

# An Analytical interpretation of meter of Sushruta Samhita

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Abstract:

Sushruta samhita is one of the most important texts in great-triad of Ayurveda. This text has been composed in 2<sup>nd</sup> Millennium BC. Nearly half of the first part and major portion of 2<sup>nd</sup> half of the compendium are written in verse form. The ancient scholars maintained the learning and the streamline flow of knowledge by rhythmic recitation for thousands of years even before the era of documentation. With the advent of science many technologies have emerged in the field of education and have given us new dimension of study. But this classical practice of recitation has been gradually loosing its common uses in this current century resulting in lack of expertization in the subject.

This review consists of methods of rhythmic recitation of all verse of *Sushruta Samhita* with proper examples, notations and analysis according to meter.

Keywords: *Sushruta Samhita, Chhanda,*

***Chhanda:***

The Veda is the main sources of knowledge for achieving duty (*dharma*), wealth (*artha*), desire (*kama*) and final deliverance (*moksa*). The study of the Vedas was divided by six different varieties widely known as *vedanga*. In early days of Vedic period study was in the form of oral tradition and methodical rhythmic recitation was mandatory to keep the purity of text. Rhythmic recitation also helps to develop good memory of the text. *Chhanda* was given major importance from the very beginning of Vedic era and considered it as a *vedanga*<sup>1</sup>. Apart from the classical teaching *chhandas* were being used in day to day life to remember the verses of worshiping etc. *Ayurveda*, the science of life, has taken the origin from vedic wisdom and was transmitted through same tradition. Majority of the texts of *Ayurveda* literature are composed in poetry form to remember the subject purely. So, study of meter (*chhanda*) is an integral part to study and explore the *ayurveda* literature.

***Sushruta Samhita –***

*Sushruta Samhita* is the most authoritative and comprehensive compendium of Ayurvedic knowledge covering almost each and every aspects of health care. This treatise despite being the one of the oldest available literature of *ayurveda* (the currently redacted

version available is estimated to be documented in 200 A.D. ), is truly a versatile classic. In *Sushruta Samhita* near about 8500 verses are available<sup>2</sup> of which approximately half are in poetic form. These verses are written in various meters.

### **Methods of study depicted in *Sushruta Samhita*:**

The profounder of *ayurveda* had adopted three steps of learning i.e. *adhyayana*, *adhyapana* and *tadvidyasambhasa*<sup>3</sup> as needs of time to continue the streamline flow of *ayurvedic* knowledge. The most preliminary stage of study (*adhyayana*) is “*adhigata karana*”<sup>4</sup> i.e. grasping and mastering of the text thoroughly. The texts were written mostly in a very concise style known as “*Sutra*” and in combined form of both prose and verse. Prose is not tightened by *aksara*, *matra*, *gati* & *yati* on the other hand verse is bound by some rules. The verses were mostly in simple form and were meant to be easy for cramming by the pupils and comprehended in their scope of exposition a vast range of subjects.

Ancient practice regarding recitation reveals that during study *acharya* used to recite one or two *pada* of the verse at first methodically pronounced with gradual completion of the rest part. Students one after another followed the preceptor blindly reciting the *pada* respectively. During this process main focus was laid on correct pronunciation<sup>5</sup>.

During study the student should be very careful in maintaining the perfectness instructed in the text<sup>6</sup>. He should recite neither too fast; that means the letters, words, quarter verses should not be in close succession and as such indistinct nor too slow i.e. the words etc. should not be too loosened. He should recite without any hesitation, avoid nasal sounds always, pronounce the letters clearly without compressing them, recite well refined, non-confused letter and should read with medium voice not in very high or very low pitch<sup>7</sup>.

Most important aspect of ancient system of education was achievement of oral fluency<sup>8</sup>. The student easily gained oral promptness in the course of study with improvement in their pronunciation and other loops. *Sushruta* mentioned that the student should make efforts to attain excellence of speech, for successful management of practical.

The next stage was memorization. With repeating the verse again and again in proper methodical rhythm, the students used to store permanently in memory. The *sutras* were studied in different ways like *samhita-patha*, *pada-patha*, *krama-patha*, *jata-patha*, *ghana-patha* etc. for memorization<sup>9</sup>. *Samhita-patha* is reading of text what it actually is. *Pada-patha* is reading word by word by breaking *samasa-baddha-pada* of main *samhita-patha*. *Krama-patha*, *jata-patha* and *ghana-*

*patha* have same *svaravinyas* (phonation) but the only specialty is repetition. In *krama patha* the frequency of repetition of each word is twice. In *jata-patha* each *pada* is being recited thrice or more. In *ghana patha* the frequency of repetition is up to six times with a definite sequential rhythm. Hence with the help of glorious methods the *ayurveda* literature remains its pure form.

### ***Importance of chhanda-jnana for proper methodical study***

In Vedic period the scholars used to study *ayurveda* either after completing his Vedic school or simultaneous with. They had to study *chhanda* as a *vedanga* in their respective Vedic school. Ancient scholars kept the streamline flow of knowledge by rhythmic recitation for thousands of years even before the era of documentation. With the advent of science many technologies have emerged in the field of education and have given us new dimension of study. But on account of lack of practice in classical and rhythmic methods of recitation the current ayurvedic scholars are not been able to make them well versed in their respective ayurvedic subjects. Hence for regaining the golden spirit of ayurvedic text based study the knowledge and proper method of recitation of ayurvedic verses on the basis of *chhanda* is inevitable as primary step of learning.

### **Varieties of Chhanda**<sup>10</sup>

A verse is consisted of four parts known as *pada*. The governing rules and regulation of meters are concerned with each single *pada*.

