Chapter 3

Phonology

3.1. Phonemic Inventory

The phonemes of Anal consist of twenty three (23) consonantal phonemes: six (6) vowels and two (2) supra-segmental phonemes (i.e., two tones as high and low). The phonemes of the language are illustrated in the following sections:

3.1.1. Vowels

Anal has six (6) vowel phonemes, i.e. */i, e, ə, a, o* and *u/*. These vowels can be categorized into three levels of tongue height: high, mid and low, a three way contrast of front, central and back are also distinguished in terms of the parts of the tongue raised. The vowel phonemes of Anal are illustrated in the following table:

	Front	Central	Back
High	i		u
Mid	e	ə	o
Low		a	

Table 2: Vowel phonemes in Anal

3.1.2. Consonants

There are twenty three (23) consonantal phonemes in Anal. According to their place of articulation, consonants can be categorized into bilabial, labio-dental, alveolar, palatal, velar and glottal. They can be further categorized into seven types: stops, affricates, fricatives, nasals, rhotics, laterals and approximants and in terms of their manner of articulation. Anal language has 23 (twenty three) consonantal phonemes, ***/p, b, t, d, k, p^h, t^h, k^h, č, ǰ, s, h, m̩, n̩, hŋ, m, n, ŋ, l̩, l, r̩, r, v/***. All the consonantal phonemes occur word initially and medially. However, some consonants like voiced nasals, ***/m, n, ŋ/***, voiced lateral ***/l/*** and voiced rhotic ***/r/*** can occur all the three positions of the word. The consonantal phonemes of Anal are illustrated below in the following table:

		Bilabial		Labio-dental		Alveolar		Palatal		Velar		Glottal	
		Vl.	Vd.	Vl.	Vd.	Vl.	Vd.	Vl.	Vd.	Vl.	Vd.	Vl.	Vd.
Stops	Unaspirated	p	b			t	d			k			
	Aspirated	p^h				t^h				k^h			
Affricates								č	ǰ				
Fricatives						s						h	
Nasals		ṃ	m			ṇ	n			hŋ	ŋ		
Laterals						ḷ	l						
Rhotics						ṛ	r						
Approximant					ʋ								

Table 3: Consonantal phonemes in Anal

From the above illustration, it is stated that Anal has eight stops consisting of unaspirated voiceless /*p, t, k*/, aspirated voiceless stops /p^h, t^h, k^h/ and unaspirated voiced /*b, d*/ which lack their aspirated counterpart /b^h/ and /d^h/. The language lacks the aspirated voiced stop /g^h/ and unaspirated voiced stop /g/. Like many other Tibeto-Burman languages, aspiration is phonemic in the language and the voicing is also one of distinctive features in the case of consonantal phonemes in Anal. There are six nasal sounds i.e., the voiced /*m, n,* and *ŋ*/ and the voiceless /*ṃ, ṇ hŋ*/, the voiced nasals can occur in all the three positions viz., initially, medially and finally however, voiceless nasals can occur initial and medial positions. Other consonant sounds which include in the language are affricates /*č, ǰ*/, fricatives /*s, h*/, laterals /*ḷ, l*/ and rhotics /*ṛ, r*/. The voiced rhotic /*r*/ and voiced lateral /*l*/ can occur in all the three positions of words. It is to be noted that sometimes /ǰ/ freely varies with /y/ in Anal as likely happening in the dialects of Manipuri. The absence of /*z*/ is very common in Tibeto-Burman languages of Northeast India and it reflects in the phonological structure of Anal. Finally Anal has the voiced labio-dental approximant /*ʋ*/ as well.

3.2. Tones

Like the majority of Tibeto-Burman languages, Anal is a tone language in which a change in the pitch of the syllable corresponds to a change in its meaning. The number of contrasting tones in Anal is two i.e., Anal has two contrastive lexical tones.

(i) Low: the tension of the vocal cords in the production of a syllable is relatively low, causing a low pitch. The low tone is unmarked.

(ii) High: the tension of the vocal cords in the production of a syllable is relatively high, causing a high pitch. It is represented by the symbol / ′/.

High	Low
′	unmarked

Table No. 4: Tones in Anal

/bu'/	'rice'
/bu/	'shawl'
/k^hu'/	'rain'
/k^hu/	'lake'
/du'/	'carpet'
/du/	'water'
/piče'/	'an object to shake rice'
/piče/	'herd'
/ṛiŋtu'n/	'long life'
/ṛiŋtun/	'harmonious life'
/sə'l /	'cow'
/səl /	'arrow'
/p^hu'ŋ/	'race'
/p^huŋ/	'gun'
/ru'/	'bamboo'
/ru/	'bone'

3.3. Contrasting pairs

The contrasting pairs of vowels and consonants in the language are described in the following sections:

3.3.1. Vowels

The six (6) vowel phonemes of Anal are established on the basis of the minimal pairs which are illustrated in the following examples:

/a/ vs. /ə/ :

/haldu/	'alluminium liquid'
/həldu/	'egg'
/lam/	'group'
/ləm/	'land'

/a/ vs. /i/ :

/pa/	'father'
/pi/	'grandmother'
/ado/	'spear'
/ido/	'white'

/a/ vs. /o/ :

