3.0.0 Allophones of the DD phonemes:

3.0.1 Prolegomena:

This chapter describes different allophones of the DD phonemes—Consonants and Vowels. Since the postulation of each of the phonemes subsumes a group of phonetically similar sounds (particularly) which are in complementary distribution, and designated allophones or positional or contextual variants, it is therefore imperative that a series of statements defining their ranges of occurrence and the combinatory possibilities be made right here and now. The allophones are described and symbolized below. The descriptions are in purely general

1(a) Gleason, H.A.: An Introduction to Descriptive Linguistics, 1979, p. 80
(c) Bloch, B. & Trager, G.L.: Outline of Linguistic Analysis, 1972, p. 41
The specific allophones have been enclosed by square brackets $\left[\right]$ within stretches of Simple Phonemic transcriptions. Typographical compulsions necessitated this departure from the IPA convention. The diacritical marks used in the thesis conform to IPA specifications. Innovations and departures, if any, are explained in places where these are first used or introduced.

3.1.1 The allophones of the consonant phonemes:

The scatter of the allophones of the DD consonant phonemes are discussed below:

$p$

The allophones of $p$ are $\left[p\right]$, $\left[p^\prime\right]$, and $\left[p^\prime\prime\right]$ — the audibly released, unreleased, inaudibly released, and nasally released voiceless bilabial stop respectively.

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(b) Abercrombie: Elements of General Phonetics, 1967
(c) Bloch, B. & Trager, G.L.: Outline of Linguistic Analysis, 1972, p. 36
3. Abercrombie: Phonetic Transcriptions, 1953, p. 34
Departures - The superscripts (') and (~) written to the right of the symbols indicate inaudibly released and nasally released stops respectively.

\( \text{[p]} \) occurs when followed by a vowel or a permissible consonant, either word initially or word medially.

\( /\text{[p]uk}^h_i/ \) bird
\( /\text{[p]roka}^s/ \) disclosed
\( /\text{pi[}\text{p]}gr/ \) ant
\( /\text{pae[}\text{p]}rok/ \) a robin

\( \text{[p}^\prime \text{]} \) occurs (a) word finally when followed by a pause and (b) when followed by a homo-organic stop without intervening pause. In context (a) it is an open juncture feature while in (b) it is a close juncture feature.\(^5\)

(a) \( /\text{gori[}\text{p}^\prime \text{]}/ \) poor
\( /\text{motlo[}\text{p}^\prime \text{]}/ \) motive

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(b) /ha[p] baha/ Snake family
/pa[p] budh/ evil intention

/p/ occurs word medially when followed by a hetero-organic
stop or nasal — a close juncture feature.

/ho[p] tom/ the seventh
/so[p] ne/ dream

/p/ occurs word medially when followed by a homo-organic
nasal without intervening pause — a close juncture
feature.

/olo[p] nang/ a little
/ha[p] mukh/ snake-faced

/p/

/p/ has only one allophone /p/ the aspirated bilabial stop
in all the contexts. However, /p/ — the aspirated bilabial
fricative is heard as a free variation of /p/ in inter­
vocalic and word final positions. The occurrence of /p/
is not predictable and hence it cannot be accorded the

6. Gleason, H.A.: An Introduction to Descriptive
Linguistics, 1979, p.
allophonic status.

\[ \text{\( /\overline{\text{p}}^h\text{jira/} \)} \text{ return} \]

\[ \text{\( /\overline{\text{p}}^h\text{jihu/} \)} \text{ the solid preparation from the milk obtained immediately after the birth of a calf.} \]

\[ \text{\( /\text{dil}\overline{\text{p}}^h\text{jira/} \)} \text{ noon} \]

\[ \text{\( /\text{dil}\overline{\emptyset}^h\text{jira/} \)} \]

\[ \text{\( /\text{ma}\overline{\text{p}}^h\text{j/} \)} \text{ to forgive} \]

\[ \text{\( /\text{ma}\overline{\emptyset}^h\text{j/} \)} \]

\[ /b/ \]

The allophones of \( /b/ \) are \( /b/, /b^1/, /b^2/, \) and \( /b^\sim/ \) -- the audibly released, unreleased, inaudibly released and nasally released voiced bilabial stop respectively.

\( /b/ \) occurs when followed by a vowel or a permissible consonant word initially or word medially.

\[ \text{\( /\text{b}^\sim\text{jiwawa/} \)} \text{ give birth} \]

\[ \text{\( /\text{b}^\sim\text{jadar/} \)} \text{ bladder} \]

\[ \text{\( /\text{b}^\sim\text{ju}\text{b}^\sim\text{juriya/} \)} \text{ a grass} \]

\[ \text{\( /\text{do}\text{b}^\sim\text{jola/} \)} \text{ plot of land} \]
\[ b^\] occurs (a) word finally when followed by a pause,
and, (b) when followed by a homo-organic stop without intervening pause. In context (a) it is an open juncture feature,
while in (b) it is a close juncture feature.

\[ /p a b^/ \] node
\[ /n i b^/ \] nib
\[ /d a b^/ b a r a / \] a village
\[ /p u b^/ p^ h a l e / \] eastern side

\[ b^\] occurs when followed by a hetero-organic stop or nasal
-- a close juncture feature.

\[ /z o b^/ d o / \] hardness
\[ /d a b^/ n a r i k o l / \] green coconut

\[ b^\] occurs medially when followed by the homo-organic
nasal without intervening pause -- a close juncture feature.

\[ /k u b^/ m a r / \] beat
\[ /k^h a b^/ m a r i / \] the act of seizing suddenly by the hand

/ \[ b^h / \]

The allophones of /\[ b^h / \] are \[ b^h \] and \[ b^h \] -- the
murmured bilabial stop and murmured bilabial fricative

7. Ladefoged, P. : Preliminaries to Linguistic phonetics, 1971
respectively.

\[ b^h \] occurs when followed by a vowel or a permissible consonant, either word initially or word medially.

/\[ b^h \]uis/ buffalo
/\[ b^h \]roman/ travel
/\[ h \]in/ pregnant

\[ b^h \] occurs in word final positions when followed by a pause — a close juncture feature.

/la\[ b^h \]/ profit
/dur\[ b^h \]/ rare

Departure: The superscript (h) written to the right of a voiced symbol denotes a murmured sound in this thesis.

/t/

The allophones of /t/ are \[ t \], \[ t^l \], \[ t^r \], \[ t^e \] and \[ t^n \] — the audibly released, unreleased, inaudibly released, nasally released voiceless alveolar stop and audibly released retroflex stop respectively.
$\text{t}'$ occurs when followed by a vowel or a permissible consonant, word initially or word medially.

$\text{Juliette}/$ the sour lime
$\text{tран}/$ remove
$\text{кура}/$ piece
$\text{zontro}/$ implement

$\text{t}'$ occurs (a) word finally when followed by a pause, and (b) when followed by a homo-organic stop without intervening pause. In context (a) it is an open juncture feature, while in (b) it is a close juncture feature.

