



# PGCP

Lectures 15 onwards

# Common mispronunciations

- सावन का महीना पवन करे...
- विश्व - बिस्व
- वन - बन
- बाण - बान
- लक्ष्मण - लक्ष्मन
- ढाबा - धाबा
- अर्थ - अर्ध
- जीविका - जीविगा
- चिन्तितवान् - चिन्दिदवान्



# रक्षार्थं वेदानाम्..

- Development of two systems – (1) System of recitation – प्रकृति-पाठs and विकृति-पाठs
- Development of 6 वेदाङ्गs
- One fully dedicated to the art of pronunciation (perhaps the oldest of all the वेदाङ्गs) is शिक्षा
- Perhaps the most crucial one to ensure that the correct oral transmission of the huge Vedic corpus
- Sanskrit phonetics find its roots in the वेदs - ऋग्वेद 10.125 (वागाम्भृणी)
- Earliest description of Sanskrit phonetics found in तैत्तिरीय उपनिषद् 1000 BCE  
वर्णः स्वरः । मात्रा बलम् । साम सन्तानः । इत्युक्तः शिक्षाध्यायः ॥

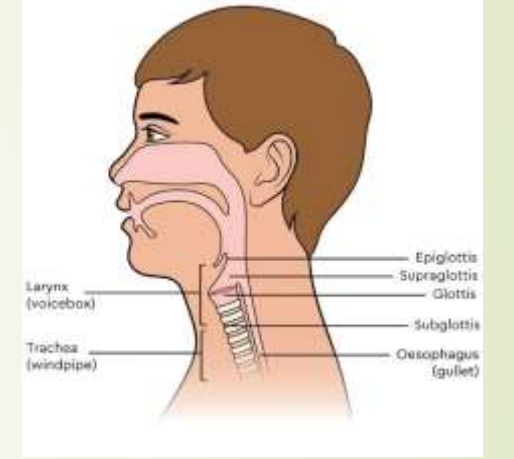


# How to give the शिक्षा of correct pronunciation?

- ▶ This method is not feasible when it comes to a written शिक्षा
- ▶ The mother-tongue bias of a learner does not allow them to perceive the correct pronunciation ... thereby articulate it
- ▶ So we have to head towards 'description' of sounds

# Tools for description

- उच्चारण-स्थान - कण्ठः, तालु, मूर्धा, दन्ताः, ओष्ठौ
- यत्नः
  - आस्यम् - ओष्ठात् प्रभृति प्राक् काकलकात्।
  - आभ्यन्तर = यत्न that happens inside the आस्य
  - बाह्य = यत्न that happens outside the आस्य
- आभ्यन्तरः (प्रयत्नः) - स्पृष्ट, ईषत्स्पृष्ट, ईषद्-विवृत, विवृत, संवृत
- बाह्यः -
  - संवारः, नादः, घोषः X विवारः, श्वासः, अघोषः
  - उदात्त, अनुदात्त, स्वरित
  - अल्प-प्राणः, महा-प्राणः
- If you understand these categories, you understand sounds





# The वर्णमाला

- The rational order of Sanskrit alphabet – वर्णमाला was established earlier than 600 BCE
- सामवेद प्रातिशाख्य organized the स्पर्श वर्ण into 5 x 5 square

