

## **Basic Structure of Hindi Poetry**

### **Part 2a – Software “Geet Gatiroop” to help in Maatraa Counting**

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#### **Preface**

Part 2 of the article series on the Basic Structure of Hindi poetry dealt with an introduction of Maatraa (मात्रा) in metered (छन्दोबद्ध) poems. Subsequent to the publication of that article, a software is now available, which can assist you in maatraa counting. This addendum to Part 2, illustrates the same examples of Part 2, this time using the software. This hopefully will enable a further understanding of those examples as well as serve as an introduction for how to the software can help you in applying the principles laid down in Part 2.

The whole article is in 4 parts as listed below:

[Part 1: Structural units of a poem.](#)

[Part 2: Maatraa \(मात्रा\) or Meter of a Poem for Chhanddobaddh \(छन्दोबद्ध\) Poetry](#) - i.e. poems that follow a clear rhythm. This is perhaps the most important ingredients of the craft of poetry.

Part 2a: (This part) Software “Geet Gatiroop” (गीत-गतिरूप) to help in Maatraa Counting

Part 3: Maatraa or the meter of poems – for Mukta Kavita (मुक्त कविता), i.e. free verse.

Part 4: Correspondence with Urdu poetry - Although this article mainly deals with Hindi poetry, some description of Urdu poetry is included because of the close inter-relationship between the two.

#### **1. Introduction**

The software [Geet-Gatiroop \( गीत-गतिरूप \)](#) provides a visual output of the maatraa arrangement of a given set of lines of poetry, in the same way as the examples in Part 2 were illustrated with diagrams. Thus, for example, the lines

उमा कहतं मैं अनुभव अपना

सत हरि भजन जगत सब सपना

उमा कहउं में अनुभव अपना  
 (1+2) (1+1+1) (2) (1+1+1+1) (1+1+2) = total 16

सत हरि भजन जगत सब सपना  
 (1+1) (1+1) (1+1+1) (1+1+1) (1+1) (1+1+2) = total 16

उ	मा	क	ह	उं	में	अ	नु	भ	व	अ	प	ना		
स	त	ह	रि	भ	ज	न	ज	ग	त	स	ब	स	प	ना

Example from Part 2

is displayed by the software as

उ	मा	क	ह	उं	में	अ	नु	भ	व	अ	प	ना	16		
स	त	ह	रि	भ	ज	न	ज	ग	त	स	ब	स	प	ना	16

The colors and shapes have specific meaning that provide additional information to the user. For details see this [link](#). However, for the purposes of maatraa counting and this article, that is not needed.

This software encodes the principles laid out in Part 2 that are largely applicable to any Hindi text – i.e. the fact that laghu swar (short vowels) occupy 1 maatraa, deergh swar (long vowels) occupy 2 maatraas, and the generally applicable rules of when when half-letters consume a maatraa and when it does not. However, the software cannot take care of exception cases, and other finer adjustments that may be required for the specific text in question. That is something that only you can do. Thus, it is still important to equip oneself with the knowledge in the other parts of this article series, and use the software only as an assistant, a helper.

We shall now see how the same examples taken in Part 2, are handled by the software and what is required of you as a user.

## 2. Examples of Part 2, Re-seen via Geet Gatiroop

The software is available at this address: <http://manaskriti.com/vis/hindi-poem-vis/>.

It does not need to be downloaded and installed. It is to be used at this address in the browser itself.

This is the software screen –



## गीत गतिरूप : Geet Gatiroop

Visualizing Hindi verse. Seeing rhythm, temporal and phonetic patterns in poems and songs.  
To refine maatraas in writing verse. For structural analysis of poems & songs. To set a song to a required musical beat.

अपनी हिन्दी कविता यहां कापी-पेस्ट करिए

Visualize!

To obtain the outputs as above, copy-paste (or type) your Hindi text in the box on the left and press the “Visualize” button.

### 2 and 2 alignment

It is important to note that 1+2 cannot match with 2+1. However 2 can match with 1+1 so 1+2 or 2+1 can both match 1+1+1. For example " राह " (2+1) will not match with " रह " (1+2) but both will match with " सड़क ".

रा	ह
र	हा

रा	ह	
स	इ	क

र	हा	
स	इ	क

Output from Geet-Gatiroop

रा	ह	3
र	हा	3

रा	ह	3	
स	इ	क	3

र	हा	3	
स	इ	क	3

The misalignment of 2 and 2 of रा and हा can be seen in the first output.

