

Report

Phonology of Birjia

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This has a reference to the earlier reports of the months of March & April, 2015. In this month, we have prepared a description of the comprehensive phonology of Birjia on the basis of the limited data collected from the field.

PHONOLOGY

INTRODUCTION

There are eight vowel sounds and thirty three consonant sounds. From the limited data, we have determined the phonemic status of the sounds.

VOWELS

The eight vowel sounds in Birjia are [i,e,ə,a,ɔ,o,u and ε].

DESCRIPTION AND DISTRIBUTION OF VOWELS:

Vowels	<u>Initial</u>	<u>Medial</u>	<u>Final</u>
<u>FRONT VOWELS</u>			
/i/: High Unrounded	/itiʔih/ ‘to pinch’, /ijam/ ‘to cry or weep’, /ic/ ‘stool’	/rimil/ ‘cloud’, /baɖida/ ‘ice’, /riɽ/ ‘spine’	/jijemi/ ‘to open’, /iremi/ ‘to guide or show the way’, /huni/ ‘he’
/e/: Mid High Unrounded	/ela/ ‘to come’, /egerimi/ ‘to abuse’, /eteraʔa / ‘from’	/seta/ ‘dog’, /kulseret/ ‘lizard’, /gendra/ ‘sari’,	/d ^h eke/ ‘chest’, /jawarope/ ‘to gather together or assemble’, /goɽe/ ‘all’
[ε]: Mid Low Unrounded		/mεrom/ ‘goat’ (found in only one	

instance)

CENTRAL
VOWELS**/ə/: Mid Low
Unrounded****/gəd^ha/ ‘donkey’,
/mərec/ ‘black
pepper’, / səhan /
‘wood’****/indrə/ ‘well’,****/a/: Low Unrounded** **/alom swikarke/ ‘to
deny or having done
something’, /ara/
‘saw’,
/aca/ ‘beautiful’****/sekam/ ‘leaf’,
/humaʔah/ ‘to kill’,
/raram/ ‘old’****/b^hanʃa/ ‘brinjal’,
/sendra/ ‘hunter’,
/ara/ ‘saw’**BACK VOWELS**/u/: High Rounded****/uplao/ ‘to float’,
/uttər/ ‘north’, /u:l/
‘mango’****/kumhər/ ‘potter’,
/susun/ ‘dance’,
/ajupdilaŋ/
‘evening’****/t^hu/ ‘to spit, saliva’,
/haku/ ‘fish’, /hasu/
‘pain’****/o/: Mid High
Rounded****/oremi/ ‘to stretch
something’, /oʃa/ ‘to
smear’, /oke/ ‘who’,
/oʃa/ ‘house’****/bokoin/ ‘father’s
sister’s son’, /ʃinor/
‘maize’, /kote/
‘after’****/kado/ ‘mud’, /bōro/
‘to shiver’, / boʃo /
‘lung’****/ɔ/: Mid Low
Rounded****/ɔr/ ‘and’****/nɔ/ ‘nine’, /c^hɔ/
‘six’,****/sersɔ/ ‘mustard’**

There are seven vowel phonemes in Birjia. The phonemic status of /ɛ/ is doubtful because of limited data. Medial /ɔ/ is found to occur in Hindi loan words. Words with /ɔ/ are also rare in the data. No word with initial /ə/ is found and words with final /ə/ are very rare in the data.

The contrastive pairs of vowels are given below:

/i:/u/**/mamu/ ‘mother’s brother’: /mami/ ‘mother’s brother’s wife’****/ə:/a/****/pakər/ ‘pebble’: /pakar/ ‘stone’****/a:/e/****/oʃa/ ‘house’: /oʃe/ ‘bird’****/ɔ:/o/****/ɔr/ ‘and’: /or/ to drag’****/i:/o/****/samd^hi/ ‘daughter-in-law’s father’: /samd^ho/ ‘daughter-in-law’s mother’**