क	ख	ग	घ	ङ
च	छ	ज	झ	ञ
ट	ठ	ड	ढ	ण
त	थ	द	ध	न
प	फ	ब	भ	म

# Formulation of a rational order of वर्णऽs

† आभ्यन्तरबाह्यप्रयत्नज्ञानार्थकं कोष्ठकम्—

आभ्यन्तर- प्रयत्नाः	स्पृष्टाः		ईषत्स्पृष्टाः		ईषद्विवृताः	विवृताः		संवृताः
संज्ञाः	स्पर्शाः				अन्तःस्थः	ऊष्माणः	स्वराः	
वर्णाः	क च ट त प	ख छ ठ थ फ	ग ज ड द ब	ङ ञ ण न म	घ झ ढ ध भ	य व र ल	श ष स ह	अ ऋ ओ इ लृ ऐ उ ए औ ह्रस्वोऽकारः प्रयोगे
बाह्यप्रयत्नाः	अ.प्रा.म.प्रा. विवाराः श्वासाः अघोषाः	अल्पप्राणाः संवाराः नादाः घोषाः	म.प्रा. संवाराः नादाः घोषाः	अ.प्रा. संवाराः नादाः घोषाः	म.प्रा. विवाराः श्वासाः अघोषाः	म. सं. ना. घो.	उदात्तानुदात्तस्वरिताः	

# Helps in Two Ways

1. Using the vocabulary developed based on

- (a) place of articulation and
- (b) manner of articulation

one can provide a unique description of each sound.

Example – there is one and only one sound with (a) place of articulation - दन्त and (b) manner of articulation – स्पृष्ट, विवार, श्वास, अघोष and अल्पप्राण that sound is 'क'

2. It provides a logical reasoning for commonly observed sound shifts ...



सोर-शोर, वन-बन, लक्ष्मण-लक्ष्मन, ढाबा-धाबा, अर्थ-अर्ध, जीविका-जीविगा, चिन्तितवान्-  
चिन्दिदवान्

† आभ्यन्तरबाह्यप्रयत्नज्ञानार्थकं कोष्ठकम्—

आभ्यन्तर- प्रयत्नाः	स्पृष्टाः		ईषत्स्पृष्टाः		ईषद्विवृताः		विवृताः		संवृताः			
संज्ञाः	स्पर्शाः				अन्तःस्थाः	ऊष्माणः		स्वराः				
वर्णाः	क	ख	ग	ङ	घ	य	श	ह	अ	इ	उ	ह्रस्वोऽकारः प्रयोगे
	च	छ	ज	झ	ञ	व	ष		ऋ	लृ	ए	
	ट	ठ	ड	ण	ढ	र	स		ओ	ऐ	औ	
	त	थ	द	न	ध	ल						
	प	फ	ब	म	भ							
बाह्यप्रयत्नाः	अ.प्रा.म.प्रा. विवाराः श्वासाः अघोषाः	अल्पप्राणाः संवाराः नादाः घोषाः	म.प्रा. संवाराः नादाः घोषाः	अ.प्रा. संवाराः नादाः घोषाः	म.प्रा. विवाराः श्वासाः अघोषाः	म. सं. ना. घो.	उदात्तानुदात्तस्वरिताः					



# Emergence of IPA

- The International Phonetic Alphabet Chart – A notational standard of for phonetic representation of all languages
- Maintained by International Phonetic Association
- In 1886 a few language teachers in Paris formed a group - *Dhi Fonètik Tītcerz' Asóciécon* (the FTA)
- Objective – to help children acquire realistic pronunciations of foreign languages
- Converted to IPA in 1897
- The group was lead by Paul Passy
- Knew English, German, Italian, SANSKRIT and Gothic Latin

# The IPA chart

## THE INTERNATIONAL PHONETIC ALPHABET (revised to 2020)

CONSONANTS (PULMONIC)

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	Bilabial	Labiodental	Dental	Alveolar	Postalveolar	Retroflex	Palatal	Velar	Uvular	Pharyngeal	Glottal
Plosive	p b			t d		ʈ ɖ	c ɟ	k ɡ	q ɢ		ʔ
Nasal	m	ɱ		n		ɳ	ɲ	ŋ	ɴ		
Trill	ʙ			r					ʀ		
Tap or Flap		ⱱ		ɾ		ɽ					
Fricative	ɸ β	f v	θ ð	s z	ʃ ʒ	ʂ ʐ	ç ʝ	x ɣ	χ ʁ	ħ ʕ	h ɦ
Lateral fricative				ɬ ɮ							
Approximant		ʋ		ɹ		ɻ	j	ɰ			
Lateral approximant				l		ɭ	ʎ	ʟ			

Symbols to the right in a cell are voiced; to the left are voiceless. Shaded areas denote articulations judged impossible.

