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| 著者(英) | Shiho Ebihara |
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Morphophonological alternation of suffixes, clitics and stems in Amdo Tibetan

Shiho Ebihara*

アムド・チベット語における接辞, 接語および語幹の形態音韻的交替

海老原 志 穂

Some of the suffixes and clitics of Amdo Tibetan have a number of allomorphs which are conditioned phonologically (in most cases, their initial consonants alter). Stems which these suffixes or clitics follow also alternate from time to time. Alternations are to some extent regular, but appear complicated because there are various alternation patterns. This paper gives an overview of morphophonological alternation patterns, by separating the alternation rules of suffixes and clitics (section 3) and the alternation rules of stems (section 4). These morphophonological alternations are also seen in Written Tibetan (*sum cu pa*), but the rules are rather different between Amdo Tibetan and Written Tibetan. Furthermore, stem alternations are not seen in Written Tibetan. This paper aims at giving a systematic description of the alternation rules in Amdo Tibetan, but it could be a preface to working out the developmental process of Tibetan from a morphophonological perspective, by comparison with Written Tibetan and the other Tibetan languages.

アムド・チベット語における接辞と接語の多くは音韻的な環境によって条件づけられる異形態をもつ(多くの場合, その頭子音が交替する)。さらに, 接辞または接語が接続する語幹も交替することがある。このような交替現象は概ね規則的であるが, 交替パターンが複数あるため, 一見複雑である。本稿では, 接辞と接語の交替規則(第3節)と語幹の交替規則(第4節)をわけて記述することにより, 交替パターンの全体像を示す。このような接辞, 接語の交替現象はアムド・チベット語のみの特徴ではなく, チベット文語にもみられる(*sum*

*Part-time lecturer, Seisen University

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キーワード : チベット・ビルマ語派, アムド・チベット語, 形態音韻的交替, 接辞, 接語

cu pa)。しかし、文語におけるこうした交替規則はアムド・チベット語のものとはかなり異なっている。さらに、語幹の交替はチベット文語にはみられないため、アムド・チベット語に特徴的なものである。本稿ではアムド・チベット語における現象の記述に主眼を置くが、今後、チベット文語や他地域のチベット語における形態音韻的な交替規則との比較を通じて、形態音韻的な面からチベット語内部での通時的な言語変化を考える端緒としたい。

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Introduction

Amdo Tibetan is spoken in Qinghai Province, the southern part of Gansu Province, and the northern part of Sichuan Province. In this language, suffixes and clitics¹⁾ have a number of allomorphs which are conditioned phonologically. In most cases, allomorphs vary in their initial consonants. (1) and (2) are examples of the auxiliary verb //Gəjɔl//²⁾ (expressing ‘progressive’). ‘// //’ and ‘/ /’ are used to indicate underlying phonemic representation and surface phonemic representation respectively. Several phonological rules are effectively described by referring to the underlying and surface levels of the phonological system.

//Gəjɔl// has two allomorphs in sentence-final position; /=kəjɔ/ (example (1)) and /=gəjɔ/ (example (2)). I set up //Gəjɔl// as an underlying form because /=gəjɔ/ appears in more circumstances than /=kəjɔ/.

- | | | |
|---------|----------------|-----------------|
| (1) ɲa | ndək=kəjɔ. | ‘I am staying’ |
| 1SG | stay:NPST=AUX | |
| (2) ɲi | hta=gəjɔ. | ‘I am watching’ |
| 1SG:ERG | watch:NPST=AUX | |



Figure 1: Qinghai Province and its vicinity (The black area is Gonghe County)
(TAR stands for ‘Tibetan Autonomous Region’)

bLo gros rGya mtsho 1936-2008, Mr. *A lag rGya ye* 1946-) who were born and grew up in *Yongrong* village near Chapcha. In most examples of this paper, they speak in the same way, but a few differences were found. These differences will be noted in the relevant examples.

This paper aims to describe morphophonological alternations in Amdo Tibetan. These alternations have not received particular attention in the past. They are only briefly mentioned in grammars (Ming Shengzhi 1990, Wang Qingshan 1996, Gesang Jumian & Gesang Yangjing 2002, Zhou Maocuo 2003, Haller 2004⁴). This paper is the first attempt to give an overview of the morphophonological alternation systems in Amdo Tibetan by separating the alternation rules of suffixes, clitics (section 3) and stems (section 4).