(a) $\text{ba}/$ a knob
$\text{зогна}/$ gourd
(b) $\text{pata}/$ the leaf
$\text{кто}/$ where

$\text{t}'$ occurs word medially when followed by a hetero-organic stop or nasal -- a close juncture feature.

$\text{pat}/$ the seventh
$\text{mas}/$ wicked
\( \text{\textipa{t\textbar{}}} \) occurs word medially when followed by the homo-
organic nasal without intervening pause — a close juncture
feature.

\( \text{\textipa{ro\textbar{t}n\textbar{}}} \) jewel
\( \text{\textipa{zo\textbar{t}n\textbar{}}} \) care

\( \text{\textipa{t\textbar{}}} \) occurs when immediately preceded by /r/ in (a) intra-
word and (b) inter-word positions without intervening pause.
In context (a) it is a close juncture feature while in (b) it is an open juncture feature.

(a) \( \text{\textipa{bor\textbar{t}\textbar{}}} \) now-a-days
\( \text{\textipa{bor\textbar{t}a\textbar{}}} \) to reduce to a pulp by the fingers.

(b) \( \text{\textipa{kar\textbar{t}a\textbar{}}} \) in whose place
\( \text{\textipa{u\textbar{t}or\textbar{t}a\textbar{}}} \) a village, upper floor.

\( \text{\textipa{t\textbar{}}} \)

The allophones of /\textipa{t\textbar{}}/ are \( \text{\textipa{t\textbar{}}} \), \( \text{\textipa{t\textbar{}}} \), and \( \text{\textipa{t\textbar{}}} \)
— the aspirated alveolar stop, retroflex stop and the unspirated alveolar stop respectively.

\( \text{\textipa{t\textbar{}}} \) occurs word initially, medially and finally.

\( \text{\textipa{t\textbar{}}} \) branch
/buʧtʃ/ a large curved knife for cutting vegetable.

/kaʧtʃ/ wood

ʧ tʃ occurs when immediately preceded by /r/ in (a) intra-word and (b) inter-word positions without intervening pause. In context (a) it is a close juncture feature while in (b) it is an open juncture feature.

(a) /orʧtʃɔ/ meaning /horʧtʃuk/ a bird

(b) /bاهoɾʧtʃekəna/ a bamboo stick used for support something.

/duɾʧtʃai/ distance places

ʧ tʃ occurs word medially when followed by a homo-organic stop without intervening pause — a close juncture feature.

/kaʧtʃtar/ from the wood

/aʧtʃta/ eight pieces

/d/

The allophones of /d/ are /d/, /d/, /d/, /d/ and /d/ — the audibly released, unreleased, inaudibly released, nasally released voiced alveolar stop and audibly
released retroflex stop respectively.

$\mathcal{d}^j$ occurs when followed by a vowel or a permissible consonant, word initially or word medially.

\[
\begin{align*}
/\mathcal{d}^j\text{gba}/ & \quad \text{tank} \\
/\mathcal{d}^j\text{ram}/ & \quad \text{a big water vessel} \\
/\mathcal{d}^j\text{ura}/ & \quad \text{to removed or separate} \\
/\text{da}\mathcal{d}^j\text{ren}\alpha/ & \quad \text{rough}
\end{align*}
\]

$\mathcal{d}^{i^j}$ occurs (a) word finally when followed by a pause and (b) when followed by a homo-organic stop without intervening pause. In context (a) it is an open juncture feature while in (b) it is a close juncture feature.

\[
\begin{align*}
(a) & \quad /\text{ta}\mathcal{o}\mathcal{d}^{i^j}/ \quad \text{strong} \\
& \quad /\text{ze}\mathcal{d}^{i^j}/ \quad \text{rivalry} \\
(b) & \quad /\text{bu}\mathcal{d}^{i^j}\text{hi}/ \quad \text{the power of understanding} \\
& \quad /\text{ba}\mathcal{d}^{i^j}\text{de}/ \quad \text{leave (it)}
\end{align*}
\]

$\mathcal{d}^{i^j}$ occurs word medially when followed by a hetero-organic stop or nasal — a close juncture feature.

\[
\begin{align*}
/\text{ba}\mathcal{d}^{i^j}\text{baki}/ & \quad \text{remaining} \\
/\text{mo}\mathcal{d}^{i^j}\text{mays}\gamma\alpha/ & \quad \text{wine and meat}
\end{align*}
\]
\[ \text{\$ occurs word medially when followed by the homo-organic nasal without intervening pause — a close juncture feature.} \]

/bo\$nam/ scandal

/bo\$mas/ of bad character

\[ \text{\$ occurs when immediately preceded by /r/ in (a) inter-word and (b) inter-word positions without intervening pause. In context (a) it is a close juncture feature while in (b) it is an open juncture feature.} \]

(a) /or\$ali/ a cook

/kor\$ui/ star fruit

(b) /dor\$am/ rate

/mosur\$ali/ lentils

\[ \text{\$ occurs word initially, medially and finally.} \]

/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$/\$
\[ d^h \] occurs when immediately preceded by /\( r \)/ in (a) intra-word and (b) inter-word positions without intervening pause. In context (a) it is a close juncture feature while in (b) it is an open juncture feature.

(a) /or\( d^h \)Jo/ half
   /gar\( d^h \)Ana/ back of the neck
(b) /nir\( d^h \)oni/ poor
   /bor\( d^h \)Ana/ a paddy

\( d \) occurs word medially when followed by a homo-organic stop without intervening pause — a close juncture feature.

/gpora\( d \)ta/ the offence

/k/

The allophones of /k/ are \( k \), \( \tilde{k} \) and \( \tilde{k} \) — the audibly released, unreleased and inaudibly released voiceless velar stop respectively.

\( k \) occurs when followed by a vowel or a permissible consonant, word initially or word medially.

/\( k \)mor/ waist
/\( k \)rija/ affect
/su\( k \)uri/ butterfly
/bo\( k \)ra/ dumb
\( \k \) occurs (a) word finally when followed by a pause and (b) when followed by a homo-organic stop without intervening pause. In context (a) it is an open juncture feature, while in (b) it is a close juncture feature.

(a) /ho\k/ crane
   /ha\k/ a pot herb, vegetables

(b) /bg\k\ka/ stupid
    /da\k\ka/ to strike with the open hand.

\( \k \) occurs word medially when followed by a hetero-organic stop or nasal — a close juncture feature.

/to\k\ta/ plank
/ru\k\mini/ a name

/\h/ The allophones of /\h/ are \( \k \) and \( \x \) — the aspirated velar stop and voiceless velar fricative respectively.

\( \k \) occurs word initially and medially when preceded by the homo-organic stop or nasal — a close juncture feature.

