterday /right.now /tomorrow)
bit.li-**cho**ⁿ?
dance.LI-PST1.Q

‘Did Ava dance?’, *‘Ava danced.’

- A: ava-k (piyaako /*himaakaya /*niihtama)
Ava-NOM (yesterday /right.now /tomorrow)
bit.li-**ti**.
dance.LI-PST1

‘Ava danced.’, *‘Did Ava dance?’

(regardless of intonation/nasalization)

-kha — **toskaⁿ**: remote past tense

- (12) Q: Ava-k bit.li-**toskaⁿ**?
Ava-NOM dance.LI-**PST2.Q**
'Had Ava danced?', *'Ava had danced.'
- A: Ava-k bit.li-**kha**.
Ava-NOM dance.LI-**PST2**
'Ava had danced.', *'Had Ava danced?'
(regardless of intonation/nasalization)

Past tenses come in pairs!

(13) Q: Ava-k holisso-n hossoⁿ?
Ava-NOM letter-OBL write
'Has Ava written the letter?'

A1: ay, Ava-k hosso-**bi**.
yes Ava-NOM write-**AUX**
'Yes, Ava has written it.'

A2: # ay, Ava-k hosso-**ti**.
yes Ava-NOM write-**PST1**
'Yes, Ava wrote it.'

Past tenses come in pairs!

(14) Q: Ava-k holisso-n hosso-**cho**ⁿ?
Ava-NOM letter-OBL write-**PST1.Q**
'Did Ava write the letter?'

A1: # ay, Ava-k hosso-**bi**.
yes Ava-NOM write-**AUX**
'Yes, Ava has written it.'

A2: ay, Ava-k hosso-**ti**.
yes Ava-NOM write-**PST1**
'Yes, Ava wrote it.'

Past tenses come in pairs!

- (15) Q: Ava-k bitli-**toska**ⁿ?
Ava-NOM dance-PST3.Q
'Had Ava danced before?'
- A1: ay, Ava-k bitli-**kha**.
yes Ava-NOM write-PST3
'Yes, Ava had danced before.'
- A2: # ay, Ava-k bitli-**ti**.
yes Ava-NOM dance-PST1
'Yes, Ava danced.'

-sso — ssaⁿ: mirative/evidential past

(the speaker finds the proposition surprising)

- (16) Q: Ava-k bokko-chaaha-n oṭa-ssaⁿ?
Ava-NOM hill-tall-OBL arrive-EVID.PST
'Did Ava really make it to the mountain?',
*'Apparently, Ava made it to the mountain.'
- A: Ava-k bokko-chaaha-n oṭa-sso.
Ava-NOM hill-tall-OBL arrive-EVID.PST
'Apparently, Ava made it to the mountain.',
*'Did Ava really make it to the mountain?'
(regardless of intonation/nasalization)

-hchoti — hchossoⁿ: present habitual

- (17) Q: Ava-k bitli-**hcho.sso**ⁿ?
Ava-NOM dance-HAB.PRS
'Does Ava usually dance?',
*'Ava usually dances.'

A: Ava-k bitli-**hcho.ti**.
Ava-NOM dance-HAB.PRS
'Ava usually dances.',
*'Does Ava usually dance?'
(regardless of intonation/nasalization)

Habitual *hcho*?

- Should we decompose *hchosso* into *hcho* + *sso*, and *hchoti* into *hcho* + *ti*? It is very appealing:

- (18) a. **hcholi**ⁿ: interrogative PRS habitual
b. **hcho**lo: declarative PRS habitual (*hcho* + *li* + *o*?)
- (19) a. **hcholitaska**ⁿ interrogative PST habitual
b. **hcholikha**: declarative PST habitual
- (20) a. **hchotah**ⁿ: interrogative PST habitual
b. **hchotah**: declarative PST habitual

- **Issue:** does not make sense given the meanings.

Other properties of the TAM system

Viewpoint Aspect

Our tentative generalization is that *hchi* forms are imperfective, but sentences with most other verbal forms (*-la*, *-lo*, *-tah*, *-o/bi*, *-ti*, *-kha*) receive **perfective** interpretation by default.

- (21) piyaako a-m-iisa-f-on
yesterday 1SG-POSS-house-LOC-OBL
oṭa-li-fookama...
come-1SG-when
'When I came home yesterday...'

- a. a-n-taata-k nip-on labatli-**ti**.
SG-POSS-father-NOM meat-OBL cook-**PST1**.
'...my dad cooked meat.'