/pa/	'father'
/po/	'belly'
/ḷa/	'song'
/ḷo/	'friend'

/i/ vs. /e/ :

/ṃi/	'fire'
/ṃe/	'face'
/pəli/	'tongue'
/pəle/	'navel'

/o/ vs. /u/ :

/ǰo/	'sheep'
/ǰu/	'bear'
/som/	'ten'
/sum/	'mortar'

/i/ vs. /u/ :

/ni/	'day'
/nu/	'mother'
/ri/	'flower'
/ru/	'bone'

/o/ vs. /i/ :

/no/	'law'
/ni/	'day'
/po/	'belly'
/pi/	'grandmother'

/a/ vs. /u/ :

/pa/	'father'
/pu/	'grandfather'
/isa/	'be hot'
/isu/	'be treatment'

3.3.2. Consonants

Anal has twenty three (23) consonantal phonemes which are established on the basis of the following minimal pairs. Consider the given examples:

/p/ vs. /b/ :

/pu/	'grandfather'
/bu/	'rice'
/puŋ/	'hour'
/buŋ/	'mountain'

/t/ vs. /d/ :

/ito/	'be rotten'
/ido/	'white'
/itəl/	'be lazy'
/idəl/	'be old'

/b/ vs. /d/ :

/bu/	'hut'
/du/	'water'
/ite/	'to paint'
/ide/	'be cool'

/č/ vs. /ǰ/ :

/ičoŋ/	'left portion'
/iǰoŋ/	'darkness'
/ičə/	'be tire'
/iǰə/	'be stingy'

/s/ vs. /ǰ/ :

/isu/	'treatment'
/iǰu/	'to adopt'
/isa/	'shacking'
/iǰa/	'to blow wind'

/p/ vs. /p^h/ :

/puŋ/	'hour'
/p^{h}uŋ/	'gun'
/ipa/	'to read'
/ip^{h}a/	'to get'
/ipu/	'to borrow'
/ip^{h}u/	'to breathe'

/t/ vs. /t^h/ :

/ətə/	'a kind of weaving tool'
/ət^hə/	'wages'
/itəm/	'to study'
/it^həm/	'to trust'

/k/ vs. /k^h/ :

/ikuŋ/	'to bend'
/ik^huŋ/	'be baron'
/kel/	'goat'
/k^hel/	'greater or better'

/č/ vs. /s/ :

/čom/	'spoon'
/som/	'ten'
/ičə/	'be stingy'
/isə/	'to shave'

/m/ vs. /n/ :

/imol/	'to blunt'
/inol/	'to repentance'
/mo/	'elder son'
/no/	'law'
/itom/	'be lesser amount'
/iton/	'to roam'

/m/ vs. /ŋ/ :

/imol/	'to blunt'
/iŋol/	'be hopeless'
/mo/	'elder son'
/ŋo/	'fishing by blocking water'

/itom/	'lesser amount'
/itoŋ/	'hit to the body'

/n/ vs. /ŋ/ :

/inol/	'to repentance'
/iŋol/	'be hopeless'
/no/	'law'
/ŋo/	'fishing by blocking water'
/iton/	'to roam'
/itoŋ/	'hit to the body'

/l/ vs. /r/ :

/lu/	'friend'
/ru/	'bone'
/li/	'deep water'
/ri/	'flower'

/ṃ/ vs. /m/ :

/ṃol/	'body hair'
/mol/	'hill'
/ṃi/	'fire'
/mi/	'human'
/iṃəl/	'be forgetful'
/iməl/	'be fat'

/ṇ/ vs. /n/ :

/ṇəl/	'lip'
/nəl/	'dysentry'
/piṇem/	'console'
/pinem/	'soft'

/iṇol/	'to block'
/inol/	'unsharp'

/hŋ/ vs. /ŋ/ :

/hŋa/	'fish'
/ŋa/	'jock'
/ihŋa/	'gap'
/iŋa/	'support'

/ḷ/ vs. /l/ :

/ḷi/	'field'
/li/	'deep (in water)'
/ḷəm/	'road'
/ləm/	'land'
/iḷi/	'to throw out'
/ili/	'to fall down'

/ṛ/ vs. /r/:

/ṛ/	'louse'
/ri/	'flower'
/iṛi/	'heavy'
/iri/	'standing'
/iṛiŋ/	'alive'
/iriŋ/	'available'

3.4. Distribution of Phonemes

3.4.1. Vowels

In Anal language, the six (6) vowel phonemes can occur in all the three positions in different syllabic structures. It means */i/, /e/, /ə/, /a/, /u/, /o/* can occur initial, medial and final positions. The distribution of these six vowel phonemes are discussed in the following with examples:

Occurrence of /*i*/:

Initial position

/isa/	'be hot'
/iko/	'be patient'
/iǰəŋ/	'darkness'
/itoŋ/	'echo'
/ide/	'be cool'

Medial position

/t^{h}iŋ/	'wood'
/t^{h}in/	'milk'
/pəlim/	'cup'
/ṛin/	'new'
/lisəl/	'squirrel'

Final position

/ni/	'day'
/ṃi/	'eye'
/vi/	'dog'
/pət^{h}i/	'fly'
/vaki/	'horn'

Occurrence of /*e*/:

Initial position

/evum/	'crab'
/elhom/	'dung-beetle'
/eṛiŋ/	'alive'

Medial position

/peŋ/	'horizon'
/kel/	'goat'
/kekuŋ/	'prawn'
/hepoŋ/	'guava'
/pemin/	'story'

Final position

/əde/	'dew'
/pəse/	'elephant'
/təŋk^{h}e/	'lizard'
/molpe/	'Wednesday'
/ǰote/	'cat'

Occurrence of /*ə*/:

Initial position

/ədiŋ/	'lake'
/ətrəl/	'hail'
/əli/	'common squirrel'
/əŋe/	'worm'
/əki/	'horn'

Medial position

/pəsu/	'mouse'
/səkuŋ/	'rhinoceros'
/ŋəse/	'sparrow'
/pəha/	'bird'

Final position

/ənə/	'mouse'
/posə/	'ulcer'
/pisə/	'deep'
/it^{h}ə/	'dead'
/čək^{h}ə/	'buck'

Occurrence of /*a*/:

Initial position

/aṛu/	'poison'
/at^{h}un/	'afternoon'
/arəm/	'September'
/alo/	'peacock'

Medial position

/kaŋ/	'knife'
/san/	'night'
/lam/	'herd'
/dam/	'ground'
/pəkan/	'plate'

Final position

/ha/	'teeth'
/ǰənha/	'tobacco'
/pəla/	'cotton'
/koŋčəna/	'belt'
/piǰa/	'broad'

Occurrence of /*u*/:

Initial position

/umle/	'disease'
/usompa/	'spider'
/usə/	'hiccup'
/upa/	'elder brother'
/utro/	'frog'

Medial position

/but^{h}rə/	'star'
/kum/	'year'
/kolum/	'summer'
/čul/	'rainy season'
/pərul/	'snake'

Final position

/iǰu/	'adoption'
/pu/	'grandfather'
/həldu/	'egg'
/pət^{h}ru/	'dove'
/du/	'water'

Occurrence of /o/:

Initial position

/ot^{h}e/	'day after tomorrow'
/opidəl/	'eclipse'
/oṛəŋma/	'very'

Medial position

/nedoŋ/	'baby'
/itol/	'similar'
/som/	'ten'
/koŋ/	'skin'
/toku/	'tortoise'

Final position

/no/	'law'
/koŋlo/	'round'
/itro/	'be rotten'
/iso/	'far'
/ito/	'be late'
/əmo/	'child'

3.4.2. Consonants

All consonant phonemes cannot occur in the initial, medial and final positions of a word. Some of the phonemes */p, p^h, b, t, t^h, d, k, k^h, č, ǰ, s, h, ṃ, ṇ, hŋ, ḷ, ṛ, v/* can occur only in the initial and medial positions but not in the final position. Out of the twenty three consonants, voiced nasals */m, n, ŋ/*, voiced rhotic */r/* and voiced lateral */l/* can occur in all the three positions. They are given in the following:

Occurrence of */p/*:

Initial position

/panti/	'ferns'
/pəla/	'cotton'
/pətre/	'thunder'
/pəha/	'bird'

Medial position

/ədiŋpi/	'sea'
/dupom/	'wave'
/kupal/	'ring'

Occurrence of /p^h/:

Initial position

/p^he/	'valley'
/p^hul/	'lung'
/p^həlbi/	'winter'

Medial position

/čep^{h}e/	'buffalo'
/čəp^{h}ol/	'June'
/čul/	'rainy season'

Occurrence of /b/:

Initial position

/bu/	'rice'
/bačo/	'bat'
/balṛa/	'yam'

Medial position

/ibol/	'be dirt'
/əbəŋ/	'neck'
/rebal/	'sweet potato'

Occurrence of /t/:

Initial position

/tom/	'bear'
/taŋk^{h}e/	'chameleon'
/tebe/	'scarf'

Medial position

/mətol/	'mole'
/itoŋ/	'echo'
/mətu/	'bath-sponge'

Occurrence of /t^h/:

Initial position

/t^həl/	'iron'
/t^hiŋ/	'wood'
/t^himbu/	'book'

Medial position

/it^{h}o/	'death'
/pət^{h}im/	'sweat'
/ət^{h}un/	'noon'

Occurrence of /d/:

Initial position

/dolti/	'earth'
/duhəl/	'heron'
/don/	'beast'
/dukoŋ/	'river'

Medial position

/ədə/	'nerve'
/əde/	'dew'
/pədu/	'cloud'

Occurrence of /k/:

Initial position

/koŋ/	'skin'
/kelsə/	'mutton'
/koŋbul/	'waist'
/kaŋ/	'knife'

Medial position

/iko/	'be ill'
/əku/	'soldier'
/vəkəm/	'breadth'

Occurrence of /k^h/:

Initial occurrence

/k^hol/	'cave'
/k^hu/	'rain'
/k^huhu/	'shoe'
/k^hočo/	'loose character'

Medial occurrence

/ək^he/	'one'
/pək^ha/	'chin'
/sok^hal/	'waterfall'

Occurrence of /ṃ/:

Initial position

/ṃe/	'face'
/ṃəl/	'dream'
/ṃol/	'hair'
/ṃila/	'pine tree'