2 Syllable structure and phonemes

As a preliminary to the following discussion, I describe the syllable structure and phonemes of the target language.

2.1 Syllable structure

The syllable structure of this language is shown in (6).

(6) (C1)(C2)(C3)V(C4)

In underlying forms, seven consonants (/p/, /k/, /m/, /n/, /ŋ/, /l/, /r/) can appear as final (C4).

2.2 Phonemes

There are 38 consonants.

Table 2 ‘voiced and unvoiced’ pattern (abbreviated forms are shown in parentheses)

| | voiced | unvoiced |
|--------------------------------------|------------------------|------------------------|
| [1-1] nominalizer // -Dʒo// | /-dʒo/ | /-tʃo/ |
| [1-1] AUX // =Dʒijən// (//=Dʒi//) | /=dʒijən/ (//=dʒi/) | /=tʃijən/ (//=tʃi/) |
| [1-1] AUX // =Dʒire// ⁽⁵⁾ | /=dʒire/ | /=tʃire/ |
| [1-2] AUX // =Gə// | /=gə/, /=gi/ | /=kə/, /=ki/ |
| [1-2] AUX // =Gəjəl// (//=Go//) | /=gəjəl/ (//=go/) | /=kəjəl/ (//=ko/) |
| [1-2] AUX // =Gəjokkəl// (//=Gogə//) | /=gəjokkəl/ (//=gogə/) | /=kəjokkəl/ (//=kokə/) |

3.1.2 Fricative and affricate

[2-1] /s^h/ and /ts^h/, [2-2] /z/ and /ts/ patterns were seen.

Table 3 ‘fricative and affricate’ pattern

| | fricative | affricate |
|--|----------------------|-----------------------|
| [2-1] nominalizer // -S ^h o// | /-s ^h o/ | /-ts ^h o/ |
| [2-1] AUX // =S ^h oŋ// | /=s ^h oŋ/ | /=ts ^h oŋ/ |
| [2-2] AUX // =Zək// ⁽⁶⁾ | /=zək/ | /=tsək/ |

3.1.3 Retroflex and /r/

/ʈ/, /ndʈ/ and /r/ pattern was seen.

Table 4 ‘retroflex and /r/’ pattern (abbreviated forms are shown in parentheses)

| | /ʈ/ | /ndʈ/ | /r/ |
|---|--|--|--|
| co-ordination particle // =Ra// conjunction // =Ra// sentence-final particle // =Ra// | /=ʈa/ | /=ndʈa/ | /=ra/ |
| conjunction // =Roŋ// | /=ʈoŋ/ | /=ndʈoŋ/ | /=roŋ/ |
| conjunction // =Rit ^h ats ^h o// (its abbreviated form is // =Ri//) | /=ʈit ^h ats ^h o/ (//=ʈi/) | /=ndʈit ^h ats ^h o/ (//=ndʈi/) | /=rit ^h ats ^h o/ (//=ri/) |

3.1.4 Stem-final consonant copy insertion

If the underlying form of a clitic is // =V//, a copy of a stem-final consonant is inserted in front of the clitic under certain circumstances. Sometimes /C/ of // =CV// is not the same consonant as the final consonant of the stem, but partly assimilated into the consonant. Otherwise, // =V// forms follow stems.

The dative case marker // =a// sometimes changes to // =o// after a stem final /o/. I set up // =a// as the underlying form of the dative case marker because vowel /a/

appears in most phonological circumstances.

Table 5 ‘stem-final consonant copy insertion’ pattern

| | /=V/ | /=CV/ |
|------------------------------------|------------------------------|--|
| conjunction //= <i>i</i> // | /= <i>i</i> / | /= <i>ni</i> /, /= <i>ŋi</i> / |
| conjunction //= <i>a</i> // | /= <i>a</i> / | /= <i>na</i> /, /= <i>ŋa</i> / |
| dative case marker //= <i>a</i> // | /= <i>a</i> /, /= <i>o</i> / | /= <i>ka</i> /, /= <i>ma</i> /, /= <i>na</i> /, /= <i>ŋa</i> /, /= <i>wa</i> / |
| AUX //= <i>a</i> // | /= <i>a</i> / | /= <i>na</i> /, /= <i>ŋa</i> /, /= <i>wa</i> / |

3.2 Conditions on alternations

Alternations of suffixes and clitics are conditioned by the final phonemes of the stem. In what follows, the conditions under which each allomorph appears will be described. These conditions differ slightly even in the same pattern of allomorphs.