Some meters are composed and ruled by number of letters or *aksharas* known as *aksara chhanda* or *varna chhanda*. In *aksharachhanda* only *aksaras* are counted and assessment of specific *gana* is not required where as in *matra-chhanda* only *matras* are measured. Neither *gana* nor *aksaras* are assessed e.g. *aupacchandasika, vaitaliya* etc.. In *aksaragana chhanda* assessment of both the numbers of *aksara* and respective *gana* are inevitable e.g. *indravajra, malini* etc.. *Matragana chhanda* is another variety in which both *matra* and *gana* (*matra*) are assessed e.g. *arya*.

Rhythmically all verses are of three types i.e. *samachhanda, ardhasamachhanda* and *visamachhanda*. In *samavrtta chhanda* all four *pads* contain same numbers of *varna* or letters e.g. *indravajra, vamshastha* etc. on the other hand in *ardhasamavrtta chhanda* the odd *pada* i.e. 1<sup>st</sup> & 3<sup>rd</sup> *pada* are composed of same number of letters and the even *pada* 2<sup>nd</sup> & 4<sup>th</sup> are consisted of same number of letters (not similar to *pada* 1<sup>st</sup> and 3<sup>rd</sup>) e.g. *puspitagra, viyogini*. In *visamavrtta chhanda* all four *pada* are different in terms of letters e.g. *Udgata*.

### **Guru & Laghu Varna:**

Besides associated with *dirgha svāra* like आ, ई the following consonants are considered as *guru*<sup>11</sup>

- a. *Anusvara yukta* ( a ) i.e. associated with *anusvara* ;
- b. *Visarga yukta* (:),
- c. Just before the conjunct and
- d. Last word of the *pada* (*padantaga*)

All others are *laghu* including *hrasva svāra*. Practically in *shloka patha* one *matra varna* is considered as *hrasva* where as two *matras* is counted for *dirgha*. In recitation *pluta* and *vyanjana* are not practically counted .

### **Matra:**

Time required for pronunciation of *laghu aksara* is counted as one *matra*. *Matra* of *guru* letter is two<sup>12</sup>.

### **Gana:**

For making it easy the scholars of *chhanda shastra* have framed different combinations of letters popularly known as *gana*. *Gana* are framed by combination of *guru* and *laghu varnas* .The characteristics of eight *gana* are as follows <sup>13</sup>

Name	Character	Symbol	Examples
मगण	All three letters are <i>Guru</i>	SSS	त्रायन्ती, बाधिर्य
नगण	All three letters are <i>laghu</i>	III	मधुर, लशुन
भगण	First letter is <i>guru</i>	SII	नागर, सैन्धव
यगण	First letter is <i>laghu</i>	ISS	गुडुची पटोलं
जगण	Middle letter is <i>guru</i>	ISI	कषाय, किलास
रगण	Middle letter is <i>laghu</i>	SIS	पिप्पली, चन्दनं
सगण	Last letter is <i>guru</i>	IIS	अभया, मरिचं
तगण	Last letter is <i>laghu</i>	SSI	आकाश, उन्माद

S–Guru

I–Laghu

## Chhanda in Sushruta samhita

Fourteen different *chhandas* are available in whole *Sushruta Samhita* viz. *anustup*, *indravajra*, *kusumitalatabellita*, *malini*, *praharshini*, *puspitaagra*, *shalini*, *sragdhara*, *toataka upajati*, *upendravajra*, *vamshastha*, *vasantatilaka* and *vatormi*.

**Brief description of meters along with their examples are as follows**

### 1. *Anustup*:<sup>14</sup>

It is a *varnavrtta chhanda* and usually meant for *sama chhanda*. Its each *pada* consists of eight letters among them 5<sup>th</sup> is always *laghu* where as 6<sup>th</sup> is always *guru* and 7<sup>th</sup> of even *pada* is *laghu* and of odd *pada* is *guru*. Others have no bar. After each *pada* there is slight pause.

According to acarya Gangadhara<sup>15</sup> *Anustup* is of five types viz. *Anustup* (8,8,8,8), *tripadanustup*(8,8,8,0), *puranustup*(8,12,12,0), *Madhyenustup* (12,8,12,0), *antenustup* (12,12,8,0).

#### Examples

शरीरपतितानां तु शारीरवदुपक्रमः। मानसानां तु शब्दादिरिष्टो वर्गः सुखावहः॥३७॥ (*Sutrasthan 1/37*)

#### Analysis:

##### Pada 1

1	2	3	4	5	6	7	8
श	री	र	प	ति	ता	नां	तु

##### Pada 2

1	2	3	4	5	6	7	8
श	री	र	व	दु	प	क्र	मः

##### Pada 3

1	2	3	4	5	6	7	8
मा	न	सा	नां	तु	श	ब्दा	दि

##### Pada 4

1	2	3	4	5	6	7	8
रि	ष्टो	व	र्गः	सु	खा	व	हः

### 2. *Indravajra*:<sup>16</sup>

It is also a *varnavrtta sama chhanda* and contains **eleven letters** in each *pada*. Each *pada* consists of initial two *तगण*, one *जगण* and two *guru* letters. Pause is at the end.

#### Examples

विश्लेषितायास्त्वथ नासिकाया वक्ष्यामि सन्धानविधिं यथावत्॥

नासाप्रमाणं पृथिवीरुहाणां पत्रं गृहीत्वा त्ववलम्बि तस्य॥ (*Sutrasthan 16/27*)

### Analysis:

#### Pada 1

तगण	तगण	जगण	गु	गु						
ऽ	ऽ	ऽ	ऽ	ऽ						
वि	इले	षि	ता	या	स्त्व	थ	ना	सि	का	या

#### Pada 2

तगण	तगण	जगण	गु	गु						
ऽ	ऽ	ऽ	ऽ	ऽ						
व	क्ष्या	मि	स	न्धा	न	वि	धि	र्य	था	वत्

#### Pada 3

तगण	तगण	जगण	गु	गु						
ऽ	ऽ	ऽ	ऽ	ऽ						
ना	सा	प्र	मा	णं	पृ	थि	वी	रु	हा	पां

#### Pada 4

तगण	तगण	जगण	गु	गु						
ऽ	ऽ	ऽ	ऽ	ऽ						
प	न्नं	गृ	ही	त्वा	त्व	व	ल	म्बि	त	स्य

### 3. Kusumitalatavellita: 17 (a variety of)

It is a *varnavrta samachhanda* and characterised by **eighteen** letters in each *pada*. Components are यगण, मगण, नगण, सगण, तगण, and सगण . Pauses are after five, after eleven and after eighteen i.e. *padanta*.

