vyākaraṇa-praveśaḥ

An introduction to traditional Sanskrit grammar

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Preface to the print edition

This is the print edition of the vyākaraṇa-praveśaḥ guide hosted at learnsanskrit.org. This PDF contains all of the same content as our online guide.

We generated this PDF document on 4 June 2022 by processing our website with a special program. This program is not perfect, and its output does not always look clean and professional. Even so, we hope that you find this PDF useful for your needs.

If you have any questions or comments about the material, please reach out to us at learnsanskrit.org/contact.
Introduction
About our guide

This guide describes the fundamentals of the *Aṣṭādhyāyī*, the core text of the Pāṇinian school of Sanskrit grammar.

At heart, the *Aṣṭādhyāyī* is a practical system that serves a practical need: to decide which Sanskrit expressions are valid and which are not. In this guide, we focus on how the system works and avoid digressions into theory and minute details. We discuss all of the text's major systems, including nominal and verbal derivation, the root and nominal suffix systems, and compounding.

Our guide expects a basic familiarity with Sanskrit grammatical concepts. But interested beginners will still be able to follow along with a bit of extra work.

If you have never studied grammar before, or if you just want a general overview of Sanskrit grammar, please use our [Sanskrit for Beginners](#) guide instead.

Origins of the Pāṇinian school

The *Vedas*, the oldest of all Sanskrit compositions, have been passed down through a continuous oral tradition that is thousands of years old.

As time passed and cultures changed, six disciplines called the *vedāṅga* evolved to protect the Vedas in their structure and function. There is *śikṣā*, the study of speech sounds and their correct pronunciation; *chandas*, the study of meter and poetic form; *nirukta*, the study of etymological interpretation; *jyotiṣa*, the study of timekeeping and the stars; *kalpa*, the study of correct ritual; and *vyākaraṇa*, the most prestigious of the six, which is the study of grammar and linguistic analysis.

Though there have been many schools of *vyākaraṇa*, there is only one that is truly pre-eminent. That is *pāṇinīya-vyākaraṇa*, the tradition of the grammarian Pāṇini. Pāṇini lived sometime around the 5th century BCE, and we know little about his life beyond that. But what we do have is the system he developed and perfected. Pāṇini’s treatment of Sanskrit is so thorough and so precise that no
older schools of *vyākaraṇa* survive. Evidently, they were no longer worth retaining.

The core of the Pāṇinian system is the *Aṣṭādhyāyī* (“the eight chapters”), a list of around 4000 rules divided into eight chapters. Together, these rules generate grammatically valid Sanskrit expressions. And if an expression is *not* grammatically valid, then it cannot be generated by the system of rules.

The *Aṣṭādhyāyī* is so comprehensive that essentially all later Sanskrit literature is consistent with its model of Sanskrit. Perhaps Pāṇini’s greatest achievement is that he “froze” Sanskrit and preserved the form it has today.

### The later tradition

The *Aṣṭādhyāyī* is the core of the system, but it depends on a number of secondary texts, including:

- the *Dhātupāṭha*, which is a list of all basic verb roots with their meanings;
- the *Gaṇapāṭha*, which is a “list of lists” of various words and stems;
- the *Uṇādipāṭha*, which contains rules for ad-hoc derivations

In addition, there are important texts later in the tradition that clarify the overall system and fix omissions and oversights from the original text. The most important of these are the *Vārttika* by Kātyāyana and the *Mahābhāṣya* by Patañjali. These two texts are so vital that Pāṇini, Kātyāyana, and Patañjali are together called the *munitraya* (“the triad of sages”) responsible for the tradition.

This is not to mention the centuries of commentary and exposition that followed later, most notably in the *Kāśikāvṛtti* and the *Vaiyākaraṇasiddhāntakaumudī*.

In this guide, however, we focus squarely on the *Aṣṭādhyāyī* with occasional reference to the *Dhātupāṭha* and the *Gaṇapāṭha*. 
Why study the *Aṣṭādhyāyī*?

The *Aṣṭādhyāyī* has an obvious appeal to anyone who is intellectually curious. If you are interested in linguistics, mathematics, computer science, information theory, philosophy of language, Indian intellectual traditions, or all of the above: welcome! Feel free to skip to the next section below.

There is also an obvious appeal to those who want to preserve traditional Indian practices and knowledge systems. If this applies to you, we think you should proceed in the traditional way and find a teacher, perhaps through the classes from *Vyoma-Saṃskṛta-Pāṭhaśālā*.

Otherwise, the common-sense reason to study the *Aṣṭādhyāyī* is that it will improve your Sanskrit. But is that actually true?

It’s true if you are an advanced learner who wants to understand subtle points of usage and become an authority on correct Sanskrit. Then the *Aṣṭādhyāyī* will be of tremendous value to you.

But for beginning and intermediate learners, we do not think that studying the *Aṣṭādhyāyī* will meaningfully improve your Sanskrit. Research on second language acquisition is clear: we acquire proficiency in a language by hearing or listening to meaningful content. Engaging with meaningful content is much more important, and much more effective, than studying grammar rules. (See our [resources page](#) for tips on where to find such content.)