Watch the video for details - [https://youtu.be/6oRU7O6svO8?si=ocy\\_wV3qe4opVkhE](https://youtu.be/6oRU7O6svO8?si=ocy_wV3qe4opVkhE)

# माहेश्वर-सूत्रs

1. अइउण्
2. कलक्
3. एओङ्
4. ऐऔच्
5. हयवरट्
6. लण्
7. जमङणनम्
8. झभञ्
9. घढधष्
10. जबगडदश्

11. खफछठथचटतव्
12. कपय्
13. शषसर्
14. हल्

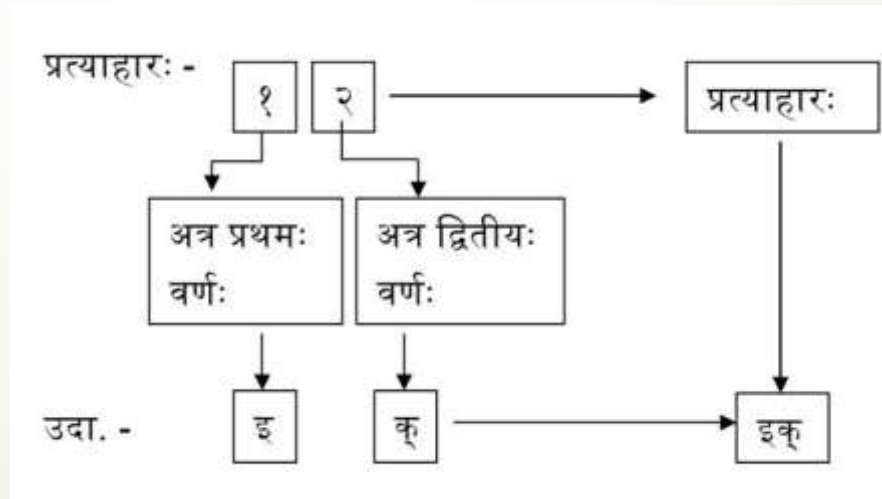
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- According to a legend, Panini performed तपस् (austerity).. Lord शिव, propitiated by his तपस् played his डमरु for 14 times. These सूत्रs are created by imitating the sounds of डमरु. Since they are acquired from lord शिव (or महेश्वर), they are called as माहेश्वर सूत्रs
- They are also called as शिव-सूत्रs, अक्षर-समाम्नाय and प्रत्याहार-सूत्रs
- The main purpose of these सूत्रs is to create प्रत्याहारs
- प्रत्याहारs are abbreviations that can denote different strings of sounds for performing different linguistic operations



# How to Prepare a प्रत्याहार

- A प्रत्याहार consists of two वर्णs
- The first one of them can be any वर्ण except the last sound (which is also called as इत् sound) from any माहेश्वर सूत्र.
- The second one should compulsorily be the last (or इत् sound) of the same or following माहेश्वर सूत्र



# वर्णs Indicated by a प्रत्याहार

- All the वर्णs beginning from the first one mentioned in the प्रत्याहार to the last one except all the इत् sounds are indicated by a प्रत्याहार

१) अ [इ] उर् ।	२) ऋलृ [ऋ] ।	३) एओङ् ।	४) ऐऔच् ।
५) हयवरट् ।	६) लण् ।	७) अमङ्गनम् ।	८) झभञ् ।
९) घढधप् ।	१०) जवगडदश् ।	११) खफछ्ठथचटतव् ।	
१२) कपय् ।	१३) शषसर् ।	१४) हल् ।	

- For example the प्रत्याहार 'इक्' includes – इ, उ, ऋ and लृ
- More about this in the video -  
[https://youtu.be/0QnHjb3\\_GOE?si=rV1YwqvjhQtRAuk2](https://youtu.be/0QnHjb3_GOE?si=rV1YwqvjhQtRAuk2)  
(Watch between 9 min to 22 mins of the video)