3.2.1 Voiced and unvoiced

The nominalizer //=*Dz*o//, the auxiliary verbs //=*Dz*ijən// (//=*Dz*i//), //=*Dz*irel//, //=*G*ə//, //=*G*əjəl// (//=*G*o//), //=*G*əjokkə// (//=*G*ogə//) belong to this type.

Nominalizer //=*Dz*o//

//=*Dz*o// appears as /-tɕo/ after //l// of an underlying stem. Furthermore, //l// is realized as /t/ by assimilating the initial consonant of /-tɕo/. ‘/t/ (←//l//)’ in table 6 shows this realization of the stem-final consonant.

Table 6 Nominalizer //=*Dz*o//

| the final of the stem | allomorph | example |
|--------------------------------|------------------|----------|
| /t/ (←//l//) | /-tɕo/ | (7) |
| /p/ | /-tɕo/ or /-dzo/ | (8) |
| /k/, /m/, /n/, /ŋ/, /r/, vowel | /-dzo/ | (9)–(14) |

- (7) ɕet-tɕo ‘speaking’
speak-NMLZ
(The underlying form of the verb ‘speak’ is //ɕel//, but it changes to /ɕet/ before the nominalizer /-tɕo/)
- (8) hep-tɕo / hep-dzo ‘going/coming (HON)’
go/come:HON-NMLZ go/come:HON-NMLZ
(There is no difference between these two examples. The consultants allow both equally)
- (9) ndək-dzo ‘staying’
stay:NPST-NMLZ

- (21) tɕ^her=dʒi [I/we] will carry [something]
 carry=AUX
- (22) ndʒo=dʒi [I/we] will go
 go:NPST=AUX

AUX //Gə//, AUX //Gəjɔl//, AUX //Gəjɔkkə// and conjunction //Gə//

The conditions under which the allomorphs of the auxiliary verb //Gə// appear are the same as for the auxiliary verbs //Gəjɔl//, //Gəjɔkkə// and the conjunction //Gə//. //Gəjɔl//, //Gəjɔkkə// have the abbreviated forms //Go// and //Gokə//, respectively. Only the auxiliary verb //Gə// is shown in the following examples. The auxiliary verb //Gə// expresses ‘state, attribute’, //Gəjɔl// expresses ‘progressive’ (conjunct), //Gəjɔkkə// expresses ‘progressive’ (disjunct) and conjunction //Gə// expresses ‘purposive’.

Table 8 Auxiliary verb //Gə// (/kə/ and /ki/ are free variants. As with /gə/ and /gi/)

| the final of the stem | allomorph | example |
|---------------------------|--------------|-----------|
| /k/ (←//p//) | | (23) |
| /k/ | /kə/ or /ki/ | (24) |
| /k/ (←//l//) | | (25) |
| /m/, /n/, /ŋ/, /r/, vowel | /gə/ or /gi/ | (26)–(30) |

- (23) nbek=kə [It] often rains
 fall:NPST=AUX
 (The underlying form of the verb ‘fall’ is //nbep//, but it changes to /nbek/ before the auxiliary verb /kə/)
- (24) tɕ^hok=kə [It] is allowed
 allowed=AUX
- (25) jok=kə [It] is existing
 exist=AUX
 (The underlying form of the existential verb is //jɔl//, but it changes to /jok/ before the auxiliary verb /kə/)
- (26) htsem=gə [Somebody] often writes
 write=AUX
- (27) nən=gə [It] is lawfully allowed
 lawfully allowed=AUX
- (28) maŋ=gə [It] is many
 many=AUX
- (29) hter=gi [Somebody] often gives
 give:NPST=AUX
- (30) ʂa=gə [It] is good
 good=AUX

3.2.2 Fricative and affricate

Nominalizer //S^ho//, AUX //S^hoŋ//

The conditions for the allomorphs of the nominalizer //S^ho// are the same as for the auxiliary verb //S^hoŋ//. Only the nominalizer //S^ho// is shown in the following examples. The nominalizer //S^ho// expresses ‘a place to do something’ and the auxiliary verb //S^hoŋ// expresses ‘the occurrence of an event, an event which goes away’.