Medial position

/iṃəl/	'be absent minded'
/əṃən/	'joy'
/əṃaŋ/	'jungle'

Occurrence of /m/:

Initial position

/mol/	'hill'
/məhosa/	'nature'
/mobol/	'banana tree'

Medial position

/simbu/	'owl'
/iməl/	'fat'
/səmhol/	'fur'

Final position

/pitum/	'slope'
/dam/	'ground'
/sum/	'mortar'

Occurrence of *[ɲ]*:

Initial position

/ɲəl/	'mouth'
/ɲom/	'dung'
/ɲoŋko/	'boundary of field'

Medial position

/piɲe/	'pressed out'
/tʰiŋɲə/	'leaf'
/iɲol/	'to touch'

Occurrence of /*n*/:

Initial position

/ni/	'day'
/nehol/	'pregnant'
/nete/	'woodpecker'
/nedoŋ/	'baby'

Medial position

/pante/	'mosses'
/sənem/	'sand'
/inlu/	'relatives'

Final position

/ən/	'curry'
/isən/	'be small'
/k^{h}ulon/	'yard'
/at^{h}un/	'afternoon'

Occurrence of /*hŋ*/:

Initial position

/hŋa/	'fish'

Medial position

/čəhŋəl/	'wild cat'
/ihŋa/	'rice cutting'

Occurrence of */ŋ/*:

Initial position

/ŋe/	'worm'
/ŋanu/	'duck'
/*ŋəse*/	'sparrow'

Medial position

/paŋsə/	'body'
/əŋe/	'caterpillar'
/əŋol/	'epilepsy'
/koŋbul/	'waist'
/iŋa/	'gap'

Final position

/əpəŋ/	'back'
/imuŋ/	'be short'
/ibəŋ/	'be lean'
/t^{h}uŋ/	'liver'

Occurrence of *[č]*:

Initial position

[čəpə]	'nephew'
[čəp^{h}ol]	'may month'
[čəpal]	'Malabar nut'

Medial position

[bačo]	'bat'
[pəčəl]	'forehead'
[ičəl]	'be busy'

Occurrence of *[ǰ]*:

Initial position

[ǰoŋ ~ yoŋ]	'monkey'
[ǰote ~ yote]	'cat'
[ǰaŋvun~ yaŋvun]	'soldier'

Medial position

[niŋǰatrul]	'mimosa pudica'
[iǰu]	'adoption'
[piǰa]	'broad'

Occurrence of *[s]*:

Initial position

[səmnal]	'lady's finger'
[sanri]	'duranta'
[som]	'ten'

Medial position

[misemni]	'friday'
[pəsun]	'urine'
[usompə]	'spider'

Occurrence of *[h]*:

Initial position

[haldu]	'egg'
[hesan]	'jug'
[hit^{h}a]	'medicine'

Medial position

[belhe]	'butterfly'
[k^{h}elhe]	'cockroach'
[inhum]	'wet'

Occurrence of [ḷ]:

Initial position

[ḷuŋ]	'stone'
[ḷim]	'shadow'
[ḷola]	'revenge'
[ḷer]	'pour'

Medial position

[piḷam]	'pick up'
[piḷom]	'animal road'
[iḷi]	'to throw out'
[naḷa]	'maiden'

Occurrence of *[l]*:

Initial position

[lon]	'hillock'
[luče]	'head'
[lisal]	'squirrel'

Medial position

[pale]	'navel'
[pelhe]	'butterfly'

Final position

/kʰol/	'cave'
/bel/	'pot'
/pərul/	'snake'

Occurrence of /ṛ/:

Initial position

/ṛa/	'neck'
/ṛu/	'rope'
/ṛin/	'new'
/*ṛotʰu*/	'fever'

Medial position

/iṛa/	'to clean'
/iṛi/	'be heavy'
/aṛu/	'poison'
/piṛa/	'sharp'
/piṛeŋ/	'loud'
/niŋṛal/	'thirst'

Occurrence of /r/:

Initial position

/runu/	'leopard'
/rure/	'skeleton'
/ri/	'flower'

Medial position

/kerso/	'wolf'
/neram/	'infant'
/ərol/	'throat'

Final position

/əvar/	light'
/ənivar/	'sunshine'

Occurrence of /*v*/:

Initial position

/vi/	'dog'
/vaki/	'horn'
/vep^{h}ol/	'dust'

Medial position

/əvi/	'muscle'
/əvar/	'light'
/pəvan/	'sky'
/evum/	'crab'
/treve/	'cyclone'

3.5. Description of Consonants

There are three places of articulation in stops and nasals, and two for fricatives. Likewise, there is one place of articulation for affricates, laterals, approximants and rhotics. The language has voiced and voiceless counterparts of nasals, laterals and rhotics. All the consonants listed here are initial consonants.