**Entering the *Aṣṭādhyāyī***

The *Aṣṭādhyāyī* is exceptionally difficult to understand without help. This is for several reasons:

- It follows the *sutra* style, which is aphoristic, terse, and only truly accessible through expert commentaries. (The advantage of the sutra style is that its texts are compact and easier to memorize.)
- It uses highly technical Sanskrit that is more like a computer program than a piece of natural language. Even someone fluent in Sanskrit will struggle to understand it.
• Its core rules are often mutually dependent: to know one, we must understand several others.

It is only natural, then, that an entire tradition of Sanskrit commentaries has arisen to make the Aṣṭādhyāyī accessible. Even so, the true beginner finds these texts complex and overwhelming. And of course, they presume a thorough knowledge of Sanskrit.

There are also translations and non-Sanskrit commentaries available. But these, too, are often too complex to be useful to the novice. Likewise, the various popular resources are often too vague or basic to say anything useful about how the system really works.

Our approach

The Aṣṭādhyāyī constantly raises fascinating theoretical questions. But at its core, it is a practical system that serves a practical need: to decide which expressions are valid Sanskrit and which are not. Our approach is likewise a practical one that builds up the Pāṇinian system from scratch.

Each lesson starts with a specific problem that we need to address. Then, the lesson introduces the specific rules and concepts that the Pāṇinian system uses to solve the problem. By solving one problem, we often catch sight of another, which we address in the next lesson. In this way, we work through the system as a whole.

Our guide is split into different units, each of which focuses on a major component of Sanskrit grammar. Within each unit, we focus on different functional areas of the text. We cover each area with enough detail to give a useful sense of what it is like, but not in so much detail that the reader is lost in minor exceptions.

Here is what the units ahead contain:

1. We start with the problem of modeling different sounds and sound rules. In the process, we learn about some of the core devices that the Aṣṭādhyāyī uses to stay expressive and concise.
2. Once we have a clear high-level view of the system, we look at the principles of verb derivation. Starting from an initial set of semantic conditions, we apply the rules of the system to create complete words.

3. We then do the same for nominal derivation. We also take a detour into how the Āṣṭādhyāyī handles the semantics of sentences.

4. Next, we investigate the root suffixes (kṛt) that create various verbal nouns and adjectives.

5. As follow-up, we investage the nominal suffixes (taddhita) that extend and modify nominal stems.

6. Finally, we investigate the compound system.

**Digressions**

These blue boxes contain extra discussion on a specific point of interest. These discussions are solely for your interest, and you can skip them entirely if you so choose.

**Our hopes for this guide**

If you want to deepen your Sanskrit knowledge, we hope our guide will provide a smooth and useful entrance into the world of vyākaraṇa. If you are curious about the Āṣṭādhyāyī itself, we hope our guide will reveal the core of the system and give you a sense of how its ancient creators approached the world of word and language.

Not everyone can master the Āṣṭādhyāyī, but everyone can appreciate its profound and ingenious design. We hope that our guide will make it easier than ever to do so.
A summary of Sanskrit

If you know zero Sanskrit, you can still follow along with our series. But it certainly helps to have a basic sense of what Sanskrit is like and how it works. That's what we hope to give you here.

The alphabet

We're still adding audio to our website. For now, you can listen to all of these sounds through this resource from the University of British Columbia.

Sanskrit is written phonetically. Each sound has one symbol, and each symbol corresponds to one sound. The sounds below are provided in both the usual Devanagari script (संस्कृतम्) and in romanized Sanskrit (saṃskṛtam). All Devanagari in our lessons will be displayed next to its romanized version.

These sounds are colored according to where in the mouth they are pronounced. We will explain this system in the lessons to come.
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Given all of these sounds, we have the first question that the Aṣṭādhyāyī aims to answer: which phonetic distinctions are relevant to grammar?

**Sandhi**

In every spoken language, native speakers make subconscious changes to their speech so that they can speak more quickly and fluently. For example, some native English speakers might drop the final “g” of words like “running” or “drinking.” These kinds of changes are called sandhi.

Sanskrit sandhi changes are extensive, and they are almost always written down. These changes occur both within words and between words, and they depend both on specific sounds and on the semantics of different words and suffixes.

Given these sandhi changes, we have a second question: which sandhi changes apply in which contexts?

**Basic words**

Roughly, Sanskrit has three types of words. These are nominal words (nouns, adjectives, participles, and the like), verbs, and a broad third category we can call uninflected words. The example below uses each of these three word types:

रामो न जगाम।
rāmo na jagāma.
Rama didn’t go.
Sanskrit also relies on something called **inflection**. Inflection is when we change part of a word to express a new meaning. English uses inflection in a limited way: we have one *cat* but two *cats*. Or perhaps you *ate* yesterday but will *eat* today. But Sanskrit nominals and verbs use inflection much more extensively:

नयसि
nayasi
You lead

नीयेरन्
nīyeran
They might be led.

नेष्यताम्
nesyatām
of those about to lead

निनीषांतः:
ninīṣantah
those who want to lead

गजाय
gajāya
for the elephant

गजेषु
gajēṣu
among the (many) elephants

and in much more elaborate patterns, with multiple sandhi changes:

लभेः
labhe
I obtain.

रुणध्मि
runadhmi
I obstruct.
This raises a third question: *Which inflectional patterns apply in which contexts, and with what semantics?*

**Sentences**

Because Sanskrit words are highly inflected, Sanskrit does not usually depend on a specific word order. For example, the two sentences below have the same semantics:

रामो रावणं हन्ति  
*rāmo rāvaṇam hanti*  
Rama kills Ravana.