/\k\oke/ a name
/ha \k\ui/ a small bridge.
occurs word finally when preceded by a vowel — a close juncture feature.

\[ /x/ \quad \text{measurement} \]
\[ /r/ \quad \text{kept in} \]
\[ /g/ \]

The allophones of \( /g/ \) are \( /c/ \), \( /c/ \) and \( /c/ \) — the audibly released, unreleased and inaudibly released voiced velar stop respectively.

occurs when followed by a vowel or a permissible consonant, word initially or word medially.

\[ /u/ \quad \text{husk} \]
\[ /a/ \quad \text{a measure} \]
\[ /a/ \quad \text{garden} \]

occurs (a) word finally when followed by a pause and (b) when followed by a homo-organic stop without intervening pause. In context (a) it is an open juncture feature while in (b) it is a close juncture feature.

(a) \[ /d/ \quad \text{separate} \]
\[ /d/ \quad \text{beauty} \]
(b) /naʔqːkan/ nose and ear
   /ɡʰaʔqːgu/ skilful, well versed

\( \xi q:\xi \) occurs word medially when followed by a hetero-
organic stop or nasal — a close juncture feature.

/diʔqːdar/ disinclination
/muʔqːmah/ a pulse

/\( g^h \)/

The allophones of /\( g^h \)/ are \( g^h \) and \( \gamma \) — the
murmured velar stop and murmured velar fricative respective-
ively.

\( g^h \) occurs word initially and medially.

/\( g^h \)a ar/ spittle
/\( g^h \)ugu/ dove
/pa\( g^h \)a/ jute rope

\( q\gamma \) occurs word finally when preceded by a vowel — a
close juncture feature.

/ba\( q\gamma \)/ tiger
/me\( q\gamma \)/ cloud
/ s /

The allophones of /s/ are \( s_j \) and \( s'_n \) — the voiceless alveolar fricative and voiceless alveolar nasalized fricative respectively.

\( s_j \) occurs word initially, medially and finally except in the contexts in which \( s'_n \) occurs.

- /\( s_j \)uku/ sensitive plant
- /\( s_j \)on/ fan
- /\( s_j \)i/ prize

\( s'_n \) occurs word initially, medially and finally when preceded and/or followed by nasalized vowel or a nasal consonant in intra-word positions — a close juncture feature.

- /\( s'_n \)ay/ a raised bamboo platform
- /\( s'_n \)o/ meat
- /\( s'_n \)/ fish

/z/

The allophones of /z/ are \( z_j \) and \( z'_n \) — the voiced alveolar fricative and voiced alveolar nasalized fricative respectively.
\[ \tilde{\mathbf{z}} \] occurs word initially, medially and finally except in the contexts in which \( \tilde{\mathbf{z}} \) occurs.

\[ /\tilde{\mathbf{z}}\text{juri}/ \quad \text{rope} \]
\[ /\text{ga}\tilde{\mathbf{z}}\text{jol}/ \quad \text{a nail} \]
\[ /\text{ak}^\text{h}\tilde{\mathbf{z}}\text{j}/ \quad \text{enmity} \]

\[ \tilde{\mathbf{z}} \] occurs word initially, medially and finally when preceded and/or followed by nasalized vowel or a nasal consonant in intra-word positions — a close juncture feature.

\[ /\tilde{\mathbf{z}}\text{jay}/ \quad \text{(I) go} \]
\[ /\tilde{\mathbf{z}}\text{jol}/ \quad \text{confusion, perplexity} \]
\[ /\text{ma}\tilde{\mathbf{z}}\text{j}/ \quad \text{middle} \]

\[ /\text{h}/ \]

The allophones of the /h/ are \( \tilde{\text{h}} \) and \( \tilde{\text{h}}^\text{h} \) — the voiceless pharyngeal fricative and voiceless nasalized pharyngeal fricative respectively.

\[ \tilde{\text{h}} \] occurs word initially and medially except in the contexts in which \( \tilde{\text{h}}^\text{h} \) occurs.
loosely, widely apart.

hope

\( \text{\textipa{h\text{\^a}}/ a stone} \)

\( \text{\textipa{h\text{\^a}r\text{\^a}}/ a waist ring} \)

The allophones of \( /h/ \) are \( \text{\textipa{h\text{\^a}}} \) and \( \text{\textipa{h\text{\^a}}} \) — the murmured laryngeal fricative and murmured nasalized laryngeal fricative respectively.

\( \text{\textipa{h\text{\^a}}/ a place} \)

\( /l\text{\textipa{h\text{\^a}}}/ \) lac

\( /b\text{\textipa{h\text{\^a}}}/ \) pain

\( \text{\textipa{h\text{\^a}}/} \) occurs word initially, medially and finally when preceded and/or followed by a nasalized vowel or a nasal consonant in intra-word position — a close juncture feature.
/ \h^\an/ to prick
/ b\h^\ane/ morning
/ m\h^\/ month

/ d^h /

/d^h/ has only one allophone /d^h/ — the murmured alveolar affricate in all contexts.

/ /ch^h/ika/ wet, moist
/ \u/d^h/a/ physician

/ m /

/m/ has only one allophone /m/ — the voiced bilabial nasal in all contexts.

/ /m/ e/ /m/aj/ bad spirit, ghost
/ /g/ma/a/ /m/a/ firefly
/ /d/ /m/ri/ calf
/ /k/ /m/ /a/ a tree

/ n /

The allophones of /n/ are /n/ and /\n/ — the voiced alveolar nasal and voiced retroflex nasal respectively.
cludes word initially, medially and finally.

/Ćn/rom/    soft
/guĆn/ol/    a henshed
/Ćn/h/    salt

Ć occurs when immediately preceded by /r/ in (a) intra-word and (b) inter-word positions without intervening pause. In context (a) it is a close juncture feature while in (b) it is an open juncture feature.

(a) /korĆ/ a name
    /borĆona/ description

(b) /borĆam/ fame
    /norĆarajon/ God

Ć has only one allophone Ć — the voiced velar nasal in all contexts.

/aĆar/ charcoal
/beĆluku/ a ladpole
/bĆu/ hair of the body.
/ l /

The allophones of /l/ are /l/ and /l/ - the voiced alveolar and voiced retroflex lateral respectively. /l/ occurs word initially, medially and finally except in contexts in which /l/ occurs.

/l/ak^h or/  cowherd
/kami/l/a/  lamourous
/badam6l/  moss

/l/ occurs when immediately preceded /r/ in (a) intra-word and (b) inter-word positions without intervening pause. In consonant (a) it is a close juncture feature while in (b) it is an open juncture feature.

(a) /dur/l0b/  rare
    /bar/l1/  a fish
(b) /kanor/lum/  hair of the ear
    /kar/lath/  Whose stick?