3.5.1. Stops

3.5.1.1. Bilabial stops

In Anal, there are three bilabial stop consonants which have three distinctive voicing types, i.e., the voiceless unaspirated bilabial stop */p/*, the voiceless aspirated bilabial stop */p^h/* and the voiced bilabial stop */b/*. Among the three bilabial stop consonants, /*p*/ can precede all the six vowels /*i, e, ə, a, o,* and *u*/. However, /*p^h*/ precedes the five vowels /*i, e, ə, o* and *u*/ and /*b*/ precedes vowels /*i, e, a, o* and *u*/ as can be illustrated in the following examples:

/*p*/:

/pi/	'grandmother'
/pelhe/	'butterfly'
/pədu/	'cloud'
/pa/	'father'
/po/	'belly'
/pu/	'grandfather'

/p^h/:

/$p^h int^h rə$/	'wind'
/$p^h e$/	'valley'
/p^həlbi/	'winter'
/$p^h o$/	'fame'
/$p^h uŋ$/	'race'

/*b*/:

/bilim/	'blister'
/bel/	'pot'
/bačo/	'bat'
/bol/	'blessing'
/bu/	'rice'

3.5.1.2. Alveolar stops

Like bilabial stops, alveolar stops also have three voicing types distinguished as voiceless unaspirated alveolar stop */t/,* voiceless aspirated alveolar stop /t^h/ and voiced alveolar stop */d/*. The voiceless unaspirated alveolar stop */t/* and voiceless aspirated alveolar stop /t^h/ can precedes the same vowels */i, e, ə, o,* and *u*/. However, the voiced alveolar stop */d/* can precedes all the six vowels */i, e, ə, a, o,* and *u/*. Consider the following examples:

/*t*/:

/tiŋnal/	'earthworm'
/tebe/	'scarf'
/təri/	'eight'
/toku/	'tortoise'
/tusun/	'beak/bill'

/t^h/:

/t^hin/	'milk'
/t^heŋsum/	'grinding stone'
/t^hərp^{h}u/	'nerve'
/t^hove/	'soul'
/t^huŋ/	'liver'

/*d*/:

/dilp^{h}um/	'dhoti'
/delhim/	'shade'
/dəŋḷe/	'necklace'
/dam/	'ground'
/dolti/	'earth'
/dupom/	'wave'

3.5.1.3. Velar stops

The velar stops have only two distinctive voicing types. They are voiceless unaspirated velar stop /*k*/ and voiceless aspirated velar stop */k^h/*. Out of the six vowels which are found in Anal, both /*k*/ and /*k^h*/ precedes five vowels each. /*k*/ precedes vowels */i, e, a, o,* and *u/* whereas */k^h/* precedes the vowels */i, e, ə, o* and *u*/ as can be illustrated in the following examples:

/*k*/:

/kisin/	'fox'
/kersə/	'wolf'
/kaŋ/	'knife'
/koŋlo/	'round'
/kulu/	'black monkey'

/*k^h*/:

/k^{h}ik^{h}i/	'elder sister'
/k^{h}esul/	'grasshopper'
/k^{h}əm/	'bank'
/k^{h}ol/	'cave'
/k^{h}ulon/	'yard'

3.5.2. Affricates

3.5.2.1. Palatal affricates

There are two palatal affricates in Anal. They are distinguished as voiceless unaspirated palatal */č/* and voiced unaspirated palatal */ǰ/*. */č/* and */ǰ/* precedes all the six vowels */i, ə, a, e, o,* and *u/*. Consider the following examples:

/*č*/:

/čini/	'sugar'
/čədu/	'tea'
/čep^{h}ol/	'May'
/čakul-kəpo/	'popcorn'
/čolel/	'leech'
/čul/	'rainy season'

/*ǰ*/:

/ǰimǰə/	'mist'
/ǰəŋ/	'morning'
/ǰam/	'flour'
/ǰeǰu/	'choosy'
/ǰo/	'sheep'
/ǰu/	'wine'

3.5.3 Fricatives

3.5.3.1. Alveolar fricatives

In Anal, there is only one voiceless unaspirated alveolar fricative */s/*. It precedes all the six vowels which are found in Anal, i.e., */i, e, ə, a, o,* and *u/*.They are illustrated in the following with examples:

/*s*/:

/simbu/	'owl'
/selu/	'gooseberry'
/səmhol/	'fur'
/san/	'night'
/soldoŋ/	'youth'
/sumt^{h}um/	'thirty'

3.5.3.2. Glottal fricative

The only glottal fricative found in Anal is */h/* which is distinguished as voiceless unaspirated glottal. The phoneme */h/* precede only five vowels out of the six vowels found in Anal i.e., */i, e, ə, a* and *u /*.

/*h*/:

/hit^{h}a/	'medicine'
/hesən/	'jug'
/həldu/	'egg'
/ha/	'teeth'
/humpi/	'lion'

3.5.4. Nasals

3.5.4.1. Bilabial nasals

There are six nasals in Anal out of these two are bilabial nasals. They distinguish voicing types in two manners i.e., voiceless unaspirated */ṃ/* and voiced unaspirated */m/*. */ṃ/* can precede all the six vowels */i, e, ə, a, o* and *u/* whereas /m/ precedes five vowels viz. */i, e, ə, o* and *u /* as can be seen in the following examples:

/*ṃ*/:

/ṃi/	'eye'
/ṃe/	'face'
/ṃəl/	'dream'
/ṃaldu/	'before meal'
/ṃol/	'body hair'
/ṃu/	'smell'

/*m*/:

/minuŋ/	'work of men'
/meŋkə/	'tame'
/mənepa/	'servant'
/močuŋ/	'yak'
/muŋsom/	'ten piece'

