

## About ऋ (ṛ) and ॠ (ṛi) in Sanskrit

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This paper attempts to understand the way the grammatical tradition of Paninian treats two sounds ṛ and ṛi that are found in Sanskrit. The sound 'ṛ' occurs in many Sanskrit words like 'Kṛṣṇa' and 'hṛdaya'. The sound 'ṛi' occurs in words like 'kṛpṭiḥ' that are derived from root 'kṛpū (sāmarthyē)'. The two sounds have been taught in the second *sūtra* of the Māheśvara-sūtras of the Aṣṭādhyāyī. The sounds that have been taught from the first to fourth *māheśvara-sūtras* are collectively called as 'ac' in Pāṇini. The book 'Pāṇinīyaśikṣā' calls them 'Svaras'. The characteristics of these two sounds however are different from those of the other sounds that fall under the category of *svaras*. This paper attempts to analyze how Paninian grammatical tradition views, categorizes and accommodates these two sounds.

**Key Words:** Sanskrit, the sounds 'ṛ' and 'ṛi', *svara*, vowel,

### 1. Introduction:

The two sounds 'ṛ' and 'ṛi' are commonly known as 'Svara' in Sanskrit. If a *svara* is an exact equivalent of 'vowel', this appears to be a misunderstanding of the tradition. It, therefore becomes essential to examine all the discussions available about these two sounds in Paninian grammatical tradition and understand the reason behind this common perception in Sanskrit.

### 2. Common Perception About the Nature of Sounds 'ṛ' and 'ṛi' in Sanskrit:

A common belief about sounds 'ṛ' and 'ṛi' in Sanskrit is that they are *svaras*. The two sounds are taught in the second Māheśvara-sūtra of the

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Aṣṭādhyāyī of Pāṇini. The sounds that have been taught in the first four *sūtras* of the Aṣṭādhyāyī are collectively known as ‘ac’ and are called as ‘Svaras’ in books like Pāṇinīyaśikṣā. There is the following verse in Pāṇinīyaśikṣā –

*svarā vimśatirekaśca sparśānām pañcaviṃśatiḥ|*

*yādayaśca smṛtā hyaṣṭau catvāraśca yamāḥ smṛtāḥ||* (Verse 4)<sup>3</sup>

This verse clearly says that *svaras* are 21 in number. The sounds ‘ṛ’ and ‘lृ’ have to be included in the list of *svaras* along with the other sounds like *a, ā, i, ī* and so on to total up to the number 21.

All other sounds taught in the *māheśvara-sūtras* are single sounds (or diphthongs). The common understanding about sounds ‘ṛ’ and ‘lृ’ is that they too are single sounds like the others. The sound ‘ṛ’ is often pronounced as ‘ri’ or ‘ru’, which gives us an impression that is a syllable and not a *svara*. The sound ‘lृ’ is written as ‘लृ’ in Devanagari script. Just as क्+ऋ = कृ or ग्+ऋ = गृ, one feels that ल्+ऋ = लृ. This gives us an impression that ‘लृ’ is a syllable. यृ may be broken-up as य्+ऋ. In the *sūtra* ‘पुषादिद्युताङ्लृदितः परस्मैपदेषु (Aṣṭādhyāyī – 3.1.55)’ we find य्लृ. One may be tempted to break-up य्लृ as य्+ल्+ऋ. The correct break-up of य्लृ however is य्+लृ. However this is due to the limitation of the Devanagari script.

### 3. The Concept of *Svara*:

The etymology of *svaras* in contrast with that of the *vyañjanas* is found in the books called ‘Prātiśākhya’ and is quoted in Patanjali’s Mahābhāṣya as follows –

**Sanskrit** - *na punaḥ antareṇa acam vyañjanasya uccāraṇam api bhavati . anvartham khalu api nirvacanam : svayam rājante svarāḥ . anvak bhavati vyañjanam iti.* (Mahābhāṣya on Panini 1.2.29-20)<sup>3</sup>.

<sup>3</sup> See Gosh (1938:9)

<sup>3</sup> See Cardona (P\_1,2.29-30.1) KA\_I,206.14-25 Ro\_II,43-45

**English Translation** – Without *ac* a *vyañjana* cannot be pronounced. The following etymology is indeed appropriate ‘those that shine on their own are *svaras*. Those that follow are the *vyañjanas*.

This etymology clearly tells us that those sounds that can be pronounced clearly independently are *svaras*.