/a/ : /i/

/aʃa/ ‘father’s father’: /aʃi/ ‘father’s mother’

VOWEL COMBINATIONS

There are twenty three vowel combinations in the language. They are /ia/, /iu/, /ei/, /eu/, /eo/, /ẽa/, /ua/, /uo/, /oa/, /oi/, /ou/, /ai/, /au/, /ao/, /æ/, /əi/, /əe/, /ẽu/, /ũe/, /ie/, /æo/, /oe/ and /ui/. So far as the distribution is concerned it is found in this limited data that /eu/ occurs word-initially only; /iu/ and /əi/ occurs word-finally only; /ia/, /eo/, /ẽa /, /uo/, /oe/, /oi/, /ou/, /au/, /æ/, /ẽe/, /ui/, /æo/, /ũe/, / ẽu / and /ie/ occur medially only; /ei/, /ua/, /oa/ and /ao/ are found in both medial and final positions and the only combination /ai/ occurs in all the three positions. The status of the vowel [æ] in /æo/ is not decided; it may be a variant of [ɛ].

DISTRIBUTION OF VOWEL COMBINATIONS

<u>Vowel Clusters</u>	<u>Initial</u>	<u>Medial</u>	<u>Final</u>
/ia/		/bia/ ‘marriage’, /pia/ ‘I’	
/iu/			/g ^h iu/ ‘ghee’, /niu/ ‘foundation’
/ei/		/teijaŋ/ ‘elder/younger sister's husband’	/bilei/ ‘cat’
/eu/	/neula/ ‘mongoose’		
/eo/		/c ^h eora/ ‘skin’	
/ẽa/		/pẽaʃ/ ‘onion’	
/ua/		/duar/ ‘door’	/seta c ^h ua/ ‘puppy’, /simc ^h ua/ ‘chick’
/uo/		/muon/ ‘ant’	
/oa/		/horoamand ^h er/ ‘day before yesterday’	/noa/ ‘this’
/oe/		/koemi/ ‘to ask for something’	
/oi/		/ sejoit / ‘child’, /bokoin/ ‘father's brother's daughter’	

/ou/		/mousi/ ‘mother’s sister’, /mousa/ ‘mother’s sister’s husband’	
/ai/	/aina/ ‘mirror’	/mais/ ‘miser’, /kaici/ ‘scissors’	/b ^h ai/ ‘elder/ younger brother’, /cai/ ‘tea’
/au/		/cauha/ ‘chin’	
/ao/		/t ^h aore/ ‘front of’ /d ^h ikd ^h ukao/ ‘heart’	/binao/ ‘weaver’,
/æ/		/paeri/ ‘anklet’	
/ɔ̃e/		/b ^h ɔ̃es / ‘buffalo’	
/əi/			/sərləi / ‘matchstick’
/ui/		/aguimi/ ‘to bring (something to a place)’	
/æo/		/hojæona/ ‘to become’	
/ie/		/kumuinieltada/ ‘to dream’	
/ũe/		/daʔnũemi/ ‘to drink’	
/ẽu/		/ẽur/ ‘to fall’	

SUPRASEGMENTALS

The phonemic status of length and nasalisation is not decided because of the limited data. Further investigation is necessary.

SYLLABLE PATTERNS

PATTERN

V

Examples

u-sul ‘sky’

	i-pil ‘star’
	a-ja ‘father’s father’
V VC	oit^h ‘behind’
VC	ma-is ‘miser’
	mu-on ‘ant’
	ot^h ‘earth’
CV	ka-do ‘mud’
	d^hu-ka ‘wind’
	sa-ram ‘deer’
CCV	kin-dro ‘peacock’
	gēn-dra ‘sari’
	ote-tre ‘under’
CVC	siŋ-gel ‘fire’
	mir-cir ‘lightning’
	sam-d^{hi} ‘daughter-in-law's father’
CVCC	e-laŋg ‘heat’
	se-reŋg ‘rock’
	səŋk^h ‘conch’
CVV	bi-lei ‘cat’
	sim-c^hua ‘chick’

d^hik-d^hu-**kao** ‘heart’

bi-**nao** ‘weaver’

WORDS OF DIFFERENT SYLLABIC STRUCTURES

In Birjia there are monosyllabic, disyllabic and polysyllabic words.