3.5.4.2. Alveolar nasals

Anal has two alveolar nasals, voiceless unaspirated /*ṇ*/ and voiced unaspirated /*n*/. The voiceless unaspirated nasal /*ṇ*/ precedes the vowels /*i, ə, a, o* and *u*/ and /*n*/ precedes the vowels */i, e, ə, o* and *u/*. The only difference is that */ṇ/* precedes all the five vowels except vowel /*e*/ whereas /*n*/ cann't precedes vowel */a/*. Examples are shown in the following:

/*ṇ*/:

/ṇiŋkol/	'mouth'
/ṇəl/	'nose'
/ṇal/	'nose'
/ṇol/	'block'
/ṇuŋsumi/	'wearing dress untidily'

/*n*/:

/niŋt^{h}i/	'worry'
/neram/	'newly born baby'
/nəli/	'to command'
/nolkə/	'shout'
/nuŋ/	'work'

3.5.4.3. Velar nasals

According to their voicing types, velar nasals are classified into two types. They are voiceless unaspirated nasal /*hŋ*/ and voiced unaspirated nasal /*ŋ*/. The voiceless velar nasal /hŋ/ precede the few vowels only as /*a*/ and voiced nasal precedes the vowels /*ə,e, a* and *o*/:

/*hŋ*/ :

/*hŋarəlčə*/	'kingfisher'

/*ŋ*/ :

/*ŋəse/*	'sparrow'
/*ŋe*/	'worm'
/*ŋa/*	'joke'
/*ŋo/*	'dam'

3.5.5. Laterals

3.5.5.1. Alveolar laterals

There are voiceless */ḷ/* and voiced */l/* alveolar lateral in Anal. Voiceless alveolar lateral */ḷ/* and voiced alveolar lateral /l/ can precedes all the six vowels */i, e, ə, a, o* and *u/*. It can be seen in the following illustrated examples:

/ḷ/ :

/ḷi/	'field'
/*ḷe*/	'pour'
/ḷəm/	'road'
/ḷa/	'song'
/ḷola/	'revenge'
/ḷuŋ/	'stone'

/*l*/ :

/lirəm/	'person indebted'
/leliŋ/	'deep area in river'
/ləhu/	'ditch'
/laŋləm/	'accidentally'
/lončə/	'to go out'
/lu/	'friend'

3.5.6. Rhotics

3.5.6.1. Alveolar rhotics

Alveolar rhotics have two voicing distinctions namely voiceless unaspirated rhotic */ṛ/* and voiced unaspirated rhotic */r/*. The voiceless unaspirated */ṛ/* can precede the vowels */i, ə, a, o* and *u/* whereas the voiced unaspirated */r/* can precede all the six vowels */i, ə, e, a, o, a* and *u/*. Consider the following examples:

/ṛ/:

/ṛiŋmi/	'person alive'
/ṛəŋ/	'for the sake of'
/ṛa/	'neck'
/ṛot^{h}u/	'fever'
/ṛu/	'rope'

/*r*/:

/ri/	'flower'
/reme/	'ancient/historic'
/rəm/	'mad'
/ral/	'war'
/roŋ/	'barrier'
/ruba/	'branch of bamboo'

3.5.7. Approximant

3.5.7.1. Labio-dental approximant

In Anal, there is only one voiced unaspirated labio-dental approximant */v/* and it does not have its voiceless counterpart. */v/* precedes all the six vowels */i, e, ə, a, o* and *u/* as illustrated in the following examples:

/*v*/:

/vi/	'dog'
/venčaŋ/	'neighbour'
/vədu/	'front side'
/vaŋsin/	'rainbow'
/vopum/	'a kind of basket'
/vunčo/	'person who has descendents

3.6. Consonants in syllable initial position

Almost all the consonants including voiced and voiceless counterpart can occur in syllable initial positions in the language. It is worth mentioning here that occurrence of voiceless consonants */p, p^h, t, t^h, k, k^h, č, s, h, ṃ, ṇ, hŋ, ḷ, ṛ* and *v*/ in the syllable initial position is one of the typical features of Anal language which is rarely shared by other Kuki-Chin languages of Northeast India.

p	p^h	b
t	t^h	d
k	k^h	

	č	ǰ
	s	h
m̩	n̩	hŋ
m	n	ŋ
	l̩	l
	r̩	r
	ʋ	

Figure 2: Syllable initial consonants

/p-/	*/peŋ/*	'horizon'
/p^h-/	*/p^he/*	'valley'
/b-/	*/bačo/*	'bat'
/t-/	*/tom/*	'bear'
/t^h-/	*/t^hipə/*	'rabbit'
/d-/	*/dam/*	'ground'
/k-/	*/kel/*	'goat'
/k^h-/	*/k^hesul/*	'grasshopper'
/č-/	*/čeŋhe/*	'langur'
/ǰ-/	*/ǰo/*	'sheep'
/s-/	*/soldoŋ/*	'youth'
/h-/	*/həldu/*	'egg'
/m̩-/	*/m̩e/*	'face'
/n̩-/	*/n̩al/*	'nose'
/hŋ-/	*/hŋa/*	'fish'
/m-/	*/mol/*	'hill'