#### 4. Translation of the Word ‘Svara’:

The word ‘svara’ is often translated as a ‘vowel’. As per definition a vowel is a sound that is produced with no constriction in the vocal tract. While pronouncing a vowel there is no significant build-up of air pressure at any point above the glottis. Thus we see that there is a slight difference between the concept of a *svara* and that of a vowel. Generally only those sounds can be pronounced clearly independently where there is no constriction. In that way the term ‘*svara*’ coincides well with the term ‘vowel’. There is some degree of constriction in the production of sounds ‘ṛ’ and ‘ḷ’. They therefore cannot be called as vowels. They can still be called as *svaras* as their independent pronunciation is very well possible. Even fricatives can be pronounced independently. However, they cannot be called as vowels. By definition they can fall under the category of *svaras*. However, nowhere in tradition have the fricatives like *s*, *ś* and *ṣ* been called as *svaras*. This means that the definition of a *svara* provided above is not very precise.

A concept similar to that of ‘constriction’ is called ‘Vivṛti’ and falls under the group of ‘Ābhyañtara-yatna’ the following verse found in the Pāṇinīyaśikṣā is relevant in this regard –

*aco'sprṣṭā yañastvīṣannemasprṣṭāḥ śalaḥ smṛtāḥ|*  
*śeṣāḥ sprṣṭā halaḥ proktā nibodhānupradānataḥ||* (Verse 38)<sup>8</sup>

The above verse calls *Ābhyañtara-yatna* as ‘Anupradāna’ and says that there is *nemasprṣā* i.e., partial constriction in the vocal tract in the pronunciation of *s*, *ś*, *ṣ* and *h* while there is no constriction in the pronunciation of *ac* (which includes *r* and *ḷ*). The following *sūtras* found in the Pāṇinīya-śikṣā-sūtrapāṭha are relevant in this context – ‘īṣadvivṛtakaraṇā ūsmāṇaḥ (3.6)’ ‘vivṛtakaraṇā vā (3.7)’ and ‘vivṛtakaraṇāḥ svarāḥ (3.8)’<sup>9</sup>. They mean that *s*, *ś*, *ṣ* and *h* may be considered

<sup>8</sup> See Gosh (1938:73)

<sup>9</sup> See Pandey, G. (2004: 104)

either *īṣadvivṛtakaraṇas* or *vivṛtakaraṇas* i.e., there is either partial or no constriction in the pronunciation of *s*, *ś*, *ṣ* and *h* but *svaras* are necessarily *vivṛtakaraṇāḥ* i.e., there is no constriction. By composing the *sūtra* ‘*nājjhalau* (Aṣṭādhyāyī –1.1.10)’ Panini opines that there is no constriction in the pronunciation of *svaras* as well as *s*, *ś*, *ṣ* and *h*, but still *svaras* and fricatives are not homogenic. The sounds *ṛ* and *ṝ* therefore can be called as *svaras* but not as vowels.

### 5. Why have *ṛ* and *ṝ* been included among *svaras*?

The tradition gives places of articulation of various sounds. The places of articulation of the vowels have also been given. For example – ‘*akuhavisarjanīyāḥ kaṇṭhyāḥ*’ and ‘*icuyaśāstālavayāḥ*’ (Pāṇinīya-śikṣā-sūtrapāṭha 1.1 and 1.7). The first *sūtra* says that apart from sounds *k*, *kh*, *g*, *gh*, *ñ* and *h*, the sound *a* is also pronounced from *kaṇṭha* (i.e., velum). The second *sūtra* quoted above similarly says that the place of articulation of the sound *i* is *tālu* (i.e., palate). The hard palate has been given as the place of articulation of *ṛ* where as the upper teeth have been given as the place of articulation of *ṝ*. Vowels other than *ṛ* and *ṝ* are identified with the place of articulation in a different sense. The place *kaṇṭha* for example as the place of articulation of *a* refers to centredness or backness of the tongue. Similarly *tālu* as the place of articulation of *i* refers merely to the frontness. *Oṣṭha* as a place of articulation of *u* refers to rounding. The active articulators are not touching any place of articulation. There is no constriction in the vocal tract while articulating vowels other than *ṛ* and *ṝ*. In case of *ṛ* and *ṝ* the tip of the tongue actually rises up and goes closer to the place of articulation. It is therefore clear that when tradition gives ‘hard palate’ and ‘teeth’ as the places of articulation of *ṛ* and *ṝ* respectively it means that it is aware of the constriction in the vocal tract.