Few examples of प्रत्याहारs and the वर्णs indicated by them -

प्रत्याहारः	वर्णs they denote	Remarks
अक्	अ, इ, उ, ऋ, लृ	
अश्	अ, इ, उ, ऋ, लृ, ए, ओ, ऐ, औ, ह, य, व, र, ल, ज, म, ङ, ण, न, झ, भ, घ, ढ, ध, ज, ब, ग, ड, द्।	अ, इ, उ et. are vowels. वर्णs beginning from ह are consonants
अच्	अ, इ, उ, ऋ, लृ, ए, ओ, ऐ, औ।	The प्रत्याहार अच् includes all vowels
हल्	ह, य, व, र, ल, ज, म, ङ, ण, न, झ, भ, घ, ढ, ध, ज, ब, ग, ड, द्, ख, फ, छ, ठ, थ, च, ट, त, क, प, श, ष, स, ह	The प्रत्याहार हल् includes all consonants

# Comparison between वर्णमाला and माहेश्वर-सूत्रs

वर्ण-माला

उ	अ	इ	ई	उ	ऊ	ऋ	ॠ	ल	ए	ऐ	अं	औ
क	ख	ग	घ	ङ								
च	छ	ज	झ	ञ								
ट	ठ	ड	ढ	ण								
त	थ	द	ध	न								
प	फ	ब	भ	म								
य	र	ल	व									
श	ष	स	ह ह									

माहेश्वर-सूत्रs

अइउण् ऋलक् एओङ् ऐऔच्  
हयवरट् लण् जमङणनम्  
झभञ् घढधष् जबगडदश्  
खफछठथचटतव् कपय् शषसर् हल्

# How are प्रत्याहारs Used in अष्टाध्यायी

- Example – इको यणचि। (6.1.77)  
इकः यण् अचि  
(इक्)(यण्)(अच्)
- इक् - इ, उ, ऋ, लृ
- यण् - य, व, र, लृ
- अच् - अ, इ, उ, ऋ, लृ, ए, ओ, ऐ, औ (all vowels)
- Meaning –
  - इ changes to य when it is followed by any vowel
  - Likewise उ changes to व, ऋ changes to र and लृ changes to ल
- Read 'Economy and the Construction of Śivasūtras' by Paul Kiparsky (1991)



# Ellipses : अनुवृत्तिः

- In day-to-day communications an elliptical sentence is made a complete sentence by borrowing required words from the previous context
- Panini has ingeniously made use of this ordinary feature of spoken language and has transferred it into a highly technical appliance called 'अनुवृत्ति'
- आकाङ्क्षा (Expectancy) plays a major role in deciding अनुवृत्ति
- Panini has been able to save around 30000 words in his work with just this one technique

# Example of अनुवृत्ति in the rules from 1.3.2 -

1 3 9

No.	सूत्रs	Meaning
1	उपदेशे अच् अनुनासिकः इत्।	The nasalised vowels are इत् in उपदेश or original enunciation.
2	हल् अन्त्यम् ।(उपदेशे इत्)	In उपदेश, the final consonant is इत्
3	न विभक्तौ तु-स्-माः। (हल् अन्त्यम् उपदेशे इत्)	The final dental consonants and the final स् and म् are not इत् , in affixes called विभक्ति
4	आदिः जि-टु-डवः। (उपदेशे इत्)	जि, टु and डु occurring at the beginning of an उपदेश are called 'इत्'.
5	षः प्रत्ययस्य। (आदिः उपदेशे इत्)	The letter ष् at the beginning of a प्रत्यय is called 'इत्'
6	चु-टू। (प्रत्ययस्य आदिः उपदेशे इत्)	The letters - च्, छ्, ज्, झ्, ञ्, ट्, ठ्, ड्, ढ्, ण् - at the beginning of a प्रत्यय are called इत्
In सूत्रs 1 to 7 above - no. of words used = 15 : No. of words saved = 19		
7	लशकु अतद्धिते। (आदिः उपदेशे इत्)	The initial ल् and श् and the gutturals of all affixes, except तद्धित are called इत्