रावणं रामो हन्ति  
*rāvaṇam rāmo hanti*  
Rama kills Ravana.

Since word order is relatively unimportant in Sanskrit, the *Aṣṭādhyāyī* focuses instead on a fourth question: *how do words with different semantics combine to express sentence-level semantics?*

**The human constraint**

Finally, we should remember that the *Aṣṭādhyāyī* is part of a culture that values oral tradition and memorization. So a fifth question it tries to address is a pragmatic one: *how can this system be compressed to the smallest possible form, so that it is easy to memorize and easy to recall?*

With this basic framing, we are ready to begin.
An overview of the Aṣṭādhyāyī

Feel free to skip this lesson and come back to it later.

The shape of the text

Adult learners of the Aṣṭādhyāyī often think that the text's rules have an unusual or unintuitive ordering. Why do the rules of the Aṣṭādhyāyī have the ordering that they do? There are two basic factors that are responsible.

The first factor is that the Aṣṭādhyāyī is part of a long oral tradition. This fact has several important implications:

- In traditional Sanskrit education, students chant and memorize several works by rote. Many students don't even understand what they're chanting! So there is less reason to make the rules follow an intuitive order.
- Older students begin to study and unlock the contents of what they have memorized with the help of a skilled teacher. At every point in the education process, the student can rely on an expert who has memorized and understood the entire text.
- A memorized rule can be recalled at a moment's notice regardless of where it is in the text, so there is less pressure to rearrange rules into a specific order.
- Oral compositions tend to be more fluid than written compositions: they borrow heavily from past works, and they generally change over the generations.

The second factor is that the Aṣṭādhyāyī aims for overall concision (lāghava) in its total length. Again, this fact has several important implications:

- Two rules that share a similar context might be grouped together even if the operations they describe are conceptually different.
- Two rules that are conceptually quite similar might be split apart if their contexts are different enough.
• Some interpretations of the text would make a rule purposeless (vyartha), which contradicts the general spirit of lāghava. On this basis, an interpretation of the system is invalid if it makes a rule purposeless.

• Likewise, rules are usually stated the way they are for a specific reason. Often, that reason is an indicator (jñāpaka) of a critical principle of interpretation.

To some extent, these factors are in tension. The Aṣṭādhyāyī's origin in an oral tradition means that a particular rule's ordering is relatively less important. But the Aṣṭādhyāyī's emphasis on overall concision means that a rule's ordering can be vitally important.

Sections of rules

In practice, the result is that the Aṣṭādhyāyī is a set of sections, where the specific ordering of sections is not very important but the ordering of rules within a section is highly important.

Likewise, the eight chapters of the Aṣṭādhyāyī generally follow a logical flow:

1. Definitions and rules of interpretation.
2. The compound system.
3. Root suffixes: verb endings, derived roots (sanādi), suffixes that make nominal bases (kṛt), and auxiliary suffixes (vikaraṇa) inserted between the root and the verb suffix.
4. Nominal suffixes (part 1).
5. Nominal suffixes (part 2).
6. Duplication (dvitva), vowel sandhi, and accent.
7. Various suffix substitutions, as well as sound changes caused by suffixes.
8. Various sandhi rules.

So although there are some exceptions, the derivation of a specific word usually flows smoothly from book 1 to book 8.
More specifically, the derivation often follows this basic structure:

1. Add and define the base of the derivation. For verbs, this is a verb root. For nominals, this is a nominal stem. (Chapters 1 and 2)
2. Add any suffixes needed in the derivation. (Chapters 3, 4, and 5)
3. Apply sound changes caused by the specific suffixes. (Chapters 6 and 7)
4. Apply sandhi changes to merge all terms together into a single expression. (Chapter 8)
Sounds
Introduction

Sanskrit words and sentences undergo many different kinds of sound changes. Vowels might combine or become consonants. Consonants might shift from one class to another. And even more extensive transformations are possible. Together, these sound changes are called sandhi.

Many Sanskrit students learn a basic version of sandhi in the course of their studies. But Pāṇini is not content with modeling the basics. Instead, his goal is to model all of Sanskrit's sandhi rules as fully as he can. And to do so, he creates several devices that let him express these rules clearly and concisely.

In this unit, we will learn about the specific techniques and devices that Pāṇini uses to model Sanskrit's sounds and sandhi rules. Starting from scratch, we will build up his core system step by step. And by the end, we will have a simple but complete system that contains most of the Aṣṭādhyāyī's essential components. Once we have that basic system in hand, we can explore the rest of the grammar and see how the Pāninian system works in practice.

Sounds for beginners

The notes below provide a summary of the Sanskrit sound system. If you know Sanskrit already, you can continue to the next lesson.

Most Sanskrit sounds are pronounced with five places of articulation within the mouth. You can see these five points marked in the image below:
From right to left, these five points are:

- the **soft palate**
- the **hard palate**
- the **alveolar ridge**
- the base of the teeth
- the lips

All of the sounds below are colored according to which place of articulation they use. Sounds that use multiple places of articulation, or that use places of articulation other than the five above, are left black.

The colors below differ from the ones used in the image. The image uses red, orange, yellow, green, and blue. Respectively, we use red, orange, green, blue, and purple below.