The two sounds have still been accepted as *svaras* for practical purposes. The Mahābhāṣya in its discussion on the *sūtra* ‘*ṝk*’ says the following – ‘*tasminnackāryāṇi yathā syuḥ dadhyṭtakāya dehi, madhvṭtakāya dehi udanṇṭtako'gamat, pratyāṇṇṭtako'gamat* (Mahābhāṣya chapter 2)’. It is simply a morphological fact that *ṛ* and *ṝ* behave like *svaras*. The Mahābhāṣya says that *ṝ* has been taken in the *ac* series so that rules like ‘*iko yaṇaci* (Aṣṭādhyāyī – 6.1.78)’ that apply to other vowels may also apply to *ṝ*. Same is the case of *ṛ*. Just as the pronunciation of the other *svaras* can be elongated, that of *ṛ* can also be elongated

(*dīrgha*) if it is a *svara* as in the words like ‘*pitṛṇām*’. Just as the pronunciation of the other *svaras* can be prolonged (*pluta*), that of *r* and *l* can also be prolonged if they are ones among the *svaras*.

### 6. More about *r*:

In Panini this sound also falls under the *ac* group. From the discussion about *r* in the Mahābhāṣya one comes to know that Paninian tradition perceives two components in *r*. The first one of them is similar to that of *r* (or **र**). In its commentary of the *sūtra* ‘*kṛpo ro laḥ* (Aṣṭādhyāyī –8.2.18)’ the Siddhāntakaumudī clearly says the following - “*kṛperrkārasyāvayavo yo rephasadrśastasya ca lakārasadrśaḥ syāt*”. This means that, in order to derive words like ‘*cakḷpe*’, the *sūtra* ‘*kṛpo ro laḥ*’ substitutes *r*-like component of *r* with a *l*-like sound.

The second component of *r* is a vowel. The following lines on the *sūtra* ‘*raṣābhyām no ṇaḥ samānapade* (Aṣṭādhyāyī – 8.4.1)’ in the Mahābhāṣya are noteworthy in this regard –

“*raṣābhyām ṇatve ṛkāragrahaṇam. raṣābhyām ṇatve ṛkāragrahaṇam kartavyam. raṣābhyām ṇaḥ ṇaḥ samānapade ṛkārāt ca iti vaktavyam. iha api yathā syāt : mātṛṇām, pitṛṇām iti. tat tarhi vaktavyam. na vaktavyam. yaḥ asau ṛkāre rephaḥ tadāśrayam ṇatvam bhaviṣyati. na sidhyati. kim kāraṇam. na hi varṇaikadeśāḥ varṇagrahaṇena grhyante. ekadeśe nuḍādiṣu ca uktam. kim uktam. agrahaṇam cet nuḍvidhilādeśavināmeṣu ṛkāragrahaṇam iti. tasmāt grhyante. evam api na sidhyati. kim kāraṇam. ananantaratvāt. yat tat rephāt param bhakteḥ tena vyavahitatvāt na prāpnoti. aḍvyavāye iti evam bhaviṣyati. na sidhyati. kim kāraṇam. varṇaikadeśāḥ ke varṇagrahaṇena grhyante. ye vyapavṛktāḥ api varṇāḥ bhavanti. yat ca atra rephāt param bhakteḥ na tat kva cit api vyapavṛktam dṛśyate. evam tarhi yogavibhāgaḥ kariṣyate. raṣābhyām ṇaḥ ṇaḥ samānapade. tataḥ vyavāye. vyavāye ca raṣābhyām ṇaḥ ṇaḥ bhavati iti. tataḥ aṭkuvānnumbhiḥ iti. idam idānīm kimartham. niyamārtham. etaiḥ eva akṣarasamāmnāyikāiḥ vyavāye na anyaiḥ iti”.*

### English Translation:

The necessity of inclusion of *r* in the *sūtra* ‘*raṣābhyāṃ no ṇaḥ samānapade*’ –

