

# Comments on PRI 65: Devanagari Eyelash Ra

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## 1. Introduction

The subject of Devanagari eyelash ra was discussed on the indic@unicode.org mailing list. This document recapitulates the evidence pertinent to this issue.

The following individuals have participated in the discussion on the indic@unicode.org list: Omi Azad, Vinod Balakrishnan, Stefan Baums, Peri Bhaskararao, Varghese Chacko, Gihan Dias, Ketaki Kushari Dyson, Micheal Everson, Soleiman Karim, Nishad Kaypally, Jonathan Kew, Antoine Leca, Rick McGowan, Mike Meir, Eric Muller, Paul Nelson, Mahesh T. Pai, Hariram Pansari, Dr. U. B. Pavanaja, Rajkumar S., Deepayan Sarkar, Rajeev J. Sebastian, Gautam Sengupta, Sukhjinder Sidhu, Steve Smith, Kevin Sooryan, Sinnathurai Srivas, K. G. Sulochana, Owen Taylor, Anirban Udr, Uma Umamaheswaran, Ken Whistler.

## 2. Eyelash ra in Marathi and Nepali

Eyelash ra refers to the written sign  $\bar{\text{र}}$  which represents some kind of /r/ sound.

All sources agree that when a /r/ sound follows another consonant (in pronunciation), it is written either as a stroke attached to that other consonant (e.g.  $\bar{\text{प्र}}$ ) or a circumflex-like sign below it (e.g.  $\bar{\text{र}}$ ). In the remaining cases, the /r/ sound is written in one of three ways: using  $\bar{\text{र}}$ , using a repha  $\overset{\text{c}}{\text{र}}$  over the next consonant, or using an eyelash ra  $\bar{\text{र}}$ . The description of those cases differs across the sources.

### 2.1. Bernsten and Nimbkar

*A Marathi reference grammar*, Maxine Bernsten and Jai Nimbkar, Philadelphia : South Asia Regional Studies, University of Pennsylvania, 1975 (PK2357.B39 1975).

The eyelash ra and repha forms are discussed on page 22:

( b ) Preceding syllable-final consonant. The  $\bar{\text{र}}$  is represented by a curve called a *rəphar* put over the following consonant and its vowel sign. If the vowel sign has a *matra* or *velanti*, the *rəphar* goes to its right.

र	+	म	=	मै	rmə
र	+	व	=	वै	rvə
र	+	वे	=	वै	rve

Note: Actually there is no pronunciation difference between a *rəphar* and a full *r* preceding a consonant in the middle of a word. It is impossible to judge from the pronunciation which sign should be used. For such words the correct spelling must be memorized.

पर्वत	pərvət
परवा	pərva

(c) At the beginning of syllable, the र is represented by a curve : ~.

र	+	ह	=	ःह	ःहस्व	rhəsvə
र	+	य	=	ःय	दोःया	dorya

Side note: the Note in the middle of the text above is not a problem for character encoding, as the two words have a different written form with different representation in Unicode: in the first word, RA and VA are in the same consonant cluster (i.e. the representation is <RA, VIRAMA, VA>), while they are in separate clusters in the second (i.e. the representation is <RA, VA>). The second word also illustrates the disconnect between the pronounced form (pure /r/ consonant, without a vowel sound) and the written form (full RA, without any indication that the inherent /a/ is not pronounced).

## 2.2. Kale and Soman

*Learning Marathi*, Kalyan Kale and Anjali Soman, Pune : Shri Vishakha Prakashan, 1986 (PK2355.K35 1986).

The eyelash ra and repha forms are discussed on page XXVI:

(a) र — as a continuant trill as a first member = <sup>ˆ</sup> ( above the head line of the letter following )  
( Technically it is known as रफार )

नूरय	=	सूर्य
स्वरय	=	स्वर्ग
अरज	=	अर्ज
अरण	=	अर्ण

(b) र̣ — as a flap — as a first member.  
= ~ ( a curved horizontal line )

तर्हा	=	तःहा
वार्याचा	=	वाःयाचा
रहास	=	ःहास
सुर्या	=	सुःया

Note the contrast between the first example where a repha is used and the last example where an eyelash ra is used. While the two contexts are not equal, they are essentially equivalent for our discussion, i.e. these two written words show a contrast between repha and eyelash ra.

## 2.3. Acharya

*A descriptive grammar of Nepali and an analyzed corpus*, Jayaraj Acharya, Washington, D.C.: Georgetown

University Press, 1991 (ISBN 0878402829).

This author analyzes Nepali syllables as being of the form (C)(G)V(G)(C), where the first C is the onset consonant, the first G is a glide (/y/ or /w/) he calls the pre-peak satellite, V is the peak vowel, the second G is a glide he calls the post-peak satellite, and the final C is the coda consonant. He then describes the display of a RA:

When the symbol र stands for the phoneme /r/ that is in the onset position of the second syllable as in CV.CGV structure, the /r/ is represented by symbol - , e.g. पन्यो *pa.ryo* 'it fell in', गन्यो *ga.ryo* 'he did it'

When the symbol र stands for the phoneme /r/ that is in the coda position of the the first syllable as in CVC.CV, the /r/ is represented by the symbol र e.g. गर्न *gar.na* 'to do (inf.)', मर्न *mar.na* 'to die (inf.)'.

## 2.4. Other contrasts

Peri Bhasharao gives in L2/02-402 a minimal contrast in Marathi, आचार्यास “to the teacher” vs. आचार्यास “to the cook”; (from Naik, B.S., *Typography of Devanagari-1*, Bombay: Directorate of Languages, 1971).

Gautam Sengupta gives the following minimal contrast in Marathi: दर्या /darya/ “ocean” vs. दर्या /darya/ “valleys”.

## 3. Dravidian retracted R

The Dravidian languages have a retracted R sound, which is still written in modern Malayalam using the sign ॠ

and in modern Tamil using the sign ॠ; that sound is written in older Telugu using the sign ॠ, and in older

Kannada using the sign ॠ. (older is very relative; e.g. the Telugu sign was still taught a few decades ago). Those signs have the usual inherent vowel, which is "removed" in writing by the usual devices (half-form, explicit virama, whatever).

Hindi does not have that sound, and the “core” Devanagari script does not contain a sign for it. In order to transcribe the Dravidian languages in Devanagari, the combination of a RA with a nukta is used as the target of the various RRA signs.

## 4. The character standards

ISCII 1991 encoded the RRA (at D0 208) and gave it the name “Consonant Hard RA (Southern Scripts)”. ISCII also described the eyelash-RA as the half-form of the RRA (on page 12, under a note).

Unicode 2.0 (and Unicode 1.1 before it) prescribes the use of RA+VIRAMA+ZWJ to represent the eyelash-RA. This is captured in what was then rule R5 (which is now rule R5a, with the words “for compatibility with The Unicode Standard, Version 2.0” inserted).

Unicode 3.0/4.0 reflected the ISCII choice, in what is now rule R5: “In conformance with the ISCII standard, the half-consonant form RRAh is represented as eyelash-RA. This form of RA is commonly used in writing Marathi and Newari.”, and U+0931 र DEVANAGARI LETTER RRA was annotated with:

The RA with a nukta is encoded as U+0931 र DEVANAGARI LETTER RRA, and is annotated:

- for transcribing Dravidian alveolar r
- half form is represented as “Eyelash RA”

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## Document History

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Revision	Date	Comments
1	May 11, 2005	Initial version