/n-/	*/ni/*	'day'
/ŋ-/	*/ŋa/*	'breast'
/ḷ-/	*/ḷuŋ/*	'stone'
/l-/	*/limpol/*	'eagle'
/ṛ-/	*/ṛu/*	'rope'
/r-/	*/ri/*	'flower'
/v-/	*/vaha/*	'fang'

3.7. Consonants in syllable final positions

In Anal, there are only five consonants which occur at the end of syllables.it is shared by other kuki-Chin languages of Northeast India.

m	n	ŋ
	l	r

Figure 3: Syllable final consonants

/-m/	*/pət^{h}im/*	'sweat'
/-n/	*/ən/*	'curry'
/-ŋ/	*/pəluŋ/*	'heart'
/-l/	*/duhəl/*	'heron'
/-r/	*/əvar/*	'light'

3.8. Diphthongs

Some of the Tibeto-Burman languages of Northeast India don't have diphthongs at all and some of them have a few numbers of diphthongs in their phonemic inventory. Likewise, diphthongs in Anal are very rare as only a few diphthongs are found in the language. They are illustrated in the following examples:

əu -	*/əu/*	'frog'
	/pəu/	'ash

ia -	/*kialsə*/	'panther'
ao -	/*aol*/	'snow/ice'

3.9. Vowel sequence

Vowel sequence is the occurrence of two vowel phonemes beyond the syllable boundary. Anal has a good number of vowel sequences: /*əu, ou, oi, ia* and *ue*/. The possible vowel sequences in Anal are illustrated in the following examples:

/*sə.umle*/	'anemia'
/*po.umle*/	'cholera'
/*əmo.iriŋ*/	'pregnancy'
/*i.am*/	'stock'
/*hu.e*/	'whistle'

3.10. Consonant sequences

Unlike consonant clusters, consonant sequences in Anal are very rich and they only occur in the medial position of a word. Three different types of consonant sequences are found in Anal. The possible consonant sequences in the language are illustrated in the following section:

(1) Gemination
(2) Homorganic
(3) Contiguous

3.10.1. Gemination

Consonants which have similar features both in place and manner of articulations are treated as Gemination. In Anal, germination is found in the nasal sounds only and occurs in the word medial position as in the following examples:

m.m	/*tum.məde*/	'firefly'
ŋ.ŋ	/*luŋ.ŋəm*/	'shirt'
n.n	/*əsin.ni*/	'today'

3.10.2. Homorganic

In homorganic sequence, phonemes have similar feature either in place or manner of articulation. It occurs in word medially and can be seen in the following examples:

-m.p-	*/sum.pəli/*	'forty'
-m.n-	*/asənəm.na/*	'day before yesterday'
-ŋ.n-	*/tiŋ.nal/*	'earthworm'
-ŋ.m-	*/buŋ.mul/*	'plateau'
-ŋ.k-	*/beŋ.ko/*	'bowl'
-ŋ.k^h-	*/tiŋ.k^{h}on/*	'yolk'
-l.s-	*/həl.sa/*	'chicken'
-l.d-	*/həl.du/*	'egg'
-l.t-	*/dol.tirəl/*	'underground'
-r.n-	*/nilar.ni/*	'sunday'
-n.d-	*/ipun.do/*	'noise'

3.10.3. Contiguous

Contiguous sequence is a sequence in which phonemes have adjacent or neighbouring positions either in place or manner of articulation. This can be seen in the following:

-l.b-	*/k^{h}ol.bu/*	'cough'
-l.č-	*/ihol.čə/*	'sailor'
-l.k-	*/həl.kuŋ/*	'cock'
-l.k^h-	*/sol.k^{h}al/*	'waterfall'
-l.m-	*/mol.mi/*	'tribal people'
-l.v-	*/t^{h}al.vum/*	'mole'
-ŋ.b-	*/niŋ.biŋ/*	'cheek'
-ŋ.d-	*/čaŋ.de/*	'peace'
-ŋ.ǰ-	*/niŋ.ǰa/*	'shame'
-ŋ.s-	*/nuŋ.səŋ/*	'piles'
-ŋ.r-	*/ǰuŋ.ru/*	'spine'
-ŋ.t^h-	*/pəluŋ.t^{h}i/*	'fury/rage'

-ŋ.l-	*/leŋ.le/*	'swallow'
-ŋ.p-	*/ədiŋ.pi/*	'sea'
-m.č-	*/it^{h}əm.ča/*	'appeal'
-m.h-	*/kum.hepəla/*	'festival'
-m.l-	*/um.le/*	'disease'
-m.t-	*/sum.təku/*	'ninety'
-m.t^h-	*/sum.t^{h}um/*	'thirty'
-r.k-	*/kor.kəm/*	'a types of tiger'

3.11. Consonant clusters

As many other Kuki-Naga languages, a limited number of consonant clusters are permitted in Anal. Consonant cluster is the combination of two consonants in a syllable. Therefore, a few number of consonant clusters are found syllable initially conversely, no consonant clusters are found syllable finally. Furthermore, Anal has consonant clusters in the initial and medial positions of a word. It is also important to note that Anal permits upto two consonants in an initial syllable. In other words, more than two consonants are not permitted to occur in the syllable initial position.

3.11.1. Word initial consonant clusters

In Anal, the first member of the initial clusters can be /*t* and *d*/ while liquid consonants /*r*/ occupy their positions as the second member of the clusters. It is also observed that no other consonants can be second member of the Anal initial clusters except the liquid /*r*/.