- It is necessary to include *r* in the *sūtra* ‘*raṣābhyāṃ no ṇaḥ samānapade*’ and say that *n* changes to *ṇ* even when it comes after *r*, so that words like *mātṛṇām* and *pitṛṇām* can be derived correctly.
- So, should it really be included in the *sūtra*?
- No. Even without including *n* will change into *ṇ* by virtue of *r* that is a part of *r*.
- This cannot happen.
- Why?
- If a letter is enunciated, it stands only for itself and not for another letter of which it forms a part.
- It generally doesn’t but here it does. This is because in case of *nut* etc. it is precisely said “*agrahaṇam cet nuḍvidhi-lādeṣa-vināmeṣu ṛkāragrahaṇam*”. Hence in the *sūtra* ‘*raṣābhyāṃ no ṇaḥ samānapade*’ *r* will also account for the *r* which is a part of *r*.
- Still the substitution of *n* with *ṇ* will not become possible.
- Why?
- Because there is a lack of immediateness. There is a portion of vowel in *r* which comes between *r* and *n*.
- There is another *sūtra* which follows ‘*raṣābhyāṃ no ṇaḥ samānapade*’ and says that *n* does change to *ṇ* after *r* or *ṣ* even when letters in the group *aṭ* fall in between.
- The substitution of *n* with *ṇ* is still not possible.
- Why?
- Which are the letters that account for the others whom they form a part of? Only those that exist as independent letters too. The portion of vowel that follows *r* in *r* is not seen elsewhere as a separate vowel.
- In that case we will have to break the *sūtra* into two parts. Firstly ‘*raṣābhyāṃ no ṇaḥ samānapade*’ and then ‘*vyavāye* (from the following *sūtra*)’. This would then mean that *n* followed by *r* or *ṣ* does change to *ṇ*

even if there is some other letter in between the two. After that will follow the next *sūtra* – ‘*aṭkupvānnumvyavāye'pi*’.

- Now why is this (next) *sūtra* required at all?
- For limiting the scope of letters that can fall in between and substitution still happens. It would then mean that in case of hindrance of by letters taught in the Māheśvara-sūtras, *n* followed by *r* or *ṣ* will change to *ṇ* if and only if they are among the groups ‘*aṭ*’, ‘*ku*’ and ‘*pu*’.

### The inferences

- This passage in the Mahābhāṣya serves as an additional evidence of the fact that tradition sees the sound *r* as an initial part of the sound *ṛ*. The earlier sentence quoted from the Siddhāntakaumudī called it as a sound similar to that of *r* and not *r* itself.
- The above passage also talks about the portion of vowel that follows *r* in *ṛ*.
- What follows *r* in *ṛ* is a vowel, but it is different from all the other vowels taught in the Māheśvara-sūtras.
- The Mahābhāṣya does not further explain the nature of this portion of vowel in more detail as that wouldn’t have had any impact on the derivative process.
- This portion of vowel has been called as ‘*bhakti*’ in the above passage<sup>६</sup>.

### 7. More about *ḷ*:

By the rule ‘*kṛpo ro laḥ*’ the *r* or *r*-like element of the root *kṛp* can be replaced by *l* or *l*-like sound. This changes *kṛp* to *kḷp*. So Just like *ṛ*, the tradition perceives two sounds in *ḷ* as well. When a sound is derivable by adding up other elementary sounds, there is no need to consider it as an elementary sound itself. The sound *ḷ* however has been taught in the Māheśvara-sūtras as an elementary

<sup>६</sup> An entry on the word ‘*bhakti*’ in the ‘Dictionary of Sanskrit Grammar’ is interesting in this regard. The relevant part of the entry is as follows - भक्ति (2) the vowel portion surrounding, or placed after, the consonant र् or ल् which (consonant) is believed to be present in the vowel ऋ and लृ respectively forming its important portion, but never separately noticed in it. The vowels ऋ and लृ are made up of one mātrā each. It is contended by the grammarians that the consonants र् and ल् forming respectively the portion of ऋ and लृ, make up half a- mātrā, while the remaining half is made up of the भक्ति of the vowel surrounding the consonant. The word which is generally used for this ‘bhakti’ is ‘ajbhakti’ instead of which the word ‘स्वरभक्ति’ is found in the Prātiśākhya works. See Abhyankar (1961 :268).

sound in the group *ac*. This issue has been taken up for a detailed discussion in the Mahābhāṣya. One obvious reason for keeping ॠ among *ac* is that morphologically it acts more or less like a vowel. However, after a long discussion the Mahābhāṣya concludes that there is just one aspect of ॠ that cannot be done away with if it is not included in *ac*. That is its *pluti* i.e., elongated pronunciation. ॠ has to be either put in the group of *ac* or major changes are required to be made in the framework of Paninian rules in order to account for this *pluti*. This means that Paninian tradition is aware about the fact that including ॠ among elementary sounds can be done away with, but it doesn't do so as brevity is a priority in Pāṇini.