#### Examples

विसृष्टे विण्मूत्रे विशदकरणे देहे च सुलघौ विशुद्धे चोद्गारे हृदि सुविमले वाते च सरति॥

तथाऽन्नश्रद्धायां क्लमपरिगमे कुक्षौ च शिथिले प्रदेयस्त्वाहारो भवति भिषजां कालः स तु मतः।

(Uttartantra 64/84)

### Analysis:

#### Pada 1

यगण			मगण			नगण			सगण			तगण			सगण		
	ऽ	ऽ	ऽ	ऽ	ऽ						ऽ	ऽ	ऽ				ऽ
वि	सृ	ष्टे	वि	ण्मू	त्रे	वि	श	द	क	र	णे	दे	हे	च	सु	ल	घौ

#### Pada 2

यगण			मगण			नगण			सगण			तगण			सगण		
	ऽ	ऽ	ऽ	ऽ	ऽ						ऽ	ऽ	ऽ				ऽ
वि	शु	द्धे	चो	द्वा	रे	हृ	दि	सु	वि	म	ले	वा	ते	च	स	र	ति

#### Pada 3

यगण			मगण			नगण			सगण			तगण			सगण		
	ऽ	ऽ	ऽ	ऽ	ऽ						ऽ	ऽ	ऽ				ऽ
त	था	ऽन्न	श्र	द्धा	यां	क्ल	म	प	रि	ग	मे	कु	क्षौ	च	शि	थि	ले

Pada 4

यगण			मगण			नगण			सगण			तगण			सगण		
	ऽ	ऽ	ऽ	ऽ	ऽ						ऽ	ऽ	ऽ				ऽ
प्र	दे	य	स्त्वा	हा	रो	भ	व	ति	भि	ष	जां	का	लः	स	तु	म	तः

4. *Malini*:<sup>18</sup>

It is characterised by **fifteen** letters in each *pada*. Chronological components are two नगण, one मगण and two यगण. Pauses are after eight and after seven i.e. *padanta*.

**Examples**

प्रकृतिमिह नराणां भौतिकीं केचिदाहुः पवनदहनतोयैः कीर्तितास्तास्तु तिस्रः॥

स्थिरविपुलशरीरः पार्थिवश्च क्षमावाञ् शुचिरथ चिरजीवी नाभसः खैर्महद्भिः॥ (*Sharirasthan 4/80*)

**Analysis:**

*Pada 1*

नगण			नगण			मगण			यगण			यगण		
						ऽ	ऽ	ऽ		ऽ	ऽ		ऽ	ऽ
प्र	कृ	ति	मि	ह	न	रा	णां	भौ	ति	कीं	के	चि	दा	हुः

*Pada 2*

नगण			नगण			मगण			यगण			यगण		
						ऽ	ऽ	ऽ		ऽ	ऽ		ऽ	ऽ
प	व	न	द	ह	न	तो	यैः	की	ति	ता	स्ता	स्तु	ति	स्रः

*Pada 3*

नगण			नगण			मगण			यगण			यगण		
						ऽ	ऽ	ऽ		ऽ	ऽ		ऽ	ऽ
स्थि	र	वि	पु	ल	श	री	रः	पा	र्थि	व	श्च	क्ष	मा	वान्

*Pada 4*

नगण			नगण			मगण			यगण			यगण		
						ऽ	ऽ	ऽ		ऽ	ऽ		ऽ	ऽ
शु	चि	र	थ	चि	र	जी	वी	ना	भ	सः	खै	र्म	ह	द्भिः

5. *Prahashini*:<sup>19</sup>

This *varnavortta sama chanda* is composed of मगण, नगण, जगण, रगण each one and a *guru* letter in each *pada*. Pauses are after 3<sup>rd</sup> and after 13<sup>th</sup> i.e. *padanta*.

**Examples**

मेधावी निपुणमतिर्विगृह्य वक्ता तेजस्वी समितिषु दुर्निवारवीर्यः॥

सुप्तः सन् कनकपलाशकर्णिकारान् संपश्येदपि च हुताशविद्युदुल्काः॥ (*Sharirasthan 4/69*)

## Analysis:

### Pada 1

मगण			नगण			जगण			रगण			गु
ऽ	ऽ	ऽ	।	।	।	।	ऽ	।	ऽ	।	ऽ	ऽ
मे	धा	वी	नि	पु	ण	म	ति	र्वि	गृ	ह्य	व	क्ता

### Pada 2

मगण			नगण			जगण			रगण			गु
ऽ	ऽ	ऽ	।	।	।	।	ऽ	।	ऽ	।	ऽ	ऽ
ते	ज	स्वी	स	मि	ति	षु	दु	नि	वा	र	वी	र्य

### Pada 3

मगण			नगण			जगण			रगण			गु
ऽ	ऽ	ऽ	।	।	।	।	ऽ	।	ऽ	।	ऽ	ऽ
सु	प्तः	स	क्क	न	क	प	ला	श	क	र्णि	का	रान्

### Pada 4

मगण			नगण			जगण			रगण			गु
ऽ	ऽ	ऽ	।	।	।	।	ऽ	।	ऽ	।	ऽ	ऽ
सं	प	श्ये	द	पि	च	हु	ता	श	वि	द्यु	दु	ल्का

## 6. Puspitagra:<sup>20</sup>

It is a *ardhasama varna chhanda* containing **thirteen** letters in each even *pada*. Where as each odd *pada* is of **twelve** letters. Each odd *pada* composed of two नगण, रगण, यगण and one *guru varna* . On the other hand नगण, two जगण, रगण make the even *pada*. Pause is at the end.