Table 9 Nominalizer //S^ho//

| the final of the stem | allomorph | example |
|-------------------------------------|----------------------|-----------|
| /t/ (←//l//) | /-ts ^h o/ | (31) |
| /s/ (←//l//) | /-s ^h o/ | (31) |
| /p/, /k/, /m/, /n/, /ŋ/, /t/, vowel | /-s ^h o/ | (32)–(38) |

- (31) jot-ts^ho / jos-s^ho ‘place to exist’
 exist-NMLZ exist-NMLZ
 (The underlying form of the existential verb is //jol//, but it changes to /jot/ before the nominalizer /-ts^ho/ and into /jos/ before the nominalizer /-s^ho/. One consultant allows both examples, but Mr. *bLo gros rGya mtsho* says ‘jot-ts^ho’ is more colloquial than ‘jos-s^ho’)
- (32) hep-s^ho ‘place to go to/place to come to (HON)’
 go/come:HON-NMLZ
- (33) ndək-s^ho ‘place to stay’
 stay:NPST-NMLZ
- (34) ndzom-s^ho ‘place to gather to’
 gather-NMLZ
- (35) t^hon-s^ho ‘place to arrive at’
 arrive-NMLZ
- (36) doŋ-s^ho ‘place to beat’
 beat-NMLZ
- (37) hter-s^ho ‘place to give to’
 give:NPST-NMLZ
- (38) ndzo-s^ho ‘place to go to’
 go:NPST-NMLZ

AUX //Zək//

//Zək// expresses ‘inference, hearsay’.

Table 10 Auxiliary verb //Zək//

| the final of the stem | allomorph | example |
|-------------------------------------|-----------|-----------|
| /t/ (←//l//) | /=tsək/ | (39) |
| /p/, /k/, /m/, /n/, /ŋ/, /r/, vowel | /=zək/ | (40)-(46) |

- (39) çet=tsək ‘[Somebody] spoke’
 speak=AUX
 (The underlying form of the verb ‘speak’ is //çel//, but it changes to /çet/ before the auxiliary verb /=tsək/)
- (40) hep=zək ‘[Somebody] came/went (HON)’
 come/go:HON=AUX
- (41) zək=zək ‘[Somebody] made [someone] do’
 make [someone] do:PAST=AUX
- (42) htsem=zək ‘[Somebody] wrote’
 write=AUX
- (43) t^h on=zək ‘[Somebody] arrived’
 arrive=AUX
- (44) t^h oŋ=zək ‘[Somebody] drank’
 drink=AUX
- (45) ngor=zək ‘[Time] went by’
 go by=AUX
- (46) li=zək ‘[Somebody] did’
 do=AUX

3.2.3 Retroflex and /r/

Co-ordination particle //Ra//, conjunctions //Roŋ//, //Ra//

The conditions for the allomorphs of the co-ordination particle //Ra// are the same as for the conjunction //Roŋ// (‘adversative’) and the conjunction //Ra// (‘concessive, adversative’). Only the co-ordination particle //Ra// is shown in the following examples.

Table 11 Co-ordination particle //Ra//

| the final of the stem | allomorph | example |
|----------------------------------|-----------------|------------|
| /t/ (←//l//, //r//) //l/, /r/ | /=tə/ | (47), (48) |
| /n/ | /=nɕə/ or /=rə/ | (49) |
| /p/, /k/, /m/, /ŋ/, vowel | /=rə/ | (50)–(54) |

- (47) naptçet=tə / naptçel=rə ‘A loyal friend also’
 loyal friend=CO-ORD loyal friend=CO-ORD

(The underlying form of the noun ‘loyal friend’ is //naptɕel//, but it changes to /naptɕet/ before the co-ordination particle /=tʃa/. There is no difference between these two examples. The consultants allow both equally)

- (48) meɬ=tʃa tɕ^həra / mer=ra tɕ^həra ‘Butter and cheese’
 butter=CO-ORD cheese better=CO-ORD cheese

(The underlying form of the ‘butter’ is //mer//, but it changes to /meɬ/ before the co-ordination particle /=tʃa/. There is no difference between these two examples. The consultants allow both equally)

- (49) gigen=ndʌ ɬoma / gigen=ra ɬoma ‘A teacher and a student’
 teacher=CO-ORD student teacher=CO-ORD student