/ r /

The allophones of /r/ are /r/, /r/ and /r/ — the voiced alveolar and retroflex and the murmured alveolar flap respectively.
\[ \mathbf{r} \] occurs word initially, medially and finally except in the contexts where \[ \mathbf{r} \] and \[ \mathbf{r} \] occurs.

\[ /\mathbf{r} / \text{ag/} \quad \text{anger} \]
\[ /\text{darm}\mathbf{r} \text{ji} \quad \text{calf} \]
\[ /\text{komo}\mathbf{r} \text{ji} \quad \text{waist} \]

\[ \mathbf{r} \] occurs when followed by an alveolar stop or nasal or lateral in (a) intra-word and (b) inter-word positions without intervening pause. In context (a) it is a close juncture feature while in (b) it is an open juncture feature.

(a) \[ /\text{bo}\mathbf{r} \text{toman/} \quad \text{now} \]
\[ /\text{ga}\mathbf{r} \text{d^h ana/} \quad \text{the back of the neck} \]
(b) \[ /\text{ka}\mathbf{r} \text{male/} \quad \text{Whose} \quad \text{hands?} \]
\[ /\text{bo}\mathbf{r} \text{h^h hi/} \quad \text{covetous} \]

\[ \mathbf{r} \] occurs when immediately preceded by \[ /h/ \] or \[ /b^h/ \] or \[ /d^h/ \] or \[ /g^h/ \] in consonant cluster -- a close juncture feature.

\[ /h\mathbf{r} \text{od/} \quad \text{lake} \]
\[ /b^h\mathbf{r} \text{anto/} \quad \text{a mistake} \]
\[ /d^h\mathbf{r} \text{it or astro/} \quad \text{a king of Mahabharata} \]
\[ /g^h\mathbf{r} \text{an/} \quad \text{smell} \]
The allophones of /w/ are [w] and [w~] — the voiced and voiced nasalized labio-velar approximant respectively.

[w] occurs word medially, and finally in contexts except in which [w~] occurs.

/su[w]a/ ceremonial defilment occasioned by the birth or death of a relative.

/ra[w]/ speech

[w~] occurs when preceded by nasalized vowels in intra-word positions or by nasal consonants in consonant clusters — a close juncture feature.

/no[w]a/ the feast of new rice.

/munu[w]a/ a banana

/ba[w]na/ a dwarf

/j/

The allophones of /j/ are [j] and [j~] — the voiced and voiced nasalized palatal approximant respectively.

[j] occurs word medially and finally in contexts except in which [j~] occurs.
3.2.1 The allophones of the monophthongal phonemes:

A study of the allophonic scatters of the six monophthongal phonemes reveals the fact that each has seven contextual variants or allophones. They are in complementary distribution, and, they exhibit partial phonetic similarity and pattern congruity. Their occurrences in the contexts discovered in this study are predictable. The following section describes the allophones in terms of their phonetic

\[ /pa[k\hat{i}p] / \quad \text{a robin bird} \]
\[ /ka[k\hat{i}] / \quad \text{who} \]

\[ /\tilde{i} / \quad \text{occurs when preceded by nasalized vowels in intra-word position or by nasal consonants in consonant clusters - a close juncture feature.} \]

\[ /n\tilde{i} / \quad \text{a name} \]
\[ /m\tilde{i} / \quad \text{a fruit} \]

8(a) Bloch, B.: A Set of Postulates for Phonomatic Analysis, Language 24, 1948
(b) Swadesh, M.: The Phonoetical Principle (in Readings in Linguistics), 1966, p. 32
(c) Twaddell, W.F.: On Defining the Phoneme (in Readings in Linguistics), 1966, p. 55
parameter, their distributions. The allophones have also been
transcribed by appropriate IPA prescribed symbols and diacri-
tical marks.

(a) In stressed and tonic syllable\textsuperscript{9}, the allophones of
the close and half-close monophthongs (rounded and unrounded)
are relatively longer and closer.

(b) In unstressed syllables\textsuperscript{10} their opener and shorter
longerers occur.

(c) In stressed and tonic syllables relatively longer
and opener allophones of the open monophthongs (both rounded
and unrounded) occur.

(d) As against this relatively shorter and closer
allophones of the open monophthongs (both unrounded and rounded)
occur in unstressed syllables.

(e) In introduced positions, the murmured allophones
of the monophthongs occur when immediately preceded by mur-
mured consonants. This is a close juncture feature.

\textsuperscript{9} Vide Section 5.1.4 of this study.
\textsuperscript{10} Vide section 5.1.4 of this study.
(f) Likewise the nasalized allophones of the monophthongs occur when immediately preceded nasal consonants. This is also a close juncture feature.

(g) In all other contexts the voiced allophones of the monophthongs occur.

Description of the allophones of the monophthongs take into consideration the coalescence of diverse features in different contexts. For example, \[ iː \parallel J \], the relatively longer and closer allophone of /i/ occurs in the coalesced contexts (a) and (g). In the descriptions below such coalescences will be denoted by the sign (+).

/i/ represents the front close vowel phoneme which has the following allophones: (the (-) reads 'represents').

\[ iː \parallel \parallel J \] - the relatively shorter and opener allophone of /i/ which occurs in contexts (b) + (g).

/b\[ iː \parallel \parallel J \]sa/ a hairy caterpillar.

/b\[ iː \parallel \parallel J \]son/ fan

\[ iː \parallel J \] - the relatively longer and closer allophone of /i/ which occurs in contexts (a) + (g).
/balʃiʃ/ a pillow
/urhʃiʃ/ bean

ʃi - the relatively shorter and opener nasalized allophone of /i/ which occurs in contexts (b) + (f).
/nʃiʃ/ lazi/ snake gourd
/nʃiʃ/ nhali/ a fish

ʃi - the relatively longer and closer nasalized allophone of /i/ which occurs in contexts (a) + (f).
/azinʃiʃ/ sty
/pʃalajʃiʃ/ a broker

ʃi - the relatively shorter and opener murmured allophone of /i/ which occurs in contexts (b) + (e)
/dʃiʃ/ la/ loose
/bʃiʃ/ za/ wed, moist

ʃi - the relatively longer and closer murmured allophone of /i/ which occurs in contexts (a) + (e)
/kʃahʃiʃ/ he goat
/gʃahʃiʃ/ a grass cutter
/e/ represents the front half-close vowel phoneme which has the following allophones:

\[ \text{ʃ} \] - the relatively shorter and opener allophone of /e/
which occurs in contexts (b) + (g).

/bʃ/ hor/ mustard seed
/sʃ/ pta/ narrow

\[ ñ \] - the relatively longer and closer allophone of /e/
which occurs in contexts (a) + (g).

/astʃ/ slow
/pʃ/ k/ mud

\[ ñ \] - the relatively shorter and opener nasalized allophone
of /e/ which occurs in contexts (b) + (f).