### Examples

अधृतिरदृढसौहृदः कृतघ्नः कृशपरुषो धमनीततः प्रलापी॥

द्रुतगतिरटनोऽनवस्थितात्मा वियति च गच्छति संभ्रमेण सुप्तः॥ (Sharirasthan 4/65)

## Analysis:

### Pada 1

नगण			नगण			रगण			यगण		
।	।	।	।	।	।	ऽ	।	ऽ	।	ऽ	ऽ
अ	धृ	ति	र	दृ	ढ	सौ	हृ	दः	कृ	त	घ्नः

### Pada 2

नगण			जगण			जगण			रगण			गु
।	।	।	।	ऽ	।	।	ऽ	।	ऽ	।	ऽ	ऽ
कृ	श	प	रु	षो	ध	म	नी	त	तः	प्र	ला	पी



Pada 3

नगण			नगण			रगण			यगण		
						ऽ		ऽ		ऽ	ऽ
द्रु	त	ग	ति	र	ट	नो	ऽन	व	स्थि	ता	त्मा

Pada 4

नगण			जगण			जगण			रगण			गु
				ऽ			ऽ		ऽ		ऽ	ऽ
वि	य	ति	च	ग	च्छ	ति	सं	भ्र	मे	ण	सु	प्तः

7. *Salini* :<sup>21</sup>

It is characterised by **eleven** letters in each *pada*. Respective *gana* are **मगण** , two **तगण** and two *guru* letter. Pause is at the end.

**Example :**

वैरेकीयद्रव्यचूर्णस्य भागं सिद्धं सार्धं क्वाथभागैश्चतुर्भिः ।

आमृद्नीयात् सर्पिषा तच्छृतेन तत्क्वाथोष्मस्वेदितं सामितं च ॥ (*Sutrasthan 44/12*)

**Analysis:**

*Pada 1*

मगण			तगण			तगण			गु	गु
ऽ	ऽ	ऽ	ऽ	ऽ		ऽ	ऽ		ऽ	ऽ
वै	रे	की	य	द्र	व्य	चू	र्ण	स्य	भा	गं

*Pada 2*

मगण			तगण			तगण			गु	गु
ऽ	ऽ	ऽ	ऽ	ऽ		ऽ	ऽ		ऽ	ऽ
सि	द्धं	सा	र्धं	क्वा	थ	भा	गै	श्च	तु	र्भिः

*Pada 3*

मगण			तगण			तगण			गु	गु
ऽ	ऽ	ऽ	ऽ	ऽ		ऽ	ऽ		ऽ	ऽ
आ	मृ	द्नी	ता	त्स	र्पि	षा	त	च्छृ	ते	न

*Pada 4*

मगण			तगण			तगण			गु	गु
ऽ	ऽ	ऽ	ऽ	ऽ		ऽ	ऽ		ऽ	ऽ
त	त्क्वा	थो	ष्म	स्वे	दि	तं	सा	मि	तं	च

### 8. Sragdhara:<sup>22</sup>

This *varnavṛtta sama chanda* contains seven *gaṇa* i.e. twenty one letters in each *pada*. The *gaṇa* are मगण, रगण, भगण, नगण and three यगण. Pauses are after every seven letters i.e. after seven, after fourteen and after twenty-one.

#### Example:

दौर्बल्यश्वासकासज्वरवमथुमदास्तन्द्रितादाहमूर्च्छा भुक्ते चान्ने विदाहस्त्वधृतिरपि सदा हृद्यतुल्या च पीडा॥

तृष्णा कण्ठस्य भेदः शिरसि च दवनं पूतिनिष्ठीवनं च द्वेषो भक्तेऽविपाको विरतिरपि रते रक्तपित्तोपसर्गाः॥

(Uttaratantra 45/9)

#### Analysis:

##### Pada 1

मगण			रगण			भगण			नगण			यगण		यगण			यगण			
ऽ	ऽ	ऽ	ऽ		ऽ	ऽ							ऽ	ऽ		ऽ	ऽ		ऽ	ऽ
दौ	र्ब	ल्य	श्वा	स	का	स	ज्व	र	व	म	थु	म	दा	स्त	न्द्रि	ता	दा	ह	मू	च्छा

##### Pada 2

मगण			रगण			भगण			नगण			यगण		यगण			यगण			
ऽ	ऽ	ऽ	ऽ		ऽ	ऽ							ऽ	ऽ		ऽ	ऽ		ऽ	ऽ
भु	क्ते	चा	न्ने	वि	दा	ह	स्त्व	धृ	ति	र	पि	स	दा	हृ	द्य	तु	ल्या	च	पी	डा

##### Pada 3

मगण			रगण			भगण			नगण			यगण		यगण			यगण			
ऽ	ऽ	ऽ	ऽ		ऽ	ऽ							ऽ	ऽ		ऽ	ऽ		ऽ	ऽ
तृ	ष्णा	क	ण्ठ	स्य	भे	दः	शि	र	सि	च	द	व	नं	पू	ति	नि	ष्ठी	व	नं	च

##### Pada 4

मगण			रगण			भगण			नगण			यगण		यगण			यगण			
ऽ	ऽ	ऽ	ऽ		ऽ	ऽ							ऽ	ऽ		ऽ	ऽ		ऽ	ऽ
द्वे	षो	भ	क्ते	ऽवि	पा	को	वि	र	ति	र	पि	र	ते	र	क्त	पि	त्तो	प	स	र्गाः

### 9. Totaka :<sup>23</sup>

It is a *varnavṛtta sama chanda* containing *twelve* letters in each *pada*. The *gaṇa* present in each *pada* are four सगण. Pause is at the end of the *pada*.