First are the **vowels**. The first nine vowels are called **simple vowels**:
And the others are called compound vowels since they are made from combinations of the simple vowels:

\[
\begin{align*}
\text{ए} & \quad \text{ई} & \quad \text{ओ} & \quad \text{औ} \\
e & \quad ai & \quad o & \quad au
\end{align*}
\]

Of these vowels, five \((a, i, u, r, l)\) are called short. The others are called long and are pronounced for twice the duration of the short vowels. There is also a third length, \(pluta\) (prolated), that is much longer and much rarer.

All Sanskrit vowels can take one of three accents: \(udātta\) (high), \(anudātta\) (low), and \(svarita\) (mixed). And they can be either nasal or non-nasal. So each of the vowels above has \(3 \times 2 = 6\) variants.

Next, we have the first twenty-five consonants.
This is a grid with five rows and five columns. Each row in the grid uses a different place of articulation, and each column encodes different properties:

- The first two columns (ka, kha) are **unvoiced** sounds, meaning that we pronounce them without using our vocal cords. (Compare “p” and “b” in English.) All the others are **voiced**. Vowels are also voiced.
- The second and fourth columns (kha, gha) are **aspirated** sounds, meaning that we pronounce them with an extra puff of air. All the others are **unaspirated**.
- The fifth column (ṅa) contains **nasal** consonants, and the other columns contain **stop** consonants.

Next are the **semivowels**, which have a close relationship to the vowel sounds. All of them are voiced:
(Technically, va uses two points of pronunciation. But this is a minor detail, and it can essentially be treated as if pronounced only with the lips.)

Finally, we have the sibilants. ha is voiced, but the rest are unvoiced:

Sandhi for beginners

When sounds are pronounced continuously, they can change each other’s pronunciation. Sandhi is the name for these sound changes.

Most sandhi changes are between two sounds that appear next to each other in continuous speech. Here are some examples of common sandhi changes:

- \( i + u \rightarrow yu \)
  - \( i + u \rightarrow yu \)
- \( a + i \rightarrow e \)
  - \( a + i \rightarrow e \)
- \( k + a \rightarrow ga \)
  - \( k + a \rightarrow ga \)

Some sandhi changes are optional and are applied at the speaker's preference. Also, sandhi changes might be allowed or blocked in different environments, such as:

- at the end of a word
- at the end of a word that expresses the dual number
In other words, sandhi changes are not purely phonetic. We must also understand what is being said so that we can apply sandhi changes correctly.

- at the end of specific words
- at the end of a verb prefix
The Shiva Sutras

Many of Sanskrit's sandhi rules apply only to specific groups of sounds. Some might apply only to simple vowels. Others might apply only to consonants that are neither semivowels nor nasals. And still others apply to more specific groups.

So as we begin to create our system, we must answer a vital and fundamental question: How might we refer to different groups of sounds concisely?

Let's enter the Pāṇinian system by seeing how it answers this question.

A list of sounds

Suppose we visit a fruit shop that sells different kinds of fruits. Perhaps it sells the following:

- mangoes
- coconuts
- jackfruit
- oranges
- apples
- lychee fruits
- papayas

Suppose that we want to buy mangoes, coconuts, jackfruit, and oranges. One way to ask for these fruits would be to just name each fruit we want. That would be fine, but it would take a long time to say the name of each fruit.

If the clerk at the store knows the list above, however, we can just say “mangoes to oranges” to get the fruits we want. Doing so is faster and more convenient.

In contrast, suppose instead that we want to buy just mangoes, jackfruit, and papayas. These items are spread out far apart in our list. Now we can't say something like “mangoes to papayas” because that would include too many fruits that we don't want.
What we see from this simple exercise is that the ordering of fruits in our list is important. If we order our list well, we ensure that we can quickly make the requests we care about. If we order it poorly, we create extra work for ourselves (and for the poor clerk).

Pāṇini organizes the Sanskrit sounds in a similar way to this list of fruits. By ordering the Sanskrit sounds carefully, he can easily and efficiently make the groups he needs. And if we know how to use his list, we can use it to concisely refer to different groups of Sanskrit sounds.

First, here is the list:

अ इ उ ण्
a i u ŋ
ऋ व क्
ṛ ḷ k
ए ओ ङ म्
e o ŋ
ऐ औ च म्
ai au c
ह य व र ट
da ya va ra ṭ
ल ण्
la ŋ
ञ ङ ण न
ña ma ŋa na na m
झ भ ज्
jha bha ŋ
घ ढ ध ष
ga ḍha ḍha s
Some say that this arrangement was inspired by the beat of Shiva's drum. So these rules are often called the Shiva Sutras. But how do the Shiva Sutras actually work?

**How the Shiva Sutras work**

Each rule in this list has two parts. The black letters are ordinary sounds. And the red letters at the end of each rule are special letters called *its*. These *it* letters are not part of our list of sounds. Instead, they just mark the end of each rule.

Suppose that we want to refer to all of the vowels. We start by choosing the first item we want, which is *a*. Then we choose one of the *it* letters to mark the end of our list. So we would choose *c*, since *c* follows the last vowel in the list. The combination of these two is *ac*. So that is the name for all of the Sanskrit vowels: *ac*.