**Chaupaayee by Tulsidas उमा कहउं में अनुभव अपना**

उमा कहउं में अनुभव अपना  
 (1+2) (1+1+1) (2) (1+1+1+1) (1+1+2) = total 16

सत हरि भजन जगत सब सपना  
 (1+1) (1+1) (1+1+1) (1+1+1) (1+1) (1+1+2) = total 16

उ	मा	क	ह	उं	में	अ	नु	भ	व	अ	प	ना		
स	त	ह	रि	भ	ज	न	ज	ग	त	स	ब	स	प	ना

First output from Geet-Gatiroop:

उ	मा	क	ह	उं	में	अ	नु	भ	व	अ	प	ना	17		
स	त	ह	रि	भ	ज	न	ज	ग	त	स	ब	स	प	ना	16

The software has assigned one maatraa to the nasal sound (ं) at the end of कहउं. To correct that, click in that relevant box, so that it may contract to consume no maatraa.

Final output from Geet-Gatiroop:

उ	मा	क	ह	उं	में	अ	नु	भ	व	अ	प	ना	16		
स	त	ह	रि	भ	ज	न	ज	ग	त	स	ब	स	प	ना	16

**Short pronunciation of Deergh Swar (long vowel): Dohaa from Raamcharitmaanas**

*Dohaas are 24maatraa. Consider an example of a doha in Raamcharitmaanas:*

बोले बिहंसि महेश तब, जानी मूढ न कोय  
 (2+2) (1+1+1) (1+2+1) (1+1) (2+2) (2+1) (1) (2+1) = 24

जो जस जब हरिहर चहंहि, सो तस तेहि क्षण होय  
 (2) (1+1) (1+1) (1+1+1+1) (1+1+1) (2) (1+1) (1+1) (1+1) (2+1) = 24

बो	ले	बि	हं	सि	म	हे	श	त	ब	जा	नी	मू	ढ	न	को	य			
जो	ज	स	ज	ब	ह	रि	ह	र	च	हं	हि	सो	त	स	ते	हि	क्षण	हो	य

Note that the maatraa of ले in 'बोले' in the first line is 2 whereas the maatraa of ते in तेहि is 1. This is apparent from their pronunciation. The letter 'le' in 'bole' is pronounced elongated whereas 'te' in 'tehi' is pronounced in short.

First output from software:



Nasal sound in बिहंसि and चंहि needs to be adjusted, "ते" in तेहि क्षण needs to be adjusted by clicking on the appropriate boxes.

Final output from software:



### Maatraa Manipulation by adding 'Lahraa'

Now let us take one more example, in which the rule of maatraa alignment is compromised, rather manipulated, by adding 'lahraa' or by elongating a letter or by giving a pause:

कामिहि नारि पियारि जिमि, लोभिहि प्रिय जिमि दाम  
 (2+1+1) (2+1) (1+2+1) (1+1) (2+1+1) (1+1) (1+1) (2+1) = 24

तिमि रघुनाथ निरंतर -अ - प्रिय लागह मोहि राम  
 (1+1) (1+1+2+1) (1+1+1+1+1+1) (1+1) (2+1+1) (1+1) (2+1) = 24

का	मि	हि	ना	रि	पि	या	रि	जि	मि	लो	भि	हि	प्रि	य	जि	मि	दा	म		
ति	मि	र	घु	ना	थ	नि	र	न्	त	र	अ	प्रि	य	ला	ग	ह	मो	हि	रा	म

The extra letter अ at the end of nirantar is a kind of lahra that elongates the last letter 'र'. You can also pronounce it as 'निरन्तरः' or 'निरन्तरा' to get the same effect.

First output from software:

का मि हि ना रि पि या रि जि मि लो भ हि प्रि य जि मि दा म 24  
 ति मि र घु ना थ नि र ं त र अ प्रि य ला ग हु मो हि रा म 25

Final output, after adjusting nasal sound of निरंतर -

का मि हि ना रि पि या रि जि मि लो भ हि प्रि य जि मि दा म 24  
 ति मि र घु ना थ नि र ं त र अ प्रि य ला ग हु मो हि रा म 24

You might wonder: Why does the software assign a maatraa to the nasal sound (ं), that you the user must remove always? The thing is that the (ं) can also indicate a half-letter that does indeed consume one maatraa, such as in the word जंगल which indeed is a 4 maatraa word. The (ं) in this case indicates the half letter ङ which consumes 1 maatraa.