✓ *arrival before cooking*, ✗ *arrival during cooking*

Other properties of the TAM system

In order to convey the imperfective meaning, a construction with an auxiliary + V in converbial/SS form is used:

- (22) piyaako a-m-iisa-f-on
yesterday 1SG-POSS-house-LOC-OBL
oṭaa-li-fookama...
come-1SG-when
'When I came home yesterday...'

- b a-n-taata-k nip-on libatli-**yok**
SG-POSS-father-NOM meat-OBL cook-**CONV**
wiika-s-ti.
stay-**S-PST1**
'...my dad was cooking meat.'
✗ arrival before cooking, ✓ arrival during cooking

Other properties of the TAM system

Alabama retains an (apparently) nonproductive form of vowel gradation (Sylestine 1993), similar to the **Lengthened Grade**¹ (LGR) in other Muskogean languages

- (23) a. Ava-k il-o
Ava-NOM come-AUX
'Ava's here.' (lit. 'has come')
- b. Ava-k iil-o
Ava-NOM come.IPFV-AUX
'Ava's on her way' (lit. 'is coming')

¹Cmp. *wanáyas* 'Tie it!' vs. *wana:yís* 'He/she is tying it' (Jack B. Martin 2011), *hačá:líl* 'I am standing up' vs. *haččă:líl* 'I am standing.' (Jack B. Martin to appear), *taloowah* 'He is singing' vs. *tálloowah* 'He finally sang.' (Broadwell 2006)

Other properties of the TAM system

The LGR appears in imperfective interpretations with a lengthened penult, and cannot have perfective readings.

- (24) iisa-f-on oṭa-li-fook-on, ava-ya
 house-LOC-OBL arrive-1.SG-when-OBL Ava-TOP
paa-bokko-f-on ooṭ-o / oṭ-o
 on-hill-LOC-OBL arrive.LGR-AUX arrive-AUX
‘When I got to the house, Ava... ’
‘... was approaching the hill’: ✓ooṭo, ✗oṭo
‘... got to the hill.’ (*after my arrival*): ✗ooṭo, ✓oṭo

Other properties of the TAM system

Some evidence suggests speakers replace this grade with an auxiliary *V + wiika* for most verbs.

- (25) am-iisa-f-on oḷa-li-fooka-ma...
 1.DAT-house-LOC-OBL arrive-1.SG.AGT-when-if
 ‘When i got home...’
- a. judy im-aaba**chi**-y-ok s-wiika-s-ti
 judy 3.DAT-teach-Y-CONV2 INST-dwell-S-PST1
 ‘... Judy was in the middle of teaching.’
 ✓ *arrival during teaching*, ✗ *arrival before teaching*.
- b. *judy im-aaba**aach**-o
 judy 3.SG.DAT-teach.LGR-AUX
 Intended: ‘... Judy was in the middle of teaching.’

Embedding TAM

The Mystery:

- declarative morphemes cannot be embedded;
- interrogative morphemes can be embedded—this is possible only under rogative verbs like *imaalochi* ‘ask s.o.’.

Rogative verbs: OK with interrogative TAM morphemes

- (26) Jacob-ka-k Ava-n im-aalochi-ti
 Jacob-BOR-NOM Ava-OBL 3APPL-ask-PST1
 [im-piichi-k nasso-n ^{OK}hosso-**hcho**ⁿ
 3APPL-mother-NOM what-OBL write-PST1.Q
 /^{OK}hosso-**k-on** /*hosso-**ti**].
 /write-K-OBL /write-PST1
 ‘Jacob₁ asked Ava what his₁ mother wrote.’

Responsive verbs: no independent TAM morphemes possible

- (27) Jacob-ka-k sobayl-ool-o
 Jacob-BOR-NOM know-MOD-AUX
 [im-piichi-k nasso-n *hosso-**hcho**ⁿ
 3APPL-mother-NOM what-OBL write-PST1.Q
 /^{OK}hosso-**k-on** / *hosso-**ti**].
 /write-K-OBL /write-PST1
 ‘Jacob₁ knows what his₁ mother wrote.’

Anti-Rogative verbs: no independent TAM morphemes possible

- (28) Jacob-ka-k Ava-n in-manka-ti
Jacob-BOR-NOM Ava-OBL 3APPL-say-PST1
[im-piichi-k holisso-n ^{OK}hosso-**y-on**
3APPL-mother-NOM letter-OBL write-**Y-OBL**
/*hosso-**ti**].
/write-**PST1**
'Jacob₁ told Ava that his₁ mother wrote a letter.'