Therefore, Anal does partially favour the observation made by Benedict (1972), which states that "Tibeto-Burman consonant clusters, found only in root initial position, are of two types: (a) stop or nasal + liquid (r~l) (b) consonant (or cluster of foregoing type) + semi- vowel (w~y)." It is also observed that stops plus rhotic clusters are very common in Anal as can be seen in the following examples:

Stop +rhotic:

/tr-/

/trobol/	'november'
/traŋlam/	'famine'

/trunə/	'elegy'
/trə/	'brother'
/treve/	'cyclone'

/***t^hr-***/

/t^hrə/	'moon'
/t^hra/	'month'
/t^hran/	'grave'
/t^hreŋ/	'plank of wall'

3.11.2. Word medial consonant clusters

Like word initial consonant clusters, the first member of the word medial clusters in Anal are mainly occupied by stops (unaspirated and aspirated), whereas, the rhotic /***r***/ only participates as second member of the clusters. The various combinatory possibilities of medial two consonant clusters in Anal are illustrated in the following examples:

/sit^hra/	'generous'
/səmt^hrə/	'comb'
/ətrəl/	'hail'
/ət^hra/	'louse'
/itrom/	'few'
/t^hran/	'grave'
/dutraŋ/	'sring'
/pətre/	'march'
/pət^hru/	'dove'

It is also observed that ***pr-*** and ***k^hr-*** clusters are found in loanwords mainly from Manipuri, a dominant language of Manipur. The examples of such consonant clusters as shown in the following examples:

pr-

/ŋaprum/ 'eel',

k^hr-

/puk^{h}ri/ 'pond'

3.12. Syllabic structure

To present the internal structure of a syllable, Hyman (1975:188) asserts that "the syllable consists of three phonetic parts: (1) the onset, (2) the peak or nucleus, and (3) the coda". More specifically, the vowel element is known as the peak or nucleus of a syllable while consonant occupies a marginal position in a syllable i.e., a consonant at the beginning or at the end of a syllable. The consonant which begins a syllable is called 'onset', and that occurs at the end of the syllable is called 'coda'. If a coda is absent in a syllable, it will be called as 'open' syllable and if a coda is present in a syllable is called 'closed' syllable.

Syllables in Anal must contain a vowel or vowel like sound optionally preceded or followed by consonants. The basic structure of Anal syllable can be schematized in the following way: (C)V(C). It is important to note that the most common type of syllable in Anal is typically represented as CV. Here, the C stands for consonant and V for vowel. In Anal, different types of syllables like monosyllable, disyllables and trisyllables are found as many other Tibeto-Burman languages do. These various types of syllables in the language are described in the following sections:

3.12.1. Mono-syllabic words

In monosyllabic words CV pattern is more common however, a vowel V can be a syllable or morpheme or a word in Anal as many other Tibeto-Burman languages do. Monosyllabic words in Anal can be open or close syllables:

3.12.1.1. Open syllable

The pattern of open syllables in mono-syllabic words in Anal is illustrated as in the following table with examples:

Lexeme	Gloss	Syllable Type
u	elder	V
ni	day	CV

Table no. 5: Anal monosyllabic open syllable

3.12.1.2. Closed syllable

The pattern of closed syllables in mono-syllabic words in Anal is illustrated in the following table with examples:

Lexeme	Gloss	Syllable type
ən	'curry'	VC
tom	'bear'	CVC

Table no. 6: Anal monosyllabic closed syllable

3.12.2. Disyllabic words

The disyllabic words in Anal are very common. In other words, the disyllabic words are frequently used by the native speakers of Anal in their day to day conversation. The disyllabic words in anal can be open or closed syllables:

3.12.2.1. Open syllable

The disyllabic words with various syllabic pattern in Anal is illustrated in the following examples.

Lexeme	Gloss	Syllable Type
əki	horn	VCV
iso	far	VCV
pəha	bird	CVCV
laŋta	vulture	CVCCV

Table no. 7: Anal disyllabic open syllable

3.12.2.2. Closed syllable

The various closed syllabic patterns of disyllabic words in Anal are illustrated in the following examples.

Lexeme	Gloss	Syllable Type
ərol	throat	VCVC
sosul	snail	CVCVC

Table no. 8: Anal disyllabic closed syllable

3.12.3. Tri-syllabic words

The trisyllabic words in Anal are very rare and it seems to be a compounded or complex ones. The trisyllabic word pattern in Anal can be open or closed syllables. The Anal trisyllabic word pattern can be described in the following sections:

3.12.3.1. Open syllable

The open syllabic patterns of trisyllabic words in Anal are illustrated in the following table:

Lexeme	Gloss	Syllable Type
čələnu	'daughter'	CVCVCV
pətəŋpa	'old man'	CVCVCCV

Table no. 9 : Anal trisyllabic open syllable

3.12.3.2. Closed syllable

The closed syllabic patterns of trisyllabic words in Anal are illustrated in the following table:

Lexeme	Gloss	Syllable Type
doltipam	world	CVCCVCVC
rupəraŋ	rib	CVCVCVV

Table no. 10: Anal trisyllabic closed syllable