/mnʃ/ ma/ a ghost, bad spirit
/nʃ/ kar/ cat

\[ ñ \] - the relatively longer and closer nasalized allophone
of /e/ which occurs in contexts (a) + (f).

/manʃ/ purport, meaning
/najʃ/ a name
\[ e \] - the relatively shorter and opener murmured allophone of /e/ which occurs in contexts (b) + (e).

\[ b^h e \] a raft

\[ h e \] slanting

\[ e \] - the relatively longer and closer murmured allophone of /e/ which occurs in contexts (a) + (e)

\[ r^h e \] a name

\[ l a h e \] slowly

\[ a \] represents the front open vowel phonemes which has the following allophones:

\[ e \] - the relatively longer and opener allophone of /a/ which occurs in contexts (c) + (g).

\[ d o b e \] tank

\[ b e l e \] sub

\[ e \] - the relatively shorter and closer allophone of /a/ which occurs in contexts (d) + (g).

\[ h e \] curry

\[ r e \] anger

\[ e \] - the relatively longer opener nasalized allophone of /a/ which occurs in contexts (c) + (f).
/ra/ $\text{\`a}/ \rightarrow \text{red}

/tan/ $\text{\`a}/ \rightarrow \text{to cause to be pulled tight.}

\(\text{\`a}/\) - the relatively shorter and closer allophone of 
/a/ which occurs in contexts (d) + (f).

/\(\text{\`a}/\)_1/ a thread

/\(\text{\`a}/\)_1/ handle

\(\text{\`a}/\) - the relatively longer and opener murmured allophone
of /a/ which occurs in contexts (c) + (e).

/\(\text{\`a}/\)\text{\`a}/\)_1/ nest

/\(\text{\`a}/\)_1/ lac

\(\text{\`a}/\) - the relatively shorter and closer murmured allophone
of /a/ which occurs in contexts (d) + (e).

/\(\text{\`a}/\)\text{\`a}/\)_1/ the back of the neck

/\(\text{\`a}/\)_1/ necklace

/o/ represents the back open vowel phoneme which has the
following allophones:

\(\text{\`a}/\) - the relatively longer and opener allophone of /o /
which occurs in contexts (c) + (g).
\[ /zôbdo_0i:/ \] force
\[ /ôrth ô_0i:/ \] meaning

\[ /o_0i/ \] - the relatively shorter and closer allophone of \( /o/ \) which occurs in contexts (d) + (g).
\[ /d_0i/ \] an aquatic grass
\[ /k_0i/ \] banana

\[ /ô_ôi/ \] - the relatively longer opener nasalized allophone of \( /o/ \) which occurs in contexts (c) + (f).
\[ /norô_ôi/_m/ \] soft
\[ /onô_ôi/_wa/ \] heard

\[ /ô_ôi/ \] - the relatively shorter and closer nasalized allophone of \( /o/ \) which occurs in contexts (d) + (f).
\[ /mô_ôi/_sai/ \] wife's elder brother
\[ /kô_ôi/_môô_ôi/_f/ \] waist

\[ /ô_ôi/ \] - the relatively longer and opener murmured allophone of \( /o/ \) which occurs in contexts (c) + (e).
\[ /hôôô_ôi/_z/ \] easy
\[ /b_hôôô_ôi/_tôra/ \] not sharp
\[ \underline{\sigma_{\frac{1}{2}}} \] the relatively shorter and closer murmured allophone of \( /\sigma/ \) which occurs in contexts (d) + (e)

\[ /\text{noh}\underline{\sigma_{\frac{1}{2}}} / \] a name

\[ /\text{moh}\underline{\sigma_{\frac{1}{2}}} / \] mosquito

\( /\upsilon/ \) represents the back half close vowel phoneme which has the following allophones:

\[ \underline{\upsilon_{\frac{1}{2}}} \] the relatively longer and opener allophone of \( /\upsilon/ \) which occurs in contexts (c) + (g).

\[ /\text{kul}\underline{\upsilon_{\frac{1}{2}}} \text{wa}/ \] to be sufficient

\[ /\text{ak}\underline{\upsilon_{\frac{1}{2}}} \underline{\upsilon_{\frac{1}{2}}} \text{wa}/ \] clasp with the arms

\[ \underline{\upsilon_{\frac{1}{2}}} \] the relatively shorter and closer allophone of \( /\upsilon/ \) which occurs in contexts (d) + (g).

\[ /\text{bh}\underline{\upsilon_{\frac{1}{2}}} \] a gourd

\[ /\text{k}\underline{\upsilon_{\frac{1}{2}}} \] a kind of drum

\[ \underline{\upsilon_{\frac{1}{2}}} \] the relatively longer and opener nasalized allophone of \( /\upsilon/ \) which occurs in contexts (c) + (f).

\[ /\text{un}\underline{\upsilon_{\frac{1}{2}}} \text{wa}/ \] heard

\[ /\text{m}\underline{\upsilon_{\frac{1}{2}}} \text{ti}/ \] a name
$\tilde{u}_{\perp}$ - the relatively shorter and closer nasalized allophone of /u/ which occurs in contexts (d) + (f).

$/m\tilde{u}_{\perp}$ value

$/m\tilde{u}_{\perp}lan/$ the soft and white part of the root of the lotus

$\tilde{u}_{\perp}$ - the relatively longer and opener murmured allophone of /u/ which occurs in contexts (c) + (e).

$/uh\tilde{u}_{\perp}$ no

$/mal\tilde{u}_{\perp}$ a name

$\tilde{u}_{\perp}$ - the relatively shorter and closer murmured allophone of /u/ which occurs in contexts (d) + (e).

$/b^h\tilde{u}_{\perp}tri/$ female dog

$/b^h\tilde{u}_{\perp}tri/$ female pig

/u/ represents the back close vowel phoneme which has the following allophones:

$\tilde{u}_{\perp}$ - the relatively shorter and opener allophone of /u/ which occurs in contexts (b) + (g).

$/\tilde{u}_{\perp}day/$ vacant

$/b\tilde{u}_{\perp}b\tilde{u}_{\perp}ri_ba/$ a grass
\( \overline{\text{u}: \text{J}} \) - the relatively longer and closer allophone of /\text{u} / which occurs in contexts (a) + (g).

\( /\text{land}\overline{\text{u}: \text{J}} / \) a pulse

\( /\text{hud}\overline{\text{u}: \text{J}} / \) a bird

\( \overline{\text{u}: \text{J}} \) - the relatively shorter and opener nasalized allophone of /\text{u} / which occurs in contexts (b) + (f).

\( /\text{n}\overline{\text{u}: \text{J}}n/ / \) salt

\( /\text{m}\overline{\text{u}: \text{J}}\text{nuwa}/ / \) a banana

\( \overline{\text{u}: \text{J}} \) - the relatively longer and closer nasalized allophone of /\text{u} / which occurs in contexts (a) + (f).