(There is no difference between these two examples. The consultants allow both equally)

- (50) tonɖəp=ra ŋa ‘Tonɖəp and I’
 PSN=CO-ORD 1SG

- (51) hjek=ra ‘A yak also’
 yak=CO-ORD

- (52) sonam=ra ‘Sonam also’
 PSN=CO-ORD

- (53) htakt^ha-zəŋ=ra ‘Mr. htakt^ha also’
 PSN-HON=CO-ORD

- (54) ɕatɕ^hoŋ gonpa=ra dihtsa gonpa ‘ɕatɕ^hoŋ temple and dihtsa temple’
 PLN temple=CO-ORD PLN temple

Conjunction //Rit^hats^ho// (//Ri//)

//Rit^hats^ho// (its abbreviated form is //Ri//) expresses ‘while~, when~’.

Table 12 Conjunction //Rit^hats^ho// (//Ri//)

| the final of the stem | allomorph | example |
|-----------------------|--|------------|
| /t/ (←//l//) | /=tʃit ^h ats ^h o/ (≠tʃi/) | (55) |
| /t/ (←//r//) | | (56) |
| /n/, /ŋ/ | /=ndʒit ^h ats ^h o/ (≠ndʒi/) or /=rit ^h ats ^h o/ (≠ri/) | (57), (58) |
| /p/, /k/, /m/, vowel | /=rit ^h ats ^h o/ (≠ri/) | (59)–(62) |

- (55) joɬ=tʃit^hats^ho ‘When existing’
 exist=CONJ

(The underlying form of the existential verb is //joɬ//, but it changes to /joɬ/ before the conjunction /=tʃit^hats^ho/)

- (56) k^hət=tʃit^hats^ho ‘When shouldering’
 shoulder=CONJ

(The underlying form of the verb ‘shoulder’ is //k^hər//, but it changes to /k^hət/ before the conjunction /=tʃit^hats^ho/)

- (57) ʎoma jən=ndʒitʰatsʰo / ʎoma jən=ritʰatsʰo ‘When being a student’
 student COP=CONJ student COP=CONJ
 (There is no difference between these two examples. The consultants allow both equally)
- (58) joŋ=ndʒitʰatsʰo / joŋ=ritʰatsʰo ‘When coming’
 come=CONJ come=CONJ
 (There is no difference between these two examples. The consultants allow both equally)
- (59) hep=ritʰatsʰo ‘When going/coming (HON)’
 go/come:HON=CONJ
- (60) ndək=ritʰatsʰo ‘When staying’
 stay:NPST=CONJ
- (61) ndzom=ritʰatsʰo ‘When gathering’
 gather=CONJ
- (62) ndzo=ritʰatsʰo ‘When going’
 go:NPST=CONJ

Conjunction //Rəŋkoŋŋa//

//Rəŋkoŋŋa// expresses ‘when just~’.

Table 13 Conjunction //Rəŋkoŋŋa//

| the final of the stem | allomorph | example |
|---------------------------|---------------|------------|
| /l/, /r/ | /=ʎəŋkoŋŋa/ | (63), (64) |
| /n/ | /=ndʒəŋkoŋŋa/ | (65) |
| /p/, /k/, /m/, /ŋ/, vowel | /=rəŋkoŋŋa/ | (66)–(70) |

- (63) joʎ=ʎəŋkoŋŋa ‘When [something] just existed’
 exist=CONJ
 (The underlying form of the existential verb is //jəʎ//, but it changes to /joʎ/ before the conjunction /=ʎəŋkoŋŋa/)
- (64) tsʰatʰ=ʎəŋkoŋŋa ‘When [something] just ended’
 end=CONJ
 (The underlying form of the verb ‘end’ is //tsʰar//, but it changes to /tsʰatʰ/ before the conjunction /=ʎəŋkoŋŋa/)
- (65) tʰon=ndʒəŋkoŋŋa ‘When [somebody] just arrived’
 arrive=CONJ
- (66) wap=rəŋkoŋŋa ‘When [something] just fell’
 fall:PAST=CONJ
- (67) htsok=rəŋkoŋŋa ‘When [somebody] just sat’
 sit=CONJ

- (77) çok=ra ‘Come!’
 come:IMP=SFP
- (78) hti=ra ‘Watch’
 watch:IMP=SFP

3.2.4 Stem-final consonant copy insertion

In an underlying form $//=V//$, a copy of the final consonant of a stem is inserted in front of the clitic under certain circumstances to form a surface $/=CV/$ (the examples are (79)–(82)). Sometimes $/C/$ of $/=CV/$ is not the same as the final consonant of the stem, but is partly assimilated into it (as in (83)). Otherwise, the $/=V/$ form follows a stem (the examples are (84) and (85)).