#### Example:

न भयात् प्रणमेदनतेष्वमृदुः प्रणतेष्वपि सान्त्वनदानरुचिः॥

भवतीह सदा व्यथितास्यगतिः स भवेदिह पित्तकृतप्रकृतिः॥ (Sharirasthan 4/70)

**Analysis:***Pada 1*

सगण			सगण			सगण			सगण		
।	।	ऽ	।	।	ऽ	।	।	ऽ	।	।	ऽ
न	भ	या	त्प्र	ण	मे	द	न	ते	ष्व	मृ	दुः

*Pada 2*

सगण			सगण			सगण			सगण		
।	।	ऽ	।	।	ऽ	।	।	ऽ	।	।	ऽ
प्र	ण	ते	ष्व	पि	सा	न्व	न	दा	न	रु	चिः

*Pada 3*

सगण			सगण			सगण			सगण		
।	।	ऽ	।	।	ऽ	।	।	ऽ	।	।	ऽ
भ	व	ती	ह	स	दा	व्य	थि	ता	स्य	ग	तिः

*Pada 4*

सगण			सगण			सगण			सगण		
।	।	ऽ	।	।	ऽ	।	।	ऽ	।	।	ऽ
स	भ	वे	दि	ह	पि	त्त	कृ	त	प्र	कृ	तिः

**10. Upajati:<sup>24</sup>**

It is generally a combination of both *Upendravajra* & *Indravajra*. According to their (*Upendravajra* & *Indravajra*) position in different *pada* *Upajati Chhanda* is of 14 types viz. *kirti, vani, mala, shala* etc. *Upajati* may be possible with any similar two *chhandas* like *indravamsha* with *vamshastha*, *svagata* with *Rathoddhata*. Besides, mixed types of *upajati* is also available like among *vamshastha, indravajra* and *upendravajra* (Su.Utt.45/31). In this text *upajati* only signifies for combination of *indravajra* and *upendravajra*. Other varieties are marked differently.

**Examples :**

यथा खरश्चन्दनभारवाही भारस्य वेत्ता न तु चन्दनस्या।

एवं हि शास्त्राणि बहून्यधीत्य चार्थेषु मूढाः खरवद्वहन्ति॥ (Sutrasthan 4/4)

**Analysis:***Pada 1*

जगण			तगण			जगण			गु	गु
।	ऽ	।	ऽ	ऽ	।	।	ऽ	।	ऽ	ऽ
य	था	ख	र	श्च	न्द	न	भा	र	वा	ही

Pada 2

	तगण			तगण			जगण		गु	गु	
५	५		५	५			५		५	५	
भा	र		स्य	वे	त्ता	न	तु	च	न्द	न	स्य

Pada 3

	तगण			तगण			जगण		गु	गु	
५	५		५	५			५		५	५	
ए	वं		हि	शा	स्त्रा	णि	ब	हु	न्य	धी	त्य

Pada 4

	तगण			तगण			जगण		गु	गु	
५	५		५	५			५		५	५	
चा	र्थे		षु	मू	ढाः	ख	र	व	द्व	ह	न्ति

11. *Upendravajra*:<sup>25</sup>

It is composed of जगण, तगण, जगण and two *guru varna* respectively. Pause is after eleventh *varna* i.e. *padanta*.

**Examples :**

य एवमेनं विधिमेकरूपं बिभर्ति कालादिवशेन धीमान्।

स मृत्युपाशाञ्चगतौ गदौघाञ्छनति भैषज्यपरश्वधेन॥ (*Sutrasthan* 35/50)

**Analysis:**

Pada 1

	जगण			तगण			जगण		गु	गु	
	५		५	५			५		५	५	
य	ए		व	मे	नं	वि	धि	मे	क	रू	पं

Pada 2

	जगण			तगण			जगण		गु	गु	
	५		५	५			५		५	५	
बि	भ		र्ति	का	ला	दि	व	शे	न	धी	मान्

Pada 3

	जगण			तगण			जगण		गु	गु	
	५		५	५			५		५	५	
स	मृ		त्यु	पा	शा	ञ्च	ग	तौ	ग	दौ	घा

Pada 4

	जगण			तगण			जगण		गु	गु	
	५		५	५			५		५	५	
ञ्छ	न		ति	भै	ष	ज्य	प	र	श्व	धे	न

## 12. Vamshastha:<sup>26</sup>

Each *pada* of this *varnavrta samachhanda* contains **twelve letters**. Within it four *gana* are जगण, तगण, जगण and रगण respectively. Pause is at the end of *pada* .

### Examples

स्वयम्भुवा प्रोक्तमिदं सनातनं पठेद्धि यः काशिपतिप्रकाशितम्।  
स पुण्यकर्मा भुवि पूजितो नृपैरसुक्षये शक्रसलोकतां व्रजेत्॥ (Sutrasthan 1/42)

### Analysis:

#### Pada 1

जगण			तगण			जगण			रगण		
।	ऽ	।	ऽ	ऽ	।	।	ऽ	।	ऽ	।	ऽ
स्व	य	म्भु	वा	प्रो	क्त	मि	दं	स	ना	त	नं

#### Pada 2

जगण			तगण			जगण			रगण		
।	ऽ	।	ऽ	ऽ	।	।	ऽ	।	ऽ	।	ऽ
प	ठे	द्धिः	यः	का	शि	प	ति	प्र	का	शि	तम्

#### Pada 3

जगण			तगण			जगण			रगण		
।	ऽ	।	ऽ	ऽ	।	।	ऽ	।	ऽ	।	ऽ
स	पु	ण्य	क	र्मा	भु	वि	पू	जि	तो	नृ	पै

#### Pada 4

जगण			तगण			जगण			रगण		
।	ऽ	।	ऽ	ऽ	।	।	ऽ	।	ऽ	।	ऽ
र	सु	क्ष	ये	श	क्र	स	लो	क	तां	व्र	जेत्

## 13. Vasantatilaka:<sup>27</sup>

It is *varnavrta sama chanda* composed of one तगण, one भगण, two जगण and two *guru* letters (fourteen letters). At the end of the *pada* there is a slight pause.