\( /\text{san}\overline{\text{u}: \text{J}}/ / \) a name

\( /\text{man}\overline{\text{u}: \text{J}}/ / \) man

\( \overline{\text{u}: \text{J}} \) - the relatively shorter and opener murmured allophone of /\text{u} / which occurs in contexts (b) + (e).

\( /\text{b}\overline{\text{u}: \text{J}}l\text{b}\overline{\text{u}: \text{J}}l/ / \) a fruit

\( /\text{d}\overline{\text{u}: \text{J}}\text{ra}/ / \) axle

\( \overline{\text{u}: \text{J}} \) - the relatively longer and closer murmured allophone of /\text{u} / which occurs in contexts (a) + (e).
3.2.2 The allophones of the Diphthongal phonemes:

The phonetic diphthongs which are described and symbolized in chapter 1 of this study are accorded legitimate phonemic status in terms of the principles of complementary distribution, partial phonetic similarity and pattern congruity. Predictability of occurrences in specific contexts is one single major criterion determining the allophony of the diphthongal phonemes. The following observations encapsulate the allophonic scatters of the diphthongal phonemes:

(a) All diphthongs are voiced when preceded and/or followed by voiced consonants.

(b) All diphthongs are nasalized when preceded and/or followed by nasal consonants in intra-word positions — a close juncture feature.

(c) All diphthongs are murmured when preceded by murmured consonants in intra-word positions — a close juncture feature.
(d) All diphthongs are relatively short in unstressed syllables.

(e) All diphthongs are relatively long in stressed or tonic syllables. In stressed syllables the initial components of the closing diphthongs get lengthened whereas in the same contexts the terminal components of the falling and equipollent diphthongs get lengthened. The relatively long components of the diphthongal allophones are indicated in the transcriptions by the diacritic (:) written to the right of the symbols.

It must be pointed out here and now that effective descriptions of the allophones of the diphthongal phonemes necessitates the consideration of coalescence of different contexts. For example, [iaː], the relatively longer voiced allophone of the phoneme /ia/ occurs in the coalesced contexts (e) and (a) described earlier in this section. In the descriptions below such coalescences will be denoted by the sign (+).

/ia/ represents the diphthong with front close unrounded and front open unrounded initial and terminal quality
respectively. It has the following allophones:

(the (-) reads 'represents').

\[\text{\textipa{ia}}\] - the relatively shorter voiced allophone of /ia/ which occurs in contexts (d) + (a).

\[\text{\textipa{ia}s}\]   garlic
\[\text{\textipa{ia}m}\]   (I) will sew

\[\text{\textipa{ia:}}\] - the relatively longer voiced allophone of /ia/ which occurs in contexts (e) + (a).

\[\text{\textipa{ia:j}}\]   marriage
\[\text{\textipa{ia}}\]   a tree

\[\text{\textipa{ia}}\] - the relatively shorter nasalized allophone of /ia/ which occurs in contexts (d) + (b).

\[\text{\textipa{ia:l}}\]   a kind of fruit.
\[\text{\textipa{ia:n}}\]   give birth

\[\text{\textipa{ia:}}\] - the relatively longer nasalized allophone of /ia/ which occurs in contexts (e) + (b).

\[\text{\textipa{ia:j}}\]   a goldsmith
\[\text{\textipa{ia}}\]   to cause to be carried.
\( [\text{ia}] \) - the relatively shorter murmured allophone of /ia/
which occurs in contexts (d) + (c).

/\text{adh}[\text{ia}]x/ share cropping
/hah[\text{ia}]l/ courageous, brave

\( [\text{ia:}] \) - the relatively longer murmured allophone of /ia/
which occurs in contexts (e) + (c).

/\text{lub}[\text{ia:}]l/ greed, covetous
/h[\text{ia:}]l/ heart

/\text{iu}/ represents the diphthong with front close unrounded and
back close rounded initial and terminal quality respectively. It has the following allophones:

\( [\text{iu}] \) - the relatively shorter voiced allophone of /iu/
which occurs in contexts (d) + (a).

/b[\text{iu}]l/ a name
/z[\text{iu}]ram/ a name

\( [\text{iu:}] \) - the relatively longer voiced allophone of /iu/
which occurs in contexts (e) + (a).

/z[\text{iu:}]l/ soul
\[ \text{i}u_{\text{j}} \] - the relatively shorter nasalized allophone of /iu/ which occurs in contexts (d) + (b).

\[ /n\text{i}u_{\text{j}}l/ \quad \text{mongoose} \]

\[ \text{i}u_{\text{i}} \] - the relatively longer nasalized allophone of /iu/ which occurs in contexts (e) + (b).

\[ /m\text{i}u_{\text{i}}/ \quad \text{miaw of a cat.} \]
\[ /n\text{i}u_{\text{i}}/ \quad \text{hoot of an owl} \]

\[ \text{i}u_{\text{u}} \] - the relatively shorter murmured allophone of /iu/ which occurs in contexts (d) + (c).

\[ /g^{h}\text{i}u_{\text{u}}t^{h}iu/ \quad \text{butter and other things} \]

\[ \text{i}u_{\text{u}:} \] - the relatively longer murmured allophone of /iu/ which occurs in contexts (e) + (c).

\[ /g^{h}\text{i}u_{\text{u}:}/ \quad \text{butter} \]

/ei/ represents the diphthong with front half-close unrounded and front close unrounded initial and terminal quality respectively. It has the following allophones:

\[ \text{e}i_{\text{j}} \] - the relatively shorter voiced allophone of /ei/
which occurs in contexts (d) + (a).

\[ /b\text{e}i_{\text{j}}\text{man}/ \quad \text{a cheater, wicked} \]
\[ e:i \] - the relatively longer voiced allophone of /ei/
which occurs in contexts (e) + (a).

\[ z[e:i] \] whence

\[ s[e:i] \] a word used in driving away a dog

\[ \tilde{e}i \] - the relatively shorter nasalized allophone of /ei/
which occurs in contexts (d) + (b).

\[ man[\tilde{e}i]ba/ \] purport, meaning

\[ za[\tilde{e}i]de/ \] (I) go

\[ \tilde{e}:i \] - the relatively longer nasalized allophone of /ei/
which occurs in contexts (e) + (b).

\[ ban[\tilde{e}:i] \] a name

\[ kha[\tilde{e}:i] \] (I) take

\[ e:i \] - the relatively shorter murmured allophone of /ei/
which occurs in contexts (d) + (c).

\[ nah[ei]za/ \] (he) does not come at all.

\[ hei/ \] repeatedly supported

\[ \tilde{e}:i \] - the relatively longer murmured allophone of /ei/
which occurs in contexts (e) + (c).

\[ ah[\tilde{e}:i] \] (he) always come

\[ muh[\tilde{e}:i] \] a name
/ea/ represents the diphthong with front half-close unrounded and front open unrounded initial and terminal quality respectively. It has the following allophones:

[ea] - the relatively shorter voiced allophone of /ea/
which occurs in contexts (d) + (a).