1. MONOSYLLABIC PATTERN:

1. VC : o^h (earth), up (hair)
2. V : o: (to swell)
3. CV : k^hu (cough)
4. CVC : jan (bone), b^hap (steam)
5. CVCC : menʔ (eye)

2. DISYLLABIC PATTERN:

1. CV-CV : /hasa/ (clay), d^huka (wind)
2. CV-CVC : palah (snow), hadur(thunder)
3. CVC-CVC : /mircir/ (lightning), /seŋgel/ (fire)
4. CVC-CV : samd^ho (daughter-in-law’s mather), cawli (rice)
5. CVC-CCV: bandʒo (storm), sindra (to hunt)
6. V-CV : aja (father’s father), iʒa (brick)
7. VC-CVC: uttər (north)
8. V-CVC : ipil (star), usul (sky)
9. CVV: jia (we), rua (fever)

10. VVC: oit^h (behind)
11. CVC-VCC: reŋet? (hunger)
12. CVC-CVV: mərcai (chilli), sərləi (matchstick)
13. VC-CCV: indrə (well)
14. CVVC: ɲein (toy)
15. CVV-CVV: kairao (to get angry)

3. POLYSYLLABIC PATTERN:

1. CV-CV-CV : ɟojoma (food), haremi (to bury a dead body)
2. V-CV-CV: iremi (to harvest)
3. VC-CV-CV-CVV : ombagonai (to crawl as a baby)
4. CVC-CV-CV: badlimi (to change)
5. CVC-CV-CV : part^hana (to pray)
6. CV-CV-CV-CV: nakejami (to comb hair)
7. CV-CV-CV-CV: ɟawarope (to gather together (assemble))
8. CVC-CV-CVV: d^hikd^hukao (heart)
9. V-V-CV: aina (mirror)
10. VC-CVV: ultao (upside down)
11. VC-CVV: uplao ‘to fly’
12. V-CVV: ojai ‘to give’
13. CV-CV-CV-CV-CVC: tajarajanam ‘to prepare’

CONSONANTS

The consonants are 33 in number. They are [p], [b], [b^h], [t], [t^h], [d], [d^h], [ʈ], [ʈ^h], [ɖ], [ɖ^h], [k], [k^h], [g], [g^h], [ʔ], [m], [n], [ɲ], [ŋ], [r], [ɽ], [l], [f], [s], [ç], [h], [c], [c^h], [ʃ], [ʃ^h], [w], and [j].

DESCRIPTION AND DISTRIBUTION OF CONSONANTS

Consonants	Initial	Medial	Final
Plosives			
[p]: Voiceless unspirated bilabial	/pahar/ 'hill'	/ipil/ 'star'	/up/ 'hair'
[b]: Voiced unspirated bilabial	/bin/ 'snake'	/sabeʔah/ 'to chase and catch'	/rakab/ 'to climb a tree'
[b ^h]: Voiced aspirated bilabial	/b ^h atijin/ 'brother's daughter'		
[t]: Voiceless unspirated alveolar	/taruʔd/ 'tiger'	/mastar/ 'teacher'	/kulseret/ 'lizard'
[t ^h]: Voiceless aspirated alveolar	/t ^h u/ 'saliva'	/hat ^h i/ 'elephant-male, female', hot ^h o 'neck'	
[d]: Voiced unspirated alveolar	/datah/ 'teeth'	/kuduŋ/ 'eye-brow', /pudga/ 'feather'	/damad/ 'elder/younger sister's husband'
[d ^h]: Voiced aspirated alveolar	/d ^h obi/ 'washerman'	/gəð ^h a/ 'donkey'	
[ʈ]: Voiceless unspirated retroflex	/ʈarud/ 'lion', 'bindi'	/ʈikli/ 'brick'	
[ʈ ^h]: Voiceless aspirated retroflex	/ʈ ^h iʈ ^h it oɽe/ 'sparrow'	/hāʈ ^h il/ 'egg'	
[ɖ]: Voiced unspirated retroflex	/ɖagrɪn/ 'midwife'	/ciɖra/ 'squirrel'	/ʈarud/ 'lion'
[ɖ ^h]: Voiced aspirated retroflex	d ^h ekar 'to belch'		
[k]: Voiceless unspirated velar	/kac ^h a/ 'tortoise'	/siku/ 'louse'	/cecak/ 'smallpox'
[k ^h]: Voiceless aspirated velar	/k ^h erha/ 'rabbit'	/lek ^h a/ 'count'	/səŋk ^h / 'conch'