### 8. The Treatment of ṛ and ॠ in Pāṇini

It seems from what Abhyankar says in his entry on *bhakti* that even Prātiśākhya were aware of the syllabic nature of the two sounds ṛ and ॠ. The Prātiśākhya prior to Panini however have labeled ṛ and ॠ as *svaras*. Though the Paninian tradition engages only in the discussions relevant to derivation of words, it seems to be very well aware of the differences between the characteristics of sounds ṛ and ॠ and those of the other *svaras*. ṛ may be called as a syllabic vowel-like retroflex approximant where as ॠ may be called as a syllabic vowel-like lateral approximant.

### 9. Conclusion:

From the above discussion it becomes clear that the term *svara* which was current during Paninian times requires only a sound to be produced independently. Unlike the concept of a 'vowel', constriction in the vocal tract is not a matter of concern for a sound to be called as a *svara*. Thus apart from other vowels sounds ṛ and ॠ can also rightly be called as 'svaras' but not as 'vowels'. However, sounds *s*, *ś*, *ṣ* and *h* which can also be pronounced independently have never been called as *svaras* in the tradition. Panini understood the exact nature of the sounds ṛ and ॠ and perhaps also the fallacy in the definition of the concept of *svara*.

There are several terms that Pāṇini has clearly defined before using them in his Aṣṭādhyāyī. For example the *sūtra* 'mukhanāsikāvacano'nunāsikaḥ



(Aṣṭādhyāyī 1.1.8) defines the term ‘Anunāsika’ and then puts it to use in *sūtras* like ‘*upadeśe’janunāsika it* (Aṣṭādhyāyī 1.3.2)’ and so on. He similarly defines the terms ‘Guṇa’, ‘Sarvanāma’, ‘Lopa’, ‘Savarṇa’ etc. and then puts them to use. He had an option of defining the term ‘Svara’ similarly, disambiguating it and then putting it to use in his work.

A tendency of using grammatical terminology which was already well known by his time directly without defining it is also observed in Panini’s work. He uses not so technical terms like ‘Viśeṣaṇa’, ‘Viśeṣya’ and ‘Kriyā’ and several highly technical terms like ‘Auṅ’ as in the rule ‘*auṅa āpaḥ* (Aṣṭādhyāyī 7.1.18)’ and ‘Āṅ’ as in the rule ‘*āṅo nāstriyām* (Aṣṭādhyāyī 7.3.120)’ which were used by his predecessors without defining them.

Pāṇini does not define the term ‘Svara’ in his Aṣṭādhyāyī but uses it in his *sūtras* ‘*nalopaḥ sup-svara-sañjñā-tug-vidhiṣu kṛti* (Aṣṭādhyāyī 8.2.2)’ and ‘*na padāntadvirvacanavareyalopasvarasavarṇānusvāra..* (Aṣṭādhyāyī 1.1.58)’. But in these they denote accents and not vowels.

Pāṇini has devised a term ‘*ac*’ which is merely a group of certain sounds. In conformity with the tradition all the *svaras* including *r̥* and *l̥* have been included in this group. He has not ventured into defining or using the term ‘Svara’ for vowels. His term *ac* helps him to fulfill all practical purposes. Thus by not defining a *svara* Panini seems to have benefitted in the following ways –

- Pāṇini could save himself from taking a stand (either supporting or refuting) on the traditional definition of *svara*.
- Pāṇini could save an effort required to define *svara* more precisely and then use it for meeting his objectives which would have otherwise amounted to *prakriyalāghava* or lengthening of the process.

Panini has similarly refrained from defining many other essential terms like *pratyaya*, *dhātu* and *kriyā*. This also seems to be one of the techniques that he has employed for ensuring brevity while still adhering to the tradition.

The following table briefly summarizes the entire argument –

	<i>Svara</i>	Vowel	The group ‘ <i>ac</i> ’
<b>Condition 1</b>	Not necessary	Yes	Not necessary

No constriction in the vocal tract			
<b>Condition 2</b> Independent Pronunciation	Yes	Yes (By virtue of condition 1)	Not necessary
<b>r and l</b>	Yes (By condition 2)	No (By condition 1)	Yes (because it is included in <i>ac</i> )
<b>s, ś, ṣ and h</b>	Yes (By condition 1) but NO as per tradition	No (by condition 1)	No (because it is not included in <i>ac</i> )
<b>Conclusion</b>	Lack of clarity in definition	Not the exact translation of the them <i>svara</i>	No theoretical backing but efficiently serves the purpose, leads to brevity

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