# अनुबन्धs

- अनुबन्धs are an important aspect of Panini's meta-language
- They also contribute significantly to brevity/economy in Panini's work
- All the elements of उपदेशs that are labeled as इत् by the rules 1.3.2 to 1.3.9 are called as अनुबन्धs
- They are removed by the rule 1.3.9, that is why they are not visible in words arrived at as a result of the derivational process
- They are added to धातुs, प्रातिपदिकs, प्रत्ययs etc. (i.e., to उपदेशs) in order to trigger certain operational rules

Example : Compare the following derivations with  
a same suffix with different अनुबन्धs

पठ् + ण्यत् (Root पठ् takes  
the suffix ण्यत् by rule  
3.1.124)

पठ् + य (अनुबन्धs - ण् and  
त् are removed  
by rules 1.3.3, 1.3.7  
and 1.3.9)

पाठ् य (The second-last  
sound अ in a धातु  
is replaced by आ  
whenever a suffix with  
अनुबन्ध ण् is added  
to it by rule 7.2.116)

शक् + क्यप् (Root शक् takes  
the suffix क्यप् by  
rule 3.1.99)

शक् + य (अनुबन्धs - क् and  
प् are removed  
by rules 1.3.3, 1.3.8  
and 1.3.9)

(The second-last sound अ in  
शक् is not replaced by आ  
since the a suffix क्यप् does  
not have अनुबन्ध ण् in it)

Read by Anubandhas of Panini rule by G. V. Devasthali (1967)

शक्य

# Types of सूत्रs

- **संज्ञा** – (Eg.) वृद्धिरादैच्
- **परिभाषा** – (Eg.)
  - विप्रतिषेधे परं कार्यम्,
  - तस्मिन्निति निर्दिष्टे पूर्वस्य,
  - षष्ठी स्थानेयोगा,
  - तस्मादित्युत्तरस्य
- **विधि** – (Eg.) इको यणचि,
- **नियम** – (Eg.) म्रियतेः लुङ्-लिङोश्च (1.3.61)
  - Root मृङ् already takes the आत्मनेपद-suffixes in all its forms since the इत्-sound ङ् is attached to it by virtue of the rule – अनुदात्तङित् आत्मनेपदम् (१.३.१२). म्रियतेः लुङ्-लिङोश्च (१.३.६१) again repeats that root मृङ् takes आत्मनेपद-suffixes in (i) immediate past tense and (ii) potential mood forms. So, the statement in नियमसूत्र – म्रियतेः लुङ्-लिङोः च is assertive, but actually it is limiting the scope of the previous सूत्र – अनुदात्तङित् आत्मनेपदम्.
- **अतिदेश** - तृज्वत् क्रोष्टुः, लोटः लङ्वत्
- **अधिकार** - कारके, प्रत्ययः, तद्धिताः etc.



# संज्ञा-सूत्रs

- संज्ञ-सूत्रs are Naming सूत्रs
- They are found mainly in the first chapter of the अष्टाध्यायी
- Panini gives names to various linguistic elements through these सूत्रs
- The names are of two types –
  - 1. कृत्रिम-संज्ञा (artificial or self-created name) – for example,
    - by his rule 1.1.64, he names the fragment of a word starting from its last vowel as 'टि'. Here टि is a कृत्रिम-संज्ञा
    - By his rule 1.1.22, he gives the names घ two suffixes तरप् and तमप्
    - Similarly there are many other कृत्रिम-संज्ञाs like घि (1.4.7), घु (1.1.20), भ (1.4.18), etc.
  - 2. अकृत्रिम-संज्ञा (Natural or already existing name) – for example,
    - By his rule 1.1.2 he gives the name 'नदी' to all the feminine प्रातिपदिकs ending in ई or ऊ
    - Similarly there are many other अकृत्रिम-संज्ञाs like सर्वनाम (1.1.27) संख्या (1.1.23) etc.