Likewise, we can quickly refer to other groups of sounds:

all letters
**HAL**

*hal*
all consonants

**JHAS**

*jhas*
all voiced stop consonants

**JHAS**

*jhas*
all voiced aspirated stop consonants

**KHAR**

*khar*
all unvoiced sounds

But before we continue, perhaps you've noticed a few strange features of this list:

- *The vowels ā, ī, ū, and ṭ are missing.* We will explain this in the next lesson. For now, just know that *a* refers to both the short vowel *a* and the long vowel *ā*. Likewise for the other vowels.

- *ha appears twice.* The second *ha* makes it easier to quickly refer to the four sibilant sounds (*śal*). And when we use this list, any new name we create must include more than one sound. So *hal* will always refer to all consonants, and never to just the sound *ha*.

- *ṇ ends two different rules.* This is a real ambiguity, and we must rely on context and commentaries to make the usage clear. Perhaps Pāṇini ran out of *it* letters and was forced to reuse one.

**Review**

Overall, the Shiva Sutras give us a clean and concise way to refer to different groups of Sanskrit sounds. How well does it actually work for the rest of the Pāṇinian system? According to one mathematician, this arrangement is mathematically optimal.
Even so, we still have some important open questions:

- In the Shiva Sutras, why does the sound \( a \) refer to both short \( a \) and long \( ā \)?
- What is an \( it \) letter, really?

The next two lessons will answer each of these questions in turn.
savarṇa sounds

The previous lesson described how the Shiva Sutras let us refer to different sound groups concisely. But we still have some important open questions:

- In the Shiva Sutras, why does the sound $a$ refer to both short $a$ and long $ā$?
- What is an $it$ letter, really?

This lesson will answer the first question, and the next lesson will answer the second question. As we answer these questions, we will also see some actual rules from the Aṣṭādhyāyī and enter the system more deeply.

A new problem

To start the discussion, here is a small sandhi change:

$sītā aśvam icchati → sītāśvam icchati$

Sita wants a horse.

The vowels $ā$ and $a$ combine to a single shared vowel $ā$. And there are other combinations possible, too:

$\text{अ + अ → आ}$
$a + a → ā$

$\text{अ + आ → आ}$
$a + ā → ā$

$\text{आ + आ → आ}$
$ā + ā → ā$

All four of these combinations are part of the same general idea: if any two “$a$” vowels combine, the result is $ā$:  

$\text{अ/आ + अ/आ → आ}$
$a/ā + a/ā → ā$
How can we refer to the category of “a” vowels concisely? More generally, some sounds are similar to each other in an important way. How can we concisely refer to similar sounds?

Our first rule

To address the question above, we need several rules. Pāṇini starts by introducing this rule:

\[
\begin{align*}
\text{तुत्त्वायस्यप्रयत्नं सवर्णम् । १.१.९} \\
tulyāsyaprayatnam savarṇam (1.1.9) \\
tulya-āsya-prayatnam savarṇa
\end{align*}
\]

[Sounds with] the same āsya (place of articulation) and prayatna (articulatory effort) are called savarṇa (similar).

This is the first rule we've seen from the \textit{Aṣṭādhyāyī}, so let's dwell on it for a moment:

- The numbers 1.1.9 mean that this is chapter 1, part 1, rule 9. The \textit{Aṣṭādhyāyī} has eight chapters, and each chapter has four parts. You can click on these numbers to see the rule's traditional interpretation and commentary, as collected on ashtadhyayi.com.

- First, we show the original rule in Devanagari and Roman script.

- Next, we show the rule with its sandhi changes removed and with its compound separated, so that it is easier to understand. To save space on your screen, we've written this version in just Roman script.

- In the translation, the words in (parentheses) are short translations of the Sanskrit terms they follow.

- In the translation, the words in [brackets] are not explicitly in the rule and must be provided from context. Context may come either from prior rules or from our prior knowledge of the system.

Now, what does this rule actually mean?

- āsya refers to one of the places of articulation in the mouth: the soft palate (where we pronounce \textit{ka}), the hard palate (\textit{ca}), the alveolar ridge (\textit{ṭa}), the teeth (\textit{ta}), or the lips (\textit{pa}).
• *prayatna* refers to how these sounds are pronounced: with full contact between places of articulation (as with *ka*), with partial contact (*ya*), or with no contact (*a*).

So, sounds with the same *āsya* and *prayatna* are called *savarṇa*, which means “similar.” This rule defines the term *savarṇa*, which can then be used in the rest of the system. Rules that define a term are called *saṃjñā* (“designation”) rules.

However, this rule is too general. By 1.1.9, the sounds *i* and *ś* could be counted as *savarṇa* with each other. This definition will cause many problems later. Has Pāṇini made a mistake?

**Counteracting a rule**

Pāṇini has not made a mistake. In the *Aṣṭādhyāyī*, it is common for one rule to state a general principle and for another to counteract it. To counteract the overapplication of 1.1.9, we have rule 1.1.10:

\[ \text{nājjhalau} \]

But vowels and consonants are not [savarṇa with each other].

Notice that the phrase “savarṇa with each other” is inferred from the context of rule 1.1.9 above. This extension of context from one rule to another is called *anuvṛtti*. There are specific principles that we can use to define *anuvṛtti*. But for now, let’s just focus on understanding this rule.

Rule 1.1.10 refers to *ac* and *hal*, which we learned about in the previous lesson: *ac* refers to all vowels, and *hal* refers to all consonants.