[g]: Voiced un aspirated velar	/gapa/ ‘tomorrow’	/daqrin/ ‘midwife’	
[g ^h]: Voiced aspirated velar	/g ^h uti/ ‘wrist’	g ^h arig ^h ari ‘always’	
[ʔ]: glottal Stop		bidʔjana ‘to prick as a thorn’	ti:ʔ ‘insect’, buaʔ ‘jackal’
NASAL			
[m]: Voiced bilabial	/mastar/ ‘teacher’, /majam/ ‘blood’	/hɔromsu/ ‘honeybee’	/sadam/ ‘horse’
[n]: Voiced alveolar	/neula/ ‘mongoose’	/menaʔ/ ‘face’	/bin/ ‘snake’
[ɲ]: Voiced retroflex	/ɲein/ ‘toy’		
[ŋ]: voiced velar		/serɛŋg/ ‘rock’, /darɛŋga/ ‘slope’ /ɟaŋa/ ‘leg’	/çiton/ ‘sunshine’, /konion/ ‘to adopt a child’
TRILL			
[r]: Voiced alveolar	/ɽarud/ ‘lion’	/roɽe/ ‘toad’	/serser/ ‘foot’
FLAP			
[ɽ]: Voiced retroflex	/ɽani/ ‘queen’	/kiɽa/ ‘worm’	
FRICATIVE			
[f]: Voiceless labiodentals (occurs only in one instance)	/fusri/ ‘pimple’		
[s]: Voiceless alveolar	/simc ^h ua/ ‘chick’	/hasu/ ‘ache/pain’	/mais/ ‘miser’
[ç]: Voiceless palatal	/çiton/ ‘sunshine’		
[h]: glottal	Initial: /hapadʔ/ ‘leech’	/bihan/ ‘seed’	/joʔoh/ ‘again’
AFFRICATE			
[c]: Voiceless un aspirated alveolar	/cawli/ ‘rice’, camar ‘cobbler’	/kaici/ ‘scissors’	/ic/ ‘stool/shit’, mɔrec ‘black pepper’
[c ^h]: Voiceless aspirated alveolar	/c ^h utki/ ‘brother’s wife’	/c ^h uc ^h u/ ‘rat’	
[ɟ]: Voiced un aspirated alveo-palatal	/joʔoh/ (fruit), /jojo/ ‘tamarind’	/kagɟi/ ‘lime’	/pɛaj/ ‘onion’

[ɟ^h]: Voiced aspirated alveo-palatal /ɟ^hara/, /ɟ^hari/ 'liquorice' /samɟ^hao/ 'to guide or show the way'

LATERAL

voiced alveolar liquid /lajemi/ 'to dig' /kulseret/ 'lizard' /usul/ 'up'

GLIDE OR SEMIVOWEL

[w]: Voiced labial /bawer/ 'rope'

[j]: Voiced palatal /lajemi/ 'to dig' /gaj/ 'cow'

MINIMAL PAIRS

In the report of April'15 the following 10 sounds were established as phonemes: /p, t, k, g, s, h, n, l, r and ɽ/. Now sounds in minimal pairs, in continuation with the last report, are /k^h, t^h, ɟ, ɟ^h, c, c^h, b, m, ɽ, g^h, j/.