/b[ea]ta/ the worse one

[ea:] - the relatively longer voiced allophone of /ea/
which occurs in contexts (e) + (a).

/b[ea]/ inferior in quality

[ea] - the relatively shorter nasalised allophone of /ea/
which occurs in contexts (d) + (b).

/n[ea]li/ lonely

[ea:] - the relatively longer nasalized allophone of /ea/
which occurs in contexts (e) + (b).

/nimun[ea]/ a disease.

[ea] - the relatively shorter murmured allophone of /ea/
which occurs in contexts (d) + (c).

/gaeh[ea]r/ disregard

/h[ea]r/ a name
\( \text{\[ea: J\]} \) - the relatively longer murmured allophone of /ea/ which occurs in contexts.

/\text{bah\[ea: J\]}\] stale

/\text{ah\[ea: J\]}\] (he) has coming

/\text{ai}\] represents the diphthong with front open unrounded and front close unrounded initial and terminal quality respectively. It has the following allophones:

\( \text{\[ai\]} \) - the relatively shorter voiced allophone of /ai/ which occurs in contexts (d) + (a).

/\text{l\[ai\]hak}\] a vegetable

/\text{al\[ai\]bilai}\] uncared for, helpless

\( \text{\[a:i\]} \) - the relatively longer voiced allophone of /ai/ which occurs in contexts (e) + (a).

/\text{b\[a:i\]}\] elder brother

/\text{k\[a:i\]a}\] a black pulse.

\( \text{\[ai\]} \) - the relatively shorter nasalized allophone of /ai/ which occurs in contexts (d) + (b).

/\text{n\[ai\]ka}\] not existing

/\text{z\[ai\]na}\] will (you) go
\[ \text{\textlangle ai\textrangle} - \text{the relatively longer nasalized allophone of } /ai/ \]

which occurs in contexts (e) + (b).

\[ /\text{nim} \text{\textlangle ai\textrangle} / \quad \text{a name} \]

\[ /\text{n} \text{\textlangle ai\textrangle} / \quad \text{no} \]

\[ \text{\textlangle ai\textrangle} - \text{the relatively shorter murmured allophone of } /ai/ \]

which occurs in contexts (d) + (c).

\[ /\text{g} \text{\textlangle ai\textrangle} l / \quad \text{wounded, blow} \]

\[ /\text{h} \text{\textlangle ai\textrangle} l / \quad \text{wheel ring of a carriage} \]

\[ \text{\textlangle ai\textrangle} - \text{the relatively longer murmured allophone of } /ai/ \]

which occurs in contexts (e) + (c).

\[ /\text{b} \text{\textlangle ai\textrangle} l / \quad \text{brother} \]

\[ /\text{h} \text{\textlangle ai\textrangle} l / \quad \text{dispute} \]

\[ / \text{ae} / \text{represents the diphthong with front open unrounded and} \]

front half-close unrounded initial and terminal quality 
respectively. It has the following allophones:

\[ \text{\textlangle ae\textrangle} - \text{the relatively shorter voiced allophone of } /ae/ \]

which occurs in contexts (d) + (a).

\[ /\text{k} \text{\textlangle ae\textrangle} t\text{o} / \quad \text{who} \]

\[ /\text{z} \text{\textlangle ae\textrangle} g\text{a} / \quad \text{place} \]
[əː ɪ ə] - the relatively longer voiced allophone of /æ/ which occurs in contexts (e) + (a).
/kʰ/ [ə ɪ ə] eats

[ə ɪ ə] - the relatively shorter nasalized allophone of /æ/ which occurs in contexts (d) + (b).
/m/ [ə ɪ ə] ki/ wife, female

[ə ɪ ə] - the relatively longer nasalized allophone of /æ/ which occurs in contexts (e) + (b).
/ban/ [ə ɪ ə] / makes

[æ ɪ ə] - the relatively shorter murmured allophone of /æ/ which occurs in contexts (d) + (c).
/n/ [æ ɪ ə] ran/ harassed

[æ ɪ ə] - the relatively longer murmured allophone of /æ/ which occurs in contrasts (e) + (c).
/bah/ [æ ɪ ə] / nest

/au/ represents the diphthong with front open unrounded and back half-close rounded initial and terminal quality respectively. It has the following allophones:

[ə u] - the relatively shorter voiced allophone of /au/ which occurs in contexts (d) + (a).
/d/ [ə u] ka/ a place

[ə ɪ u] - the relatively longer voiced allophone of /au/ which occurs in contexts (e) + (a).
/b/ [ə ɪ u] / a paddy
/d/ [ə ɪ u] / a big knife
\( A̤ u \)- the relatively shorter nasalized allophone of /au/
which occurs in contexts (d) + (b).

/na A̤ u ʃria/ a boat man
/zA̤ u ʃna/ a pot used for keeping wine

\( A̤ iu \)- the relatively longer nasalized allophone of /au/
which occurs in contexts (e) + (b).

/na A̤ iu/ boat
/bh A̤ iu (you) break it

\( a:u \)- the relatively shorter murmured allophone of /au/
which occurs in contexts (d) + (c).

/bh a:u ʃria/ actor
/ha a:u ʃra/ a place

\( a:u \)- the relatively longer murmured allophone of /au/
which occurs in contexts (e) + (c).

/gh a:u/ blow of a knife
/bh a:u (you) float it.

/au/ represents the diphthong with front open unrounded
and back close rounded initial and terminal quality
respectively. It has the following allophones:
\[\text{au}\] - the relatively shorter voiced allophone of /au/
which occurs in contexts (d) + (a).

/b\[\text{au}\]/la/ a name
/k\[\text{au}\]/wa/ crow

\[\text{a:u}\] - the relatively longer voiced allophone of /au/
which occurs in contexts (e) + (a).

/l\[\text{a:u}\]/ bottle gourd

/\[\text{a:u}\]/ra/ orphan
/n\[\text{a:u}\]/wa/ a name

\[\text{a:u}\] - the relatively shorter nasalized allophone of /au/
which occurs in contexts (d) + (b).

/m\[\text{a:u}\]/ra/ motherly
/k\[\text{a:u}\]/ (you) earn

\[\text{a:u}\] - the relatively longer nasalized allophone of /au/
which occurs in contexts (e) + (b).

/m\[\text{a:u}\]/ elder brother's wife
/k\[\text{a:u}\]/ria/ voracious
\( \text{a:u} \text{J} \) - the relatively longer murmured allophone of /\text{au}/ which occurs in contexts (e) + (c).

/\text{gha u g k} \)/ - bow-wow

/\text{ud h a:u} \text{J} /) - flee

/\text{u1} / represents the diphthong with back half-close rounded and front close unrounded initial and terminal quality respectively. It has the following allophones:

\( \text{u1} \text{J} \) - the relatively shorter voiced allophone of /\text{u1}/ which occurs in contexts (d) + (a).