With the extra context and these two definitions in mind, the meaning of the rule is clear. Rule 1.1.10 prevents sounds like *i* and *śa* from being *savarṇa* with each other. Together, 1.1.9 and 1.1.10 give us a complete definition of the term *savarṇa*. 
Defining groups of sounds

Now that we have a complete definition of *savarna*, we can return to our original problem: *how can we concisely refer to similar sounds?*

Pāṇini’s solution is to provide these two rules:

1.1.68  
स्वं रूपम्  शब्दस्य राशिं। 1.1.68
svam rūpam śabdasya rāśiṃ (1.1.68)
svam rūpam śabda-saṃjñā
denotes its own form if it is not a definition (saṃjñā).

1.1.69  
अणुदति  मवर्णस्य  चाप्रत्यय। 1.1.69
aṇudit savarṇasya ca a-pratyayaḥ  (1.1.69)
aṇ-udit savarṇasya a-pratyayaḥ
denotes their savarṇa, if they are not pratyaya (suffixes).

Rule 1.1.68 does not define a term or counteract a rule. Instead, it is an instruction for us as we read the grammar. Such rules are called *paribhāṣā* (“explanation”) rules. *paribhāṣā* rules usually apply throughout the entire system, so it’s important to understand them well.

What does rule 1.1.68 actually mean? We can make the rule clear with an example. Suppose that we see some rule about the word *agni*, which means “fire.” The point of rule 1.1.68 is that such a rule is about the specific form *agni*, and not about any other word that means “fire.”

Rule 1.1.69 then borrows this context to define another *paribhāṣā*. (That is, it inherits some context by *anuvṛtti* from rule 1.1.68). Rule 1.1.69 also uses two interesting terms:

- *aṇ* has two interpretations, as we learned in the previous lesson. Here, it is the *aṇ* that includes all vowels and semivowels.
- *udit* will be explained in the next lesson. For now, treat “udit sounds” as meaning “sounds followed by *u*.”
With these terms defined, we can see what 1.1.69 does for us:

- In the grammar, a will refer to both itself and ā, which is savarṇa to it. Likewise for i, u, and so on.
- In the grammar, ku’will refer to both ka and the four sounds kha, ga, gha, and ṇa, all of which are savarṇa to ka. And likewise for cu’, tu’, tu’, and pu’. (u’is a nasal u. Why is this vowel nasal? We’ll explain in the next lesson.)

So with these four rules, we can now refer to similar sounds simply and concisely. But this system also creates a new problem. What if we want to refer to short a but not long ā? It seems that we can’t do that anymore. Has Pāṇini made a mistake?

**Referring to short and long vowels**

Pāṇini has not made a mistake. We have one more rule to consider:

\[ \text{taparastatkālasya} \ 1.1.70 \]

\[ ta-paraḥ tat-kālasya \]

[A sound] bordered by t [refers to the sound] with that duration.

Rule 1.1.70 follows right after rule 1.1.69, which we saw above. Note that it continues to use context provided from 1.1.69.

What does this rule actually mean? It means that at refers to the short vowel a but not to ā. Similarly, it means that āt refers to ā but not to the short vowel a. With this new rule, we can always tell these vowels apart.

This rule also explains part of the term udit, which we saw in 1.1.69 above. udit is ut-it: a term that has the vowel ut (short u) as an it letter. (But what is an it letter, really? We will answer that question soon.)

**Different kinds of vowels**

As a closing thought, perhaps you are wondering if rule 1.1.70 is worth the extra effort. Is this rule really necessary?
Yes. Sanskrit vowels make many important distinctions. They can differ in length:

The three lengths $u$, $\bar{u}$, and $\bar{\bar{u}}$ [are called] *hrasva* (short), *dīrgha* (long), and *pluta* (prolated, overlong).

And they occur in the context of vowels.

Accent:

[In the context of vowels], a high [tone is called] *udātta* (acute accent);

a low [tone is called] *anudātta* (grave accent);

and a mix [of the two is called] *svarita* (circumflex),

of which the beginning is *udātta* for half the length of a short [vowel].

And nasality:
An utterance [made with] the mouth and nose is called *anunāsika* (nasal).

So in the context of grammar, *a* refers to eighteen variants (three lengths × three accents × two options for nasality). And even *at* refers to six variants (3 accents × 2 nasality options).

**Review**

With the Shiva Sutras and the rules above, we now have a powerful framework for referring to different Sanskrit sounds.

But there is still an important open question: what is an *it* letter, really? The next lesson answers this question and starts to explain the core of the Pāṇinian system.
Before we talk about \textit{it} letters, let's first understand one of the problems that Pāṇini was facing. Since we are not ancient grammarians, let's put the problem in simple and concrete terms.

Suppose we run a clothing store that sells all kinds of shirts and saris. And when our customers arrive, they want to find exactly what they're looking for. How might we organize this store?

One obvious idea is to group similar items together: shirts with shirts, large items with large items, and so on. Pāṇini uses a similar device to organize lists of verb roots, lists of pronouns, and various other terms.

But one problem with this approach is that there is a limit to how much information it can easily convey. For example, which shirts must be washed in cold water? Which have been imported? Which are on sale? It can be difficult to manage all of these different groupings.

One elegant solution is to add a paper \textit{tag} to each item we sell. This small tag can tell us about the price, the country of origin, and whatever other information we need to know. The tag is not part of the shirt; it's just a label that tells us what the shirt is like.