1. /k^h/: /t^h/
/k^hu/ 'cough': /t^hu/ 'saliva'
2. /ɟ^h/: /ɟ/
/ɟ^hil/ 'lake': /ɟil/ 'flesh'
3. /ɟ/: /b/
/ɟil/ 'flesh': /ɟib/ 'tongue'
4. /c^h/: /m/
/ac^ha/ 'clean': /ama/ 'you'
5. /ɽ/: /t/
/daɽa/ 'tooth': /data/ 'tusk'
6. /g^h/: /n/
/g^hiu/ 'ghee': /niu/ 'foundation'
7. /j/: /ɟ/
/aja/ 'mother': /aɟa/ 'father's father'

The phonemic status of [f] is doubtful. It occurs only in one instance. Though [ʔ] is perceived and one pair like [gol] ‘round’ and [goʔ] ‘to die’ has been found, yet its status is not decided. The status of other consonants is yet to be investigated on the basis of more data.

DESCRIPTION AND DISTRIBUTION OF DOUBLE CONSONANTS

Double Consonant	Initial Distribution	Medial Distribution	Final Distribution
[d+d]		/guḍḍi/ ‘kite’	
[t+ t]		/cuṭṭu/ ‘mouse’	
[d+d]		/meddah/ ‘tears’	
[t+t]		/uttar/ ‘north’ / gattar/ ‘body’	
[h+h]		/ahha/ ‘mouth’	

LIST AND DISTRIBUTION OF CONSONANT CLUSTERS

Consonants	Initial	Medial	Final
ŋ+g			elaŋg/ ‘heat’ /sereŋg/ ‘rock’ /citong din/ ‘summer’
d+r		/bandro/ ‘storm’	

	/ciɖra/ ‘squirrel’	
n+d	/b ^h enɖo/ ‘sheep’	/tanɖ/ ‘field’
ʔ+d		taruʔd ‘tiger’
t+r	/matrom/ ‘cold- ailment’	
	/natra/, /natri/ ‘dwarf - male, female’	
n+d	/konda, kundi/ ‘dumb - male, female’	
g+r	/pagri/ ‘turban’	
n+j		/panj/ ‘to stamp’

LIST AND DISTRIBUTION OF CONSONANT SEQUENCES

Consonants	Initial	Medial	Final
l+k (lateral+stop)		/halkao/ ‘wave’	
t+k (stop+ stop)		/chutki/ ‘brother’s wife’	
n+h (nasal+glottal fricative)		hanhar ‘mother-in- law’	
g+n (stop+ nasal)		/bhagni/ ‘sister’s daughter’	

l+h (lateral+glottal fricative)	/dulhin/ ‘bride’
d+g (stop+atop)	/pudga/ ‘feather’
m+s (nasal+sibilant)	/həromsu/ ‘honey bee’
l+s (lateral+sibilant)	/kulseret/ ‘lizard’
k^h+n/k^h+l (stop+naal)	/sik^hni/, /sik^hli/ ‘mosquito’
n+d (nasal+stop)	/bandra/ ‘monkey’
r+h (trill+glottal fricative)	/kul sərheɖ/ ‘spider’
r+n (trill+nasal)	/birni/ ‘wasp’
p+n (stop+nasal)	/pipni/ ‘eye-brow’
r+g (trill+stop)	/mirgi/ ‘epilepsy’
h+r (glottal fricative + trill)	/behra/ ‘dear’
w+l (semivowel+lateral)	/cawli/ ‘rice’
j+j(semivowel+affricate)	gajjil
k+r (stop+trill)	/sukri/ ‘pig’
	/mokre/ ‘knee’
d+r(stop+trill)	/kindro/ ‘peacock’
	/gēndra/ ‘sari’
c+c^h(affricate+affricate)	/pəcc^him/ ‘west’