- (79) $//\text{çən}//$ + $//=i//$ > $/\text{çən=ni}/$ ‘[Somebody] gave, then’
 give:PAST =CONJ
- (80) $//\text{jɔŋ}//$ + $//=i//$ > $/\text{jɔŋ=ŋi}/$ ‘[Somebody] came, then’
 come =CONJ
- (81) $//\text{sonam}//$ + $//=a//$ > $/\text{sonam=ma}/$ ‘to Sonam’
 PSN =DAT
- (82) $//\text{naŋ}//$ + $//=a//$ > $/\text{naŋ=ŋa}/$ ‘to inside’
 inside =DAT
- (83) $//\text{t}^{\text{h}}\text{əp}//$ + $//=a//$ > $/\text{t}^{\text{h}}\text{əp=wa}/$ ‘[I/we] was/were able to do’
 able =AUX
- (84) $//\text{k}^{\text{h}}\text{or}//$ + $//=i//$ > $/\text{k}^{\text{h}}\text{or=i}/$ ‘[Somebody/something] turned, then’
 turn =CONJ
- (85) $//\text{go}//$ + $//=a//$ > $/\text{go=a}/$ ‘to the outside’
 door =DAT

The circumstances under which consonant copy insertion occurs vary from clitic to clitic. Four clitics (the conjugations $//=i//$, $//=a//$, the dative case marker $//=a//$ and the auxiliary verb $//=a//$) will be exemplified in what follows.

Conjunctions $//=i//$, $//=a//$

The conditions for the allomorphs of the conjunction $//=i//$ are the same as for conjunction $//=a//$. Only the conjunction $//=i//$ is shown in the following examples. Both $//=i//$ and $//=a//$ express ‘sequential actions, simultaneous actions’.

Table 15 Conjunction $//=i//$

| the final of the stem | allomorph | example |
|---|-----------|-----------|
| $/n/$ | $/=ni/$ | (86) |
| $/ŋ/$ | $/=ŋi/$ | (87) |
| $/w/$ ($\leftarrow //p//$), $/k/$, $/m/$, $/l/$, $/t/$, vowel | $/=i/$ | (88)–(93) |

- (86) t^hon=ni ‘[Somebody] arrived, then’
arrive=CONJ
- (87) s^hoŋ=ŋi ‘[Somebody] went, then’
go:PAST=CONJ
- (88) ndəw=i ‘[Something] finished up, then’
finish up=CONJ
(The underlying form of the verb ‘finish up’ is //ndəp//, but it changes to /ndəw/ before the conjunction /=i/)
- (89) dzək=i ‘[Somebody] ran, then’
run=CONJ
- (90) dem=i ‘[Somebody] knotted, then’
knot=CONJ
- (91) tɕ^her=i ‘[Somebody] carried [something], then’
carry=CONJ
- (92) tɕ^hel=i ‘[Somebody] brought along [a person], then’
bring along [a person]=CONJ
- (93) hti=i ‘[Somebody] watched, then’
watch:PAST=CONJ

Dative case marker //a/

The dative case marker is used for expressing ‘recipient’ or ‘direction’. Only after the vowel /o/, //a/ sometimes changes to /o/ (as in example (104)), but the conditions under which /=o/ appears are not fully understood. Otherwise, the vowel of //a/ is /a/.