# परिभाषा-सूत्रs

- These सूत्रs are rules regarding the other rules of the अष्टाध्यायी
- That is why परिभाषा-सूत्रs are called as meta-rules
- Some of them help interpreting other rules correctly
  - Example - the सूत्र – एचोऽयवायावः (एचः अय्-अव्-आय्-आवः) (6.1.87) says that एच् (ए,ओ,ऐ and औ) are to be replaced by अय्, अव्, आय् and आव् when they are followed by any vowel. There is a mention of 4 स्थानीs (or former occupants) and 4 आदेशs (or substitutes) in the सूत्र. However, the सूत्र does not say anything about – “which स्थानी is to be replaced by which आदेश?”. In such a situation one may arbitrarily replace any sound by any substitute. To avoid this, there is a सूत्र 1.3.10 which says. “when the number of स्थानीs and आदेशs mentioned in a सूत्र is the same, then the first is replaced by the first, second is replaced by the second, and so on.

...

- The others are regarding their application –
  - Example – In the derivation of the word 'यः' –
  - At the stage – यद् + सु the rule – 'त्यदादीनाम् अः' (7.2.102) comes into action.
  - As per the rule, the words belonging to the त्यादादि-गण are to be substituted by अ in the above situation. Now if we replace the entire word यद् above by अ the resultant form will be अ + सु → अः. However, the desirable form is यः. Here a परिभाषा – अलोऽन्त्यस्य (1. 1. 52) comes into play. It says that, 'a substitution consisting of a single sound should be made on the last sound of the former occupant'. Thus only द् of यद् is replaced by अ. So the derivation proceeds as follows –
- यद् + सु → यअ + सु (Rules 7.2.102 and परिभाषा 1.1.52) → य + सु (Rule 6.1.17)  
यः →

# विधि-सूत्रs

- These सूत्रs constitute the crux of the entire grammatical system
- These सूत्रs tell us about the actual operations to be performed in the derivational process
- All other types of सूत्रs are meant to aid the विधि सूत्रs to carry out the derivational process flawlessly
- Examples -
  - एचोऽयवायावः (एचः अय्-अव्-आय्-आवः) (6.1.87) says that एच् (ए,ओ,ऐ and औ) are to be replaced by अय्, अव्, आय् and आव् when they are followed by any vowel
  - 'त्यदादीनाम् अः' (7.2.102) says that the words belonging to the त्यादादि-गण are to be substituted by अ् when they are followed by विभक्ति-suffixes

# नियम-सूत्र

- About नियम-सूत्रs it is said that – सिद्धे सति आरभ्यमाणः विधिः ‘नियमः’ – A new rule that is initiated to tell something that has already been told is called as a नियम-सूत्र
- Literally, it is an assertive statement but in its implication, it limits the scope of some other सूत्र
- Example –
  - The rule शेषो घि असखि (1.4.7) broadly labels all the words ending in short इ and short उ as घि
  - The very next rule – पतिः समासे एन (1.4.8) labels the compounds ending in पति like पशुपति, राष्ट्रपति etc. as घि. Since all the words like पशुपति, राष्ट्रपति etc. end in short इ, they get the label घि by virtue of the previous सूत्र – 1.4.7 only. The implication of सूत्र 1.4.8 is that only the compound words ending in पति like पशुपति, राष्ट्रपति etc. get the label घि, so, the word पति alone is deprived of the the label घि



# अतिदेश-सूत्र

- There are Extension rules
- They enable the application of certain operations that are taught in one context to the other current context
- For example, look at the लङ् लोट् forms of the root पठ् –

लङ् forms			लोट् forms		
अपठत्	अपठताम्	अपठन्	पठतु	पठताम्	पठन्तु
अपठः	अपठतम्	अपठत	पठ	पठतम्	पठत
अपठम्	अपठाव	अपठाम	पठानि	पठाव	पठाम