### Example:

सिध्यन्ति वातकफपित्तकृता विसर्पाः सर्वात्मकः क्षतकृतश्च न सिद्धिमेति।  
पैतानिलावपि च दर्शितपूर्वलिङ्गौ सर्वे च मर्मसु भवन्ति हि कृच्छ्रसाध्याः॥ (Nidanasthan 10/8)

**Analysis:***Pada 1*

तगण			भगण			जगण			जगण			गु	गु
ऽ	ऽ	।	ऽ	।	।	।	ऽ	।	।	ऽ	।	ऽ	ऽ
सि	ध्य	न्ति	वा	त	क	फ	पि	त्त	कृ	ता	वि	स	र्पाः

*Pada 2*

तगण			भगण			जगण			जगण			गु	गु
ऽ	ऽ	।	ऽ	।	।	।	ऽ	।	।	ऽ	।	ऽ	ऽ
स	र्वा	त्म	कः	क्ष	त	कृ	त	श्च	न	सि	द्धि	मे	ति

*Pada 3*

तगण			भगण			जगण			जगण			गु	गु
ऽ	ऽ	।	ऽ	।	।	।	ऽ	।	।	ऽ	।	ऽ	ऽ
पै	त्ता	नि	ला	व	पि	च	द	र्शि	त	पू	र्व	लि	ङ्गौ

*Pada 4*

तगण			भगण			जगण			जगण			गु	गु
ऽ	ऽ	।	ऽ	।	।	।	ऽ	।	।	ऽ	।	ऽ	ऽ
स	र्वे	च	म	र्म	सु	भ	व	न्ति	हि	कृ	च्छ	सा	ध्याः

**14. Vatormi :<sup>28</sup>**

It is a *varnavrtta samachanda* composed of eleven letters in each *pada*. Respective *gana* are मगण भगण तगण and two *guru* letters. Pauses are after 4<sup>th</sup> and 11<sup>th</sup> letters i.e. *padanta*.

It is not full flagged available in *Sushruta Samhita* but it is found in combination with other similar (11 letters) *chhanda* like *Salini*.

Example (*uttartantra* 10/7)

**Analysis:***Pada 4*

मगण			भगण			तगण			गु	गु
ऽ	ऽ	ऽ	ऽ	।	।	ऽ	ऽ	।	ऽ	ऽ
पा	लि	न्धां	वा	म	धु	के	वा	ऽपि	कु	र्यात्

**Discussion**

Classically the *Sushruta Samhita* has been composed in *champu* style consisted of both verse and prose. Among available approximately 8500 verses nearly half are in verse form.

Among the meter the *anustup* is used in maximum instances on account of easy composition, memorization. It also justifies the transmigration of thoughts from the *Veda* as this meter is the only meter available in both Vedic texts and classical texts. In majority of the chapters the summary of that respective chapter have been presented in *anustup* which also suggest the vastness of the meter in common use.

Among the other meter *upajati* in combination with *upendravajra* and *indravajra* is widely used. Mixed form of *upajati* is also found in combination with *indravajra* and *shalini*, *indravajra* and *rathoddhata*, *indravajra* with *svagata* and *indravajra* with *vamsastha* (12) which suggests that subject matter is given the first priority above the composition of meter. Some meter like *kusumitalatabellita*, *malini*, *sragdhara*, *totaka*, *puspitagra* are very rarely used. In order to keep the free flowing of concepts of underlined subject-matters, the combination of prose along with verse pattern and combinations of different meters have been done. *Vatormi* has been used in one *pada* only in entire *samhita*.

## **Conclusion**

Study of *chhanda* is an integral part of classical text based learning. Proper acquaintance of the *samhita* cannot be possible without the adequate knowledge of each and every meter. Hence proper and logical study of meter according to composition is mandatory in order to recite and memorize the text rhythmically. The aforesaid presented *chhanda* are scientifically analyzed and documented for the onward propagation of classical knowledge.