Pāṇini probably didn't run a clothing store, but he certainly faced a similar problem. He wanted to organize all of the terms in Sanskrit grammar so that their roles and functions were clear. Most of these terms are grouped in large lists, just as we might group shirts together in our store. But there are too many important properties that need to be conveyed. Some of these properties are:

- whether certain verbs are allowed specific suffixes
- whether certain suffixes cause any unusual sound changes
- whether certain terms have any unusual accents

Just as we might add tags to items in our store, Pāṇini adds tags to the different terms in the grammar. These tags are not part of the terms they attach to; they're just labels that tell us what the term is like.
And since the *Aṣṭādhyāyī* is part of an oral tradition, it's only fitting that these tags are other sounds. The technical term for these sounds is *it*.

In eight rules, Pāṇini defines which sounds are *it* and which are not. These rules are so critical to the rest of the grammar that we will list all eight of them here. If you know some Sanskrit, we recommend memorizing them.

**Nasal vowels**

<table>
<thead>
<tr>
<th>उपदेशे जजनुनासिकै इत्। १.३.२</th>
</tr>
</thead>
<tbody>
<tr>
<td>upadeśe 'janunāsika it (1.3.2)</td>
</tr>
<tr>
<td>upadeśe ac anunāsikaḥ it</td>
</tr>
<tr>
<td>In upadeśa, nasal vowels are [called] <em>it</em>.</td>
</tr>
</tbody>
</table>

The term *upadeśa* ("instruction, teaching") here refers to the teaching context of *vyākaraṇa* and the Pāṇinian system. Specifically, it refers to the technical language used within the system. So within this technical context, nasal vowels are called *it*.

With this rule, we can better understand the term *udit* that was used in the previous lesson. For example, we learned previously that *ku* refers to the five sounds *ka*, *kha*, *ga*, *gha*, and *ṅa*. More properly, this is *ku* with a nasal *u* vowel.

By rule 1.3.2, *ku* is the consonant *k* with the vowel *u* as an *it*. By rule 1.1.70, the short vowel *u* is called *ut*. So, we can say that *k* is *udit* (*ut-it*, "having *u* as an *it*").

And since *k* is *udit*, it is in scope for rule 1.1.69 (*aṇudit savarṇasya cāpratyayaḥ*), which lets us concisely refer to *savarṇa* (similar) sounds.

**Final consonants**

<table>
<thead>
<tr>
<th>हलन्त्यम्। १.३.३</th>
</tr>
</thead>
<tbody>
<tr>
<td>halantyam (1.3.3)</td>
</tr>
<tr>
<td>hal antyam</td>
</tr>
<tr>
<td>Final consonants [are called <em>it</em> in <em>upadeśa</em>.</td>
</tr>
</tbody>
</table>
With this rule, we can better understand the terms from the Shiva Sutras. In the term \textit{ac}, for example, the final \textit{c} is an \textit{it} sound. Then we can apply rule 1.1.71, which we haven't seen yet. First, we bring in rule 1.1.68 for context:

\begin{quote}
\textit{स्वः रूपः शब्दस्य शब्दसंज्ञा।} १.१.६८
\end{quote}

\begin{quote}
\textit{svaṃ rūpam śabdasyaśabdamānijñā (1.1.68)}
\end{quote}

\begin{quote}
\textit{svam rūpam śabda-saṃjñā}
\end{quote}

A word [denotes] its own form if it is not a definition (\textit{saṃjñā}).

Then, we can define rule 1.1.71:

\begin{quote}
\textit{आदिरन्त्येन सहेता।} १.१.७१
\end{quote}

\begin{quote}
\textit{ādirantyena sahetā (1.1.71)}
\end{quote}

\begin{quote}
\textit{ādiḥ antyena saha itā}
\end{quote}

An initial [item denotes its own form and intermediates] up to the final \textit{it}.

Rule 1.1.71 defines the basic mechanism of the Shiva Sutras: an initial term is paired with an \textit{it} and includes all of the terms between them:

\begin{quote}
\textit{अण्} \rightarrow \textit{अ इ उ}
\end{quote}

\begin{quote}
\textit{aṇ} \rightarrow \textit{a i u}
\end{quote}

\begin{quote}
\textit{इक्} \rightarrow \textit{इ उ ऋ ऌ}
\end{quote}

\begin{quote}
\textit{ik} \rightarrow \textit{i u ṛ ḷ}
\end{quote}

Terms that follow this mechanism are called \textit{pratyāhāras}, and we will see more of them in later lessons.

**Minor rules**

For our current needs, the next five rules are minor, and we’ve left only minor comments on them. Notice the context that carries over from one rule to the next. The order of rules here is not arbitrary; it is arranged to express as much as possible in as little space as possible.
The *tu* sounds, *s*, and *m* are not [called *it* in *upadeśa*] when they are in a *vibhakti* (verb or nominal ending).

This rule applies to the inflectional endings that we use for verbs and nominals. It will be useful later, but not right now.

Initial *ni*, *tu*, and *du* [are called *it* in *upadeśa*].

These rules are mainly found on verb roots and usually allow specific suffixes. The new word *ādiḥ* (“initial”) cancels the force of *na* (“not”) from rule 1.3.4.