- One rule – लोटः लङ्वत् (3.4.85) Helps applying all the processes taught for the derivation of लङ् forms to those of similar लोट् forms

# अधिकार-सूत्र

- These सूत्रs are often themselves meaningless
- They are carried forward to hundreds of सूत्रs following them through अनुवृत्ति and help completing the meanings of those सूत्रs
- In this way they also serve as headings of various sub-topics of व्याकरण covered at different places in the अष्टाध्यायी
- Some examples of अधिकार-सूत्रs are as follows –
  - प्रत्ययः (3.1.1) is a huge अधिकार. It is carried forward up to 5.4.160 i.e. through 1811 सूत्रs that follow it. All the suffixes taught of the अष्टाध्यायी can be found under this अधिकार only.
  - The अधिकार - धातोः (3.1.91) runs up to the end of the 3<sup>rd</sup> chapter. All the suffixes that can be added to the धातुs are listed under this अधिकार

# Ordering Rules and Conflict Resolution

- Rules of the अष्टाध्यायी are triggered when the conditions required by them are satisfied
- In the Example – वृक्ष+भ्यस्, the conditions required by two rules, namely (i) सुपि च (7.3.102) and (ii) बहुवचने झल्येत् (7.3.103) are satisfied. Both can not be applied simultaneously or even one after the other. This is the situation of conflict.
- The सूत्र – विप्रतिषेधे परं कार्यम् (1.4.2) resolves this conflict. It says that in case of such conflicts the सूत्र that occurs later in the order of the अष्टाध्यायी will win over the previous सूत्र and become applicable.
- Thus in this example बहुवचने झल्येत् is applied and we have the correct form वृक्षेभ्यः

- In the Example ते + इमे, ए of ते changes to अय् by the rule एचोऽयवायावः (6.1.78). We then arrive upto – तय् + इमे. Here य् is removed by the rule लोपः शाकल्यस्य (8.3.19). Thus we have – 'त इमे' which is the desired form. However, here, the conditions required for the rule आत् गुणः (6.1.87) to apply are matched. If the rule is applied we will reach to an undesired form – तेमे.
- This problem is solved by the rule पूर्वत्रासिद्धम् (8.2.1). It divides the entire अष्टाध्यायी into two parts – (i) from the beginning to the end of 8.1 (सपादसप्ताध्यायी) and (ii) from the beginning of 8.2 to the end of 8.4 (त्रिपादी). By virtue of the rule पूर्वत्रासिद्धम्, the changes made by the rules from त्रिपादी are not visible to those belonging to the सपादसप्ताध्यायी.
- Many other principles compiled in the बाधबीज-प्रकरणम् –
  - पर-नित्य-अन्तरङ्ग-अपवादानाम् उत्तरोत्तरं बलीयः
  - पूर्वात् – परं बलवत् – (Example) वृक्षेभ्यः
  - परात् नित्यं बलवत् – (Example) तुदति
  - नित्यात् अन्तरङ्गं बलवत् - (Example) ग्रामणिने
  - अन्तरङ्गात् अपवादः बलवान् - (Example) श्रीशः