ज ं ग ल 4

**Sthaayee from [Jhansi Kee Rani](#)**

बुंदेले हरबोलों के मुँह हमने सुनी कहानी थी,  
 (1+1+2+2) (1+1+2+2) (2) (1+1) (1+1+2) (1+2) (1+2+2) (2) = 30

खूब लड़ी मर्दानी वह तो झाँसी वाली रानी थी  
 (2+1) (1+2) (1+1+2+2) (1+1) (2) (2+2) (2+2) (2+2) (2) = 30

बु	न्	दे	ले	ह	र	बो	लों	के	मुँ	ह	ह	म	ने	सु	नी	क	हा	नी	थी
खू	ब	ल	ड़ी	म	र्	दा	नी	व	ह	तो	झाँ	सी	वा	ली	रा	नी	थी		

Output from Geet-Gatiroop:

ब ं डै ले हर बो लो ं के मु ह ह म ने सु नी क हा नी थी 30  
 खू ब ल डी म र् दा नी व ह तो झा सी वा ली रा नी थी 30

### Antaraa from Jhansi Kee Rani

जाओ रानी याद रखेंगे हम कृतज्ञ भारतवासी,  
 (2+2) (2+2) (2+1) (1+2+2) (1+1) (1+1+1+1) (2+1+1+2+2) = 30

यह तेरा बलिदान जगावेगा स्वतंत्रता अविनाशी,  
 (1+1) (2+2) (1+1+2+1) (1+2+2+2) (1+1+1+1+2) (1+1+12+2) = 30

जा	ओ	रा	नी	या	द	र	खें	गे	ह	म	कृ	त	ज्ञ	य	भा	र	त	वा	सी	
य	ह	ते	रा	ब	लि	दा	न	ज	गा	वे	गा	स्व	त	न्	त्र	ता	अ	वि	ना	शी

Again note how the total maatraas =30 and the series of maatraas match. In counting the maatraas, note that kri (कृ) in the first line is one maatraa and gya (ज्ञ) is counted as 1+1 because of their pronunciations in the respective words. If a word starts with ज्ञ, in general it would be one maatraa because it is a composite of half ग and full य with half ग telescoped into य.

First output:



Final output:



### Urdu Ghazal from Shakeel

बेजुबानी जुबाँ न हो जाये  
 (2+1+2+2) (1+2) (1) (2) (2+2) = 17

राज़ेउलफ़्त- अयाँ न हो जाये  
 (2+1+1+1+1+1) (1+2) (1) (2) (2+2) = 17

This is matlaa. Notice both the lines rhyme as 'jaaye'. The number of maatraas in each line is 17. The maatraa structure is same- if there is 2 in the top line, the bottom line at that place is either 2 or 1+1. Notice that ऐ in बेजुबानी is counted as 2, whereas in राजे it is counted as 1 because it has a long pronunciation in bezubaanee and a short pronunciation in raaze. In general in composite possessive nouns in urdu, ऐ has a short pronunciation and has 1 maatraa (For example - गमे-दिल). Here is another couplet in the same ghazal.

ज़िक्र उनका जुबान पर आया  
 (1+1+1) (1+1+2) (1+2+1) (1+1) (2+2) = 17

यह कहीं दास्ताँ न हो जाये  
 (1+1) (1+2) (2+1+2) (1) (2) (2+2) = 17

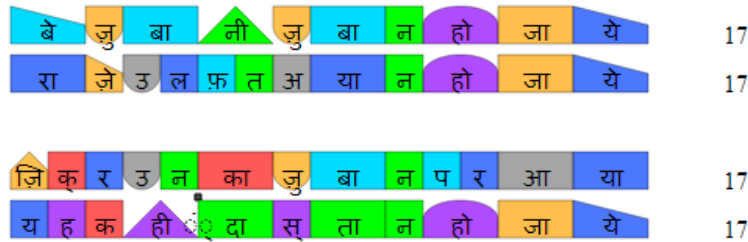
बे	जु	बा	नी	जु	बां	न	हो	जा	ऐ
रा	जे	उ	ल	फ़	त	अ	यां	न	हो

ज़ि	क्	र	उ	न	का	जु	बा	न	प	र	आ	या
य	ह	क	हीं	दा	स	तां	न	हो	जा	ऐ		

First output -



Output by adjusting जे in राजे -





Three videos are available, which explain the principles of Part 2 in a more visual manner with the use of the Geet-Gatiroop software. We recommend that you see the videos. They will enable you to further understand the concepts and know how the software can be used.



[Video 1: Short Long Vowels / Laghu Deergh Swar \(2:32\)](#)



[Video 2: Flexibility in Urdu \(6:56\)](#)



[Video 3: Half Letters / Aadha Akshar \(10:27\)](#)

Next, in Part 3 we shall see the role of Maatraa and meter in Mukht Kavita (Free Verse).

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