Table 16 Dative case marker //a/

| the final of the stem | allomorph | example |
|------------------------------|---------------|--------------|
| /p/ /w/ (← //p//) | /=wa/ /=a/ | (94) |
| /k/ | /=ka/ or /=a/ | (95) |
| /m/ | /=ma/ or /=a/ | (96) |
| /n/ | /=na/ | (97) |
| /ŋ/ | /=ŋa/ | (98) |
| //l/, /r/, vowels except /o/ | /=a/ | (99)–(102) |
| /o/ | /=a/, /=o/ | (103), (104) |

- (94) tonɕəp=wa / tonɕəw=a ‘to Tonɕəp’
PSN=DAT PSN=DAT

(Mr. *bLo gros rGya mtsho* allows both examples, but Mr. *A lag rGya ye* uses only ‘tonɕəw=a’. In /tonɕəw=a/, //p// of the underlying form //tonɕəp// (a personal name) changes to /w/ before the dative case marker /=a/)

- (95) htɕək=ka / htɕək=a ‘to one (person, thing)’
 1=DAT 1=DAT
 (Mr. *bLo gros rGya mtsho* allows both examples, but Mr. *A lag rGya ye* uses only ‘htɕək=a’. There is no difference between these two examples.)
- (96) sem=ma / sem=a ‘to a heart’
 heart=DAT heart=DAT
 (Mr. *bLo gros rGya mtsho* allows both examples, but Mr. *A lag rGya ye* uses only ‘sem=a’. There is no difference between these two examples.)
- (97) s^hemtɕen=na ‘to beings’
 beings=DAT
- (98) taŋ=ŋa ‘to the Communist Party’
 Communist Party:Ch.=DAT
- (99) t^hemtɕel=a ‘to all’
 all=DAT
- (100) mar=a ‘downstairs’
 down=DAT
- (101) ŋa=a ‘to me’
 1SG=DAT
- (102) rənpotɕ^he=a ‘to a rinpoche’
 rinpoche=DAT
- (103) ɕimo=a ‘to a girl’
 girl=DAT
- (104) tɕ^ho=o ‘to you’
 2SG=DAT

AUX //a//

The auxiliary verb //a// expresses ‘events concerning the speaker’.

Table 17 Auxiliary verb //a//

| the final of the stem | allomorph | example |
|---------------------------|-----------|-------------|
| /p/ | /=wa/ | (105) |
| /w/ (←-/p/) | /=a/ | (105) |
| /n/ | /=na/ | (106) |
| /ŋ/ | /=ŋa/ | (107) |
| /k/, /m/, /l/, /r/, vowel | /=a/ | (108)–(111) |

- (105) t^həp=wa / t^həw=a ‘[I/we] was/were able to do’
 able=AUX able=AUX
 (The underlying form of the verb ‘able’ is //t^həp//, but it changes to /t^həw/ before the auxiliary verb /a/. There is no difference between these two

- examples. The consultants allow both equally)
- (106) t^hon=na ‘[I/we] arrived’
arrive=AUX
- (107) s^honɲ=ŋa ‘[I/we] went’
go:PAST=AUX
- (108) ndək=a ‘[I/we] will stay’
stay:NPST=AUX
- (109) htsem=a ‘[I/we] wrote’
write=AUX
- (110) tɕ^her=a ‘[I/we] carried [something]’
carry=AUX
- (111) hti=a ‘[I/we] watched’
watch:PAST=AUX

4 Alternations of stems

When the final consonant of the underlying stem is one of //p//, //l// or //r//, these consonants may be (partly) assimilated into the initial consonant of the suffix or the clitic as in (112).

- (112) //p// → /t/, /k/, /w/
//l// → /t/, /tʃ/, /k/, /s/
//r// → /tʃ/

The alternations of stems are less predictable than those of suffixes and clitics. Even in the same circumstances, a stem sometimes changes and sometimes does not. Examples of each alternation are listed as follows (4.1, 4.2, 4.3).

4.1 The final consonant //p// of stems

//p// changes to /t/ before /tɕ/ (as in example (113)), /k/ before /k/ (as in example (114)) and /w/ before /a/, /i/ (as in examples (115), (116)).

- (113) nbet=tɕi ‘[I/we] will go down’
fall:NPST=AUX
(The verb ‘fall’ is /nbep/, but can change to /nbet/ before the auxiliary verb /tɕi/) (=15))
- (114) nbek=kə ‘[It] often rains’
fall:NPST=AUX
(The verb ‘fall’ is /nbep/, but changes to /nbek/ before /kə/) (=23))
- (115) tonɖəw=a ‘to Tonɖəp’
PSN=DAT

5 Conclusion

This paper is a first attempt to provide a systematic description of the morpho-phonological alternation rules of suffixes, clitics and stems in Amdo Tibetan. The following two rules were demonstrated:

· Alternation rules of suffixes and clitics (section 3)

- Patterns of allomorphs (3.1); 1. voiced and unvoiced, 2. fricative and affricate, 3. retroflex and /r/, 4. stem-final consonant copy insertion.
- Conditions for alternations (3.2); the conditions under which each allomorph appears vary even with the same pattern of suffixes or clitics.