Sl	Name of <i>chhanda</i>	Available in <i>Sushruta samhita</i>
1.	<i>Anustup</i>	<p><b>Sutra Sthana</b>  1/35-37,39 ;3/4-46,48-53,55-56; 4/7-9; 5/9-10,12,20-33,39-41 ;;6/8,22-38;7/18,20,21 ;;8/14,16-20;9/5-6;10/7,9;11/16,17-25 ;12/17-39 ;;13/5-7,18,24;14/5 ;6,9-12,15,31-34,37-45; 15/18,21-23,25-27,29-31,35-41;16/9,11-14,16,20-25,26(1-19),32;17/6,10-13,17,18 ;;18/7-10,13-15,23,30,31,33-45; 19/4,6,8,10,12,13,15,17,19,21,22,24,26,28, 30-37;20/9-12,18-29;  21/4,8,11,13,15,17,20,22,24,26,29,30,36-40;22/9-10,13;23/7,9-11,13-21; 24/10,12;25/3-30,42-46 ;; 26/14-23;27/11,23-26;28/3-28;29/3-81;30/3-23; 31/3-32;32/5-7;33/3-26;34/3-24;35/5-11,13-15,17,19-23,27,28,31-34,36,38, 40,43-49 ; 36/8,10-17;37/3-33;38/5,7,9,11,13, 15,17,19,21, 23,25,28,30, 32,34, 36,38, 40,42, 44,47,49,51,53,55-61,63,65,67,69,71,74,76,77,79-82; 39/11-14;40/6-8,11-21;41/7-10,12;42/13;43/3(1,2),10,11;44/3,4,16-89 ;; 45/9,10,13-16,20,22,23,25-48,50-64,66-82,85-91,95,97-111,113,116-119, 129, 130,133-142,144,146-147,149-158, 161,163-165,168-216,218-229 ; 46/5-7,9-11,13-20,22-26,28-33,50-52,55-58,60-66, 68-71,73,75,77,80-84,86-92,95-104,106, 107,110-112,114-117,119-125,127, 128, 131-136, 138, 140-162,164-176,178-186,188-220,222-242,248, 250-253,255,257-261,263-273,275-280,282,284-289,291,292,295-297,299-305,306-312,314-330,332-418,423-431,438-499,504-509,514-531</p> <p><b>Nidana Sthana</b>  1/3-41,47-91;2/16,19-26;3/6,13-28;4/10-13;5/20-34;;6/15-25,27;7/24,25 ;; 8/7-14; 9/3-38; 10/15-27 ;; 11/29; 12/13-15; 13/4-61; 14/4-18; 15/12-16; 16/5-12,14-26,28-35 ;;</p> <p><b>Sarira Sthana</b>  1/11-13,15,21,22; 2/6-23,26,27,29,33,34,36-58; 3/7-12,14,15,17,19-29,35; 4/6,7,9,11,13,15,17,19,21-23,26-30,32,34-37,39-56,58-61,63,67,71,76,77-79,81-99 ; 5/21-25,28,30-36,38,41-48,50,51; 6/9-14,35-41; 7/4-21,23; 8/7,10-16,20-23,25,26; 9/10,13; 10/6,14,19,20,32-36,39-44,47-49,54,55,59-65,68-70;</p> <p><b>Cikitsa Sthana</b>  1/12-16,20-140; 2/3-97; 3/3-70; 4/3-26,33; 5/5,13-17,29-45; 6/19-22; 7/3-29,31-32,34,37-38; 8/5-54; 9/27 -38,54-72 ;; 10/16; 11/13; 12/12-20; 13/3 -34; 14/9,16; 14/9,16; 16/16-43; 17/29 -33; 18/27 ; 19/3-69; 20/3-63; 21/3-18; 22/3-81; 23/6 -9;; 24/3-88,102-133; 25/3-27; 26/3-34,37,39; 27/-3-6,13; 28/9-28; 29/3,5-9,11,14-32; 30/3,6-39; 31/9-10,12,13,15-55; 33/6,16-17, 22, 33-47; 34/22; 35/4,6,8,10,14-17,19,20,22-31,33; 36/3-51; 37/3-124,127; 38/4, 6-118; 39/3 -38; 40/7,8-12,15,20,26,27,29,30,32-43,45,49,50,53-60,64-71;</p> <p><b>Kalpa Sthana</b>  1/3-85; 2/3,4,6-24,33-55; 3/3,18-37; 4/3-33,40-45; 5/3-55,82-86; 6/4-31; 7/3-65; 8/3-26,37-58,67-78,90-133,135-143;</p> <p><b>Uttara Tantra</b>  1/3-25,28-45; 2/3 ; 3/3-30 ; 6/-10-19,21,22,24 ; 7/3-26,28-33 ; 8/3-5 ; 9/3-25; 12/3-5,8-43; 13/3-18; 14/3-11; 15/3-33; 17/3-23,52-100; 18/3 -106; 19/17-20; 20/3-5 ; 21/3-58; -22/3-5,20,21; 24/-6-17,25-42; -25/3-4; 26/3-46; 27/3-5,17-21; 28/3-7,10-14; -29/3-9; 30/3-11; 31/3-11; 32/3-11; 33/3-9; 34/3-9; 35/3-9; 36/3-11; 37/3-22; 38/3-32; 39/3-56,59-324; 40/3-5,17,18,21-137,150-153,158-182; 41/3-28,31-35; 42/3-9,16-145; 43/3-22 ; 45/3-8,11-15,21-28,44,45; 46/3-13,25;47/3-13,17,49-54,65-79; 48/3 ; 49/3-8,13,14,16-35; 50/3-5,7-14,27,28; 51/3-54; 52/3; 53/10-17; 55/3-6,18-53;; 56/3-5,7-8; 58/3 -72; 59/4-27 ; 60/3-6,17-19,23-56; 61/3 -41 ; 62/3-7,14-35; 63/3 -7,9,11,13,17; 64/3-55,56-64; 65/5-7,41-43; 66/3-16;</p>
2.	<i>Indravajra,</i>	<p><b>Sutra Sthana</b>  16/-27; 44/5;46/36,46,49,421,500,501,510;</p> <p><b>Nidana Sthana</b></p>