# Meta-language


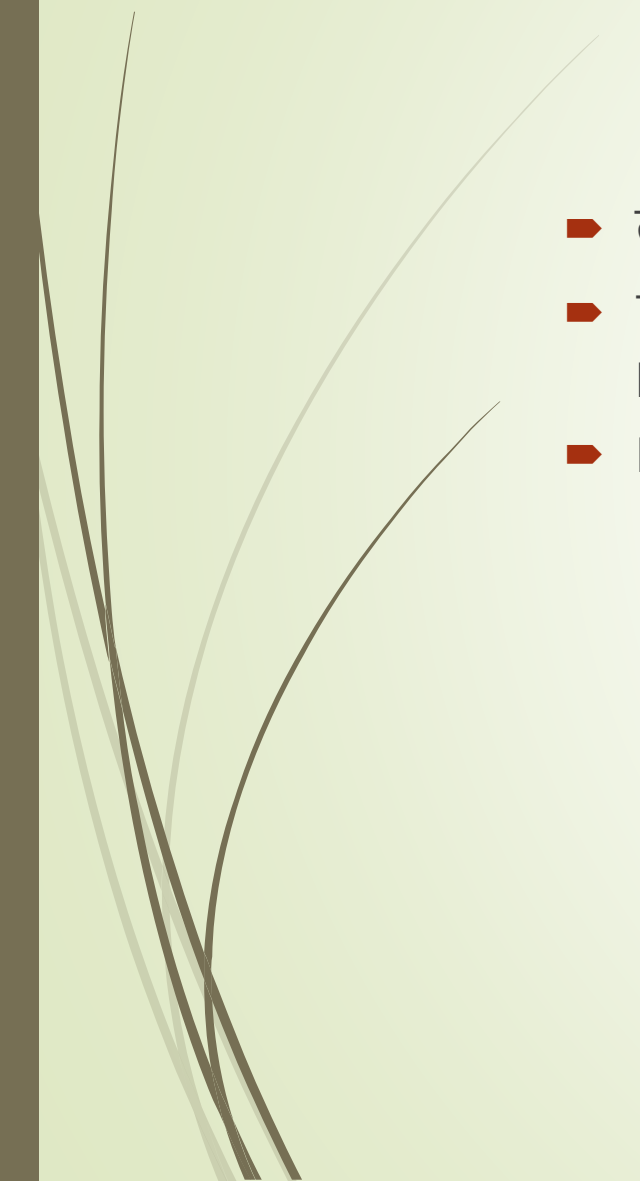
- Meta-rules = परिभाषा सूत्रs v/s Meta-language = new language that the grammarian devices through -
- प्रत्याहार
- Words like कु, चु, टु, तु, पु
- संज्ञा – टि, घि, लट्
- As well as through परिभाषा – Use of विभक्तिs, तपरस्तत्कालस्य etc.



# Cases to specify context

- षष्ठी – स्थाने – example – इक्: यण् अचि. इक्: is in genitive case. That is why the substitution happens on इक्. In this सूत्र – इक्: is to be read as इक्: स्थाने (यण् भवति)
- सप्तमी – पूर्वस्य – in the सूत्र – इक्: यण् अचि, अचि is in locative case. That is why the substitution happens on that which lies immediately before अच्. That is why substitution happens on only that इक् which lies immediately before अच्.  
in इति+अपि, the इक् - इ after त् is replaced by य् because it precedes अ which is अच्. The इक् - इ in इति+वदति is not replaced by य् as it precedes व् which is not अच्.
- पञ्चमी – परस्य – the सूत्र – अतः भिस्: ऐस् – the word अतः is in ablative case. The सूत्र says that the भिस् that comes immediately after a word ending in अ is replaced by ऐस्. In वृक्ष+भिस्, we see that भिस् has come immediately after वृक्ष, a word ending in अ. It is therefore replaced by ऐस्, consequently we have the form – वृक्ष+ऐस् = वृक्षैस् = वृक्षैः. In लता+भिस्, भिस् is not similarly replaced by ऐस् it has come after ओ and not अ.

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- तृतीया – योगे – Example - स्तोः श्रुना श्रुः - श्रुना is in तृतीया विभक्ति or instrumental case
  - The सूत्र - स्तोः श्रुना श्रुः says that स्, त्, थ्, द्, ध्, न् when either followed or preceded by श्, च्, छ्, ज्, झ्, ज्ञ् changes to श्, च्, छ्, ज्, झ्, ज्ञ्.
  - Example –
    - रामस्+चलति [स् (स्तु) changes to श् (श्रु) as it is followed by च् (श्रु)] – रामश्चलति
    - यज्+न् [न् (स्तु) changes to ज्ञ् (श्रु) as it is preceded by ज् (श्रु)] – यज् ज्ञ = यज्ञ