· Alternation rules of the stems (section 4)

As mentioned at the outset of section 4, even under the same circumstances a stem sometimes changes and sometimes does not. It is difficult at the present time to fully explain the conditions under which these alternations occur. It is noteworthy that the alternations do not follow the sonority hierarchy.

- //p// → /t/ (before /tʃ/), /k/ (before /k/), /w/ (before /a/, /i/)
- //l// → /t/ (before /ts/, /tʃ/), /tʃ/ (before /t/), /k/ (before /k/), /s/ (before /s/)
- //r// → /tʃ/ (before /tʃ/)

By separating these two sets of rules (alternation rules of suffixes and clitics, alternation rules of stems), the morphophonological rules of Amdo Tibetan could be clarified more easily. Although this study presents data only from the Amdo Tibetan spoken in Gonghe County of Qinghai province, the rules identified here will be of help in describing other varieties of Amdo Tibetan. As remarked in the introduction, the alternation rules of suffixes and clitics vary between WT and Amdo Tibetan. Furthermore, stems in WT do not change: stem alternations are peculiar to Amdo Tibetan. This might relate to the low predictability of the stem alternations. In order to trace the developmental process of Tibetan from a morphophonological perspective, a comparison with WT or the other Tibetan languages remains a topic for further study.

Abbreviation

| | |
|-------|------------------------------------|
| - | Affix boundary |
| = | Clitic boundary |
| / / | Underlying phonemic representation |
| // // | Surface phonemic representation |

| | |
|--------|-------------------------|
| 1 | First person |
| 2 | Second person |
| 3 | Third person |
| AUX | Auxiliary verb |
| C | Consonant |
| Ch. | Chinese |
| CONJ | Conjunction |
| CO-ORD | Co-ordination particle |
| COP | Copula |
| DAT | Dative case marker |
| ERG | Ergative |
| HON | Honorifics |
| IMP | Imperative |
| NMLZ | Nominalizer |
| NPST | Non-past |
| PAST | Past |
| PL | Plural |
| PLN | Place name |
| PSN | Person name |
| SFP | Sentence-final particle |
| SG | Singular |
| V | Vowel |

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Notes

- 1) Both suffixes and clitics need hosts to depend on. Zwicky & Pullum (1983) said 'Clitics can exhibit a low degree of selection with respect to their hosts, while affixes exhibit a high degree of selection with respect to their stems'. Based on Zwicky & Pullum (1983) and Zwicky (1985), I set up two tests for distinguishing between suffixes and clitics: (a) a clitic can follow several parts of speech, (b) a suffix does not follow a clitic. By these tests, case markers, a co-ordination particle, auxiliary verbs, sentence final particles are clitics, while nominalizers are suffixes. The clitics found in Amdo Tibetan are all enclitics.
- 2) The final consonant //V/ of //Gəjɔ// does not appear in sentence-final position.
- 3) It is called *sum cu pa* in WT. DeLancey (2003: 258) said '[S]everal grammatical morphemes, pre-

- sumably clitics, show alternations in the initial consonant depending on the final of the preceding word'. For instance, the genitive case marker *gi* follows velars *g, ng; kyi* following obstruents *d, b, s; gyi* follows sonorants *n, m, r, l; 'i* follows vowels ('*i* is written as part of the preceding syllable).
- 4) Haller (2004: 31-34) in particular considerably described the alternation rules of suffixes and clitics.
 - 5) The final consonant //l/ of //Dzirel// does not appear in sentence-final position.
 - 6) Allomorphs of //Zək// are /zək/ and /tsək/, thus it also belongs to [1] 'voiced and unvoiced' pattern.
 - 7) Shirai (2007: 140) divided 'conjunct/disjunct' patterns into two types: (1) the "person-restricted" type like that of Newar and (2) the "point-of-view" type like that of modern Tibetan. In modern Tibetan, as Shirai (2007: 140) noted 'the conjunct form is chosen if the speaker is a conscious participant in the process of the event—regardless of the person of the subject'.

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