/\text{t h a:u} \text{J} /a/ - a gunny bag

\( \text{u:1} \text{J} \) - the relatively longer voiced allophone of /\text{u1}/ which occurs in contexts (e) + (a).

/\text{t a:u} \text{J} \text{a} /) - curdled milk

\( \ddot{\text{u1}} \text{J} \) - the relatively shorter nasalized allophone of /\text{u1}/ which occurs in contexts (d) + (b).

/\text{m u} \text{J} /a/ - peacock

/\text{k u} \text{J} /a/ - bride

\( \ddot{\text{u:1}} \text{J} \) - the relatively longer nasalized allophone of /\text{u1}/ which occurs in contexts (e) + (b).
\[ /m [ ù: i ] / \quad \text{leveller, a harrow} \]
\[ /n [ ù: i ] / \quad \text{river} \]

\[ /u_i ] - \text{the relatively shorter murmured allophone of } /y_i/ \]
which occurs in contexts (d) + (c).
\[ /b^h [ u_i ] / \quad \text{buffalo} \]
\[ /h [ u_i ] / \quad \text{an instrument} \]

\[ /u_i : i ] - \text{the relatively longer murmured allophone of } /y_i/ \]
which occurs in contexts (e) + (c).
\[ /b^h [ u_i : i ] / \quad \text{cultivate} \]
\[ /h [ u_i : i ] / \quad \text{instead of} \]

\[ /u_a / \quad \text{represents the diphthong with back half-close rounded} \]
and front open unrounded initial and terminal quality
respectively. It has the following allophones:

\[ /u_a ] - \text{the relatively shorter voiced allophone of } /u_a/ \]
which occurs in contexts (d) + (a).
\[ /b [ u_a ] / \quad \text{ploughed} \]
\[ /g [ u_a ] / \quad \text{milk man} \]

\[ /u_a : J - \text{the relatively longer voiced allophone of } /u_a/ \]
which occurs in contexts (e) + (a).
\[ /\text{b}[^{\text{ua:J}}]/ \quad \text{a thread} \]

\[ /\text{l}[^{\text{ua:J}}]/ \quad \text{keeping} \]

\[ /\text{n}[^{\text{ua:J}}]/ \quad \text{the relatively shorter nasalized allophone of} /\text{ua}/ \]
which occurs in contexts (d) + (b).

\[ /\text{b}[^{\text{uâ~J}ni}]/ \quad \text{weaving thread} \]

\[ /\text{n}[^{\text{uâ~J}ni}]/ \quad \text{the ceremony of anointing the bridegroom or bride before bath} \]

\[ /\text{uâ:J}/ \quad \text{the relatively longer nasalized allophone of} /\text{ua}/ \]
which occurs in contexts (e) + (b).

\[ /\text{m}[^{\text{uâ:J}}]/ \quad \text{a fish} \]

\[ /\text{n}[^{\text{uâ:J}}]/ \quad \text{the feast of new rice} \]

\[ /\text{uâ:J}/ \quad \text{the relatively shorter murmured allophone of} /\text{ua}/ \]
which occurs in contexts (e) + (c).

\[ /\text{d}[^{\text{uâ:J}}]/ \quad \text{washed} \]

\[ /\text{h}[^{\text{uâ:J}}]/ \quad \text{to be cause to be done} \]

\[ /\text{uâ:J}/ \quad \text{the relatively longer murmured allophone of} /\text{ua}/ \]
which occurs in contexts (e) + (c).

\[ /\text{d}[^{\text{uâ:J}}]/ \quad \text{washed} \]

\[ /\text{h}[^{\text{uâ:J}}]/ \quad \text{to become, to be finished} \]
\( /\text{uu}/ \) represents the diphthong with back open half-close rounded and close rounded initial and terminal quality respectively. It has the following allophones:

\( /\text{uu}/ \) - the relatively shorter voiced allophone of \( /\text{uu}/ \)
which occurs in contexts (d) + (a).

\( /\text{t}/\text{uu}/\text{k\text{han}}/ \) the pot

\( /\text{u}:\text{u}/ \) - the relatively longer voiced allophone of \( /\text{uu}/ \)
which occurs in contexts (e) + (a).

\( /\text{b}/\text{u}:\text{u}/ \) elder brother's wife
\( /\text{t}/\text{u}:\text{u}/ \) a pot

\( /\text{m}/\text{u}:\text{u}/\text{ran}/ \) a name
\( /\text{m}/\text{u}:\text{u}/\text{man}/ \) a place

\( /\text{m}/\text{u}:\text{u}/\text{man}/ \) - the relatively longer nasalized allophone of \( /\text{uu}/ \)
which occurs in contexts (e) + (b).

\( /\text{m}/\text{u}:\text{u}/\text{man}/ \) honey bee

\( /\text{b}/\text{u}:\text{u}/ \) - the relatively shorter murmured allophone of \( /\text{uu}/ \)
which occurs in contexts (d) + (c).

\( /\text{b}/\text{u}:\text{uu}/\text{b}:\text{uu}/ \) barking of a dog
\[ u:\text{u\_J} \] - the relatively longer murmured allophone of /uu/ which occurs in contexts (e) + (c).

/\text{d\_u:\text{u\_J}}/ a wave

/ui/ represents the diphthong with back close rounded and front close unrounded initial and terminal quality respectively. It has the following allophones:

\[ u:\text{i\_J} \] - the relatively shorter voiced allophone of /ui/ which occurs in contexts (d) + (a).

/p\text{ui\_\text{%}}\text{\_hak}/ basella alba

\[ u:\text{i\_j} \] - the relatively longer voiced allophone of /ui/ which occurs in contexts (e) + (a).

/g\text{ui\_\text{J}}/ an iguana

\[ u:\text{i\_\text{J}} \] - the relatively shorter nasalized allophone of /ui/ which occurs in contexts (d) + (b).

/m\text{ui\_\text{J}da}/ curved knife

/k\text{ui\_\text{J}na}/ bride

\[ u:\text{i\_\text{J}} \] - the relatively longer nasalized allophone of /ui/ which occurs in contexts (e) + (b).

/am\text{ui\_\text{J}}/ female friend of mother

/n\text{ui\_\text{J}}/ river
\( \text{ui}_{\text{short}} \) - the relatively shorter murmured allophone of /ui/ which occurs in contexts (d) + (c).

/\text{ui}_{\text{short}}/'s/ buffelo

/\text{ui}_{\text{short}}/hala/ loud noise

\( \text{ui}_{\text{long}} \) - the relatively longer murmured allophone of /ui/ which occurs in contexts (e) + (c).

/\text{ui}_{\text{long}}/'s/ cultivation

/\text{ui}_{\text{long}}/hala/ washing.