The only way for the “embedded” clause to be independent is to demote the former “matrix” clause into a dependent one:

- (29) Maxine-ka-k onka-**ya**
Maxine-BOR-NOM say-**TOP**
[Ava-k bitli-**ti**]
Ava-NOM dance-**PST1**
‘As Maxine said, Ava danced.’

Discussion

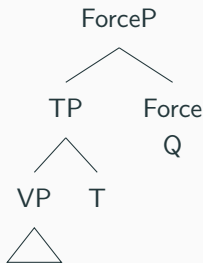
- The distinction between interrogative vs. declarative mood runs throughout the TAM system: **to choose the TAM form correctly one needs to know the mood.**
- Knowing verbal forms of independent sentences does not in most cases give one the knowledge of how to form embedded sentences of the same tense/aspect/modality.

Questions:

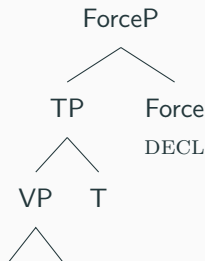
- Why are some TAM morphemes “picky” when it comes to sentence mood whereas others “versatile”?
- What explains the restrictions on occurrence of TAM morphemes in embedded clauses that we see?
- How did this TAM system arise, and to what extent is it shared by other Muskogean languages?

Why are some TAM morphemes “picky” whereas others “versatile”?

Hypothesis: “Versatile” morphemes are modals, “picky” morphemes are in fact sentence mood morphemes (in Force head (Rizzi 1997)) which have multiple allomorphs conditioned by the features of Tense.



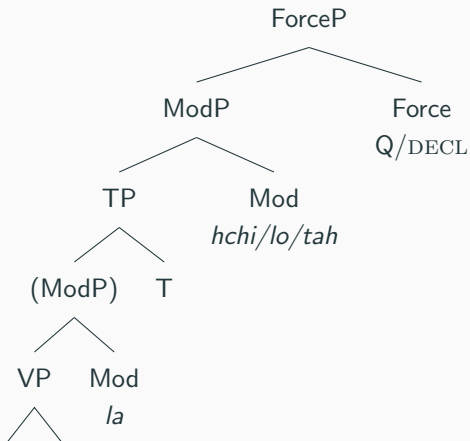
- (30) {Force, Q} $\Leftrightarrow$ $-cho^n$ /[[T,PST]____]
 $\Leftrightarrow$ $-toska^n$ /[[T,PST_{remote}]____]
 $\Leftrightarrow$ $-ssa^n$ /[[T,PST,EVID]____]
 $\Leftrightarrow$ $-hcho.sso^n$ /[[T,PRS,HAB]____]
 $\Leftrightarrow$ $\emptyset^n$



- (31) {Force, DECL} $\Leftrightarrow$ *-ti* / [[T,PST]____]
 $\Leftrightarrow$ *-kha* / [[T,PST_{remote}]____]
 $\Leftrightarrow$ *-sso* / [[T,PST,EVID]____]
 $\Leftrightarrow$ *-hcho.ti* / [[T,PRS,HAB]____]
 $\Leftrightarrow$ *o/bi* / [[T]____]
 $\Leftrightarrow$ $\emptyset$

“Versatile” Morphemes are either:

- modals that combine lower than Tense, and then they are compatible with the “picky” TAM morphemes;
- or they are modals that combine between T and Force (Marantz 2013) and disrupt the context for allomorphy, resulting in the “elsewhere” Force allomorphs ($\emptyset$ and $\emptyset^n$).



-la can appear with picky morphemes, e.g. with *-ti* in (32); while other “versatile” morphemes, e.g. *-lo*, cannot.

- (32) a. *ava-k okhich-on tiyapli-la-ti*
Ava-NOM door-OBL open-FUT1-PST1
'Ava was supposed to open the door.'
- b. **ava-k okhich-on tiyapli-lo-ti*
Ava-NOM door-OBL open-FUT2-PST1
Intended: 'Ava was supposed to open the door.'

What explains the restrictions on TAM in embedded clauses?

Hypothesis: Most verbs embed clauses smaller than ForceP, and so morphemes that expone Force cannot occur in them. *imahaalochi* ‘ask’ is unique in allowing ForceP-sized CPs.

↪ clausal embedding provides evidence for most TAM morphemes being very “high”

How did this TAM system arise, is it shared with other Muskogean?

- Not sure: Proto-Muskogean likely did not have overt tense marking (Booker 1980), and TAM systems of languages of the family seem to have experienced a lot of innovations.
- While we find some cases of declarative-interrogative pairs in other Muskogean languages, in Alabama the phenomenon seems more widespread and pairs are less predictable.

Aliilamoolo!

Thank you for the attention!

Acknowledgements

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