		<p>5/9,14,15;7/3,6,9,12,20; 11/3-5,8,10,15,17,19,28; 16/38,48,49,55,65,66</p> <p><i>Sarira Sthana</i> 4/66,74;9/11; 6/42; <i>Cikitsa Sthana</i></p> <p>9/17-18,24-25,50-53 ; 14/19; 17/4,5,7,14,19,20,34,36,37,39-42,43,44-47; 18/3,5,15,20,24,26,28,30-33,37,43,44,50,53,54; 25/28,29,34,35,38-42 ; 33/24,29 ;</p> <p><i>Kalpa Sthana</i></p> <p>2/25,32; 3/6-8,38,40,42-44; 5/75; 8/80,82,84 ;</p> <p><i>Uttara Tantra</i></p> <p>4/3-3 ½ ; 6/3,7,9,25,28; 7/35,40 ; 11/10,12,16; 12/47,48,52; 16/-3,5,8; 22/7,11,13,17,18; 28/9 ; 25/13 ; -24/3; 41/38,40,43,45,48,51,53; 44/7,8,10,23,27,32,34,36,37 ; 45/33,36; 46/14 ; -47/15,46 ; 48/4,5,7-9,17,31,33; 49/9,12,15; 50/15; 52/11,14,17,20,21,25,36,38; 55/8,10,14,15,17; 56/10-12,17,18,22,23,26;</p>
3.	<i>Kusumitalatabellita,</i>	<i>Uttara Tantra</i> 64/84 ;
4.	<i>Malini,</i>	<i>Sarira Sthana</i> 4/80;
5.	<i>Praharshini</i>	<i>Sarira Sthana</i> 4/69,73; <i>Uttara Tantra</i> 4/4-9 ; 27/8-16 ; 60/8-16 ;
6.	<i>Puspitagra</i>	<i>Sarira Sthana</i> 4/65; <i>Cikitsa Sthana</i> 15/7 ;
7.	<i>Salini</i>	<p><b><i>Sutra Sthana</i></b> 44/12,13;46/79; <i>Nidana Sthana</i> 1/42-46; 16/41-45 ; 6/20 ;</p> <p><i>Cikitsa Sthana</i> 9/12-16,39-48; 13/35 ; 32/20-25 ½ ; 37/125,126;</p> <p><i>Kalpa Sthana</i> 5/56-60 ½ ; 8/59-66;</p> <p><i>Uttara Tantra</i> 2/4-8; 5/3 ; 6/20 ; 10/3-5 ½ ,9-16; -12/44 ; 23/3-8,10-12; 27/6,7; 40/6,8,10-16,19-20; 50/16,16 ½ ,18-22;</p>
8.	<i>Sragdhara</i>	<i>Uttara Tantra</i> 45/9-10 ;
9.	<i>Totaka,</i>	<i>Sarira Sthana</i> 4/70,75;
10.	<i>Upajati,</i>	<p><b><i>Sutra Sthana</i></b> 1/21; 2/9-10;4/4;5/42;11/31;12/12;16/28-31;17/7-8,14-16;25/3-30,42-46 ; 44/6-11,14,15,90,91;45/83,145;46/34,35,37,39,40,42-44,47-48,49 ½ ,243-247,331,419,420,422,502,503,511-513; <i>Nidana Sthana</i> 5/10-13,16 ; ;7/4,5,7,9,11,13-19,21-23; 11/6,7,9,11-14,16,18,20-27;; 16/37-39,50-54,56-63; <i>Sarira Sthana</i> 6/18,20,43;</p> <p><i>Cikitsa Sthana</i> 9/20-23,26,45,49; 10/3 ; 17/3,6,8-13,21-28,35,38; 18/4,6-14,16,17,19,21,23,25,29,32,34-36,38-41,45-49,51,52,55; 23/13 ; 25/30 – 33,36-37,43 ; 26/35,36; 30/40 ; 31/56-57; 33/8-9,11-15,25-28,30,31;</p> <p><i>Kalpa Sthana</i> 3/9-17,39,41; 3/9-17,39,41; 5/61-74,76-81; 6/32 ; 8/79,81,83,85-89,134;</p> <p><i>Uttara Tantra</i> 1/26,27; 2/9 ; 5/4 -10 ; 6/4-6,8,23,26,27,29,30; 7/27,34,36 – 39, 41-46; 10/6-8; 11/10,12,16; 12/6-7,45,46,49-51,53; 16/4,6,7,9; 17/50,51; 17/26,33, 36-41,45-47; 22/6,8-10,12,14-</p>

		16,19; 23/9 ; 24/4,18-24; 25/5-12,14,18; 28/9 ; 39/57, 58 ; 40/7-9; 40/9,138-140,143,146,147,154-157; 41/36, 37,39,41, 42,44,46 ,47,49, 50,52,54-58; 42/10,12-15 ; 44/3-6,9,11-22,24-26,28-31,33,35,38-40; 45/29, 32,34,35,37,38,43; 45/20,40-42,31; 46/15-24; 47/14,16,45; 48/6,10-16,18-30, 32;49/10-11; 50/23-26; 50/17, 17 ½ ; 51/55-56; 52/4-10,12,13, 15, 16, 18, 19, 22-24, 26-35,37,39-47; 54/40; 55/7,9,11-13,16; 56/6,9,13-16,19,21, 24,25,27;; 59/3 ; 60/20-22; -659(1); 66/17 ;
11.	<i>Upendravajra,</i>	<b>Sutra Sthana</b> 35/50 ;46/41,45,532; <b>Nidana Sthana</b> 16/47 <b>Sarira Sthana</b> 6/19; <b>Cikitsa Sthana</b> 17/18; 18/18,42; <b>Uttara Tantra</b> 25/17 ; 24/-5;
12.	<i>Vamsastha,</i>	<b>Sutra Sthana</b> 1/41; <b>Cikitsa Sthana</b> 39/39 ; <b>Uttara Tantra</b> 17/24-25,27-32,34,42-44,48,49; 20/6-16; 45/16-19,30,39-40; 47/47,48 ; 50/6,29,30;
13.	<i>Vasantatilaka</i>	<b>Nidana Sthana</b> 10/3-14; <b>Sarira Sthana</b> 6/28-34 ½;41/29,30 ; <b>Uttara Tantra</b> 8/6-11; 19/-3-16; 41/29,30 ; 47/18-44,55-64 ; 53/3-9; 57/3-17 ; 62/8-13 ; 64/67,69,72,75,77,79,82;
14.	<i>Vatormi</i>	Su.Utt.10/7

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