**Interpreting *tu***

Notice that *tu*’ here literally refers to the sound *tu*, not to the five sounds *ta*, *tha*, *da*, *dha*, and *na* that we would get from rule 1.1.69. How do we know that *tu*’ here doesn’t refer to these five sounds? Part of the reason is that if it did, then the *tu* in rule 1.3.7 below would become pointless.

The sutra style is concise and compact; nothing is said carelessly. If we know and remember this fact, then we can reason more clearly about what rules mean and what they do.

The [initial] *s* of a *pratyaya* (suffix) [is called *it* in *upadeśa*].

Much of the *Aṣṭādhyāyī* focuses on *pratyayās* and their properties. We will explore the various *pratyayās* later on.
cuṭū (1.3.7)
cu-ṭū
The [initial] cu sounds and tu sounds [of a pratyaya are called it in upadeśa].

The cu sounds and tu sounds [of a pratyaya are called it in upadeśa].

cu refers to the five sounds ca, cha, ja, jha, and ŋa, and likewise for tu. For the interpretation of tu, see our note above on rule 1.3.5.

A taddhita suffix is used to create nominal stems. We will revisit this rule later.

**lopa**

Finally, we see what happens to these it letters:

tasya lopah (1.3.9)
tasya lopah
That [i.e. any it letter] undergoes lopa.

And what is lopa?

adarśanam lopah (1.1.60)
a-darśanam lopah
Disappearance is [called] lopa.
Rule 1.3.9 emphasizes a simple fact: these it letters are just a helpful notation. They are not “real” Sanskrit and have no meaning outside the technical world of the Pāṇinian system. In our clothing store, a tag’s role is to tell us something about the clothes it is attached to; and in the world of grammar, an it letter’s role is to tell us something about the terms it is attached to.

**Review**

With the rules above, we have cleaned up some of the loose ends that earlier lessons left behind. We now have a complete and compact system for defining different groups of Sanskrit sounds.

With this system in hand, we can now turn to the task of using it. In the next lesson, we will see how this system can model sandhi changes clearly and concisely. We will also learn about substitution rules, which are the last major piece of the system's formal language.
vidhi rules

In the previous lessons, we defined a simple, concise, and expressive system for defining various groups of Sanskrit sounds. But our system is missing something obvious: a way to use the terms we’ve defined. It’s as if we have a gourmet kitchen with the finest tools, the freshest ingredients, the most wonderful patrons — and no chef.

So in this lesson and the two that follow, we’ll apply our system to a real problem: how to model and describe Sanskrit’s sandhi changes. We’ll do so by learning how to apply basic vidhi rules. And by learning how to do this, we will complete our small system and be ready to examine the rest of the Aṣṭādhyāyī.

vidhi literally means “rule” or “command.” Unlike saṃjñā rules that merely assign a label, or paribhāṣā rules that help us interpret rules correctly, vidhi rules are the core operations of the grammar. They add, remove, and modify different terms. And by applying them in the correct sequence, we create a correct Sanskrit expression.

How do we apply vidhi rules in the correct sequence? This simple question is surprisingly deep and profound, and we cannot give a proper answer to it for some time. A good rule of thumb is that we should apply the most specific rule we can.

But for now, let’s focus on more concrete matters: what vidhi rules are, how we define them, and how we can use them to define sandhi rules.

Conditions for sandhi

As a reminder, sandhi is the name for Sanskrit’s various sound changes. Sandhi occurs only in specific circumstances:

पर: सानिकर्ष: सान्हिता। १.४.१०९
parah saṃnikarṣah saṃhitā (1.4.109)
parah saṃnikarṣah saṃhitā
Extremely close contact [of sounds] is called saṃhitā.
Rule 1.4.109 is a simple *samjñā* rule. But rule 6.1.72 is a new and different kind of rule. What does this rule do? Simply, it adds extra context for the rules that follow it. Such rules are called *adhikāra* (“government”) rules.

How many rules does an *adhikāra* apply to? Each *adhikāra* has a specific scope, which we can usually determine from context or from the rule itself. When in doubt, we can rely on expert commentaries to help us.

And as a quick note, perhaps you’re wondering: how many different rule types are there? Different authors classify them in different ways, but in this series, we will use just five basic types: *vidhi* (operation), *samjñā* (definition), *adhikāra* (government), *paribhāṣā* (interpretation), and a fifth type called *atideśa* (analogy) that we will use later on.

**Our first sandhi rule**

Let’s start the discussion with some small sandhi changes:

\[
\text{draupadī aśvam icchati → draupadyaśvam icchati}
\]

Draupadi wants a horse.

\[
\text{madhu asti → madhvasti}
\]

There is honey.

The basic idea is that if two non-similar vowels are in close contact (*saṃhitā*), then the first vowel should become a semivowel.

How might we capture this change? Pāṇini offers the following rule, but it is difficult to understand:
Let's start with what we do know. We know that *ik*, *yaṇ*, and *ac* are all *pratyāhāras*:

- *ik* refers to one of the vowels *i*, *u*, *ṛ*, and *ḷ*, and to any vowels similar to these four.
- *yaṇ* refers to one of the four semivowels: *y*, *v*, *r*, and *l*.
- *ac* refers to any vowel.

We also know that Sanskrit words express meanings through *inflection*. All three of these *pratyāhāras* are Sanskrit nouns, and they express different grammatical cases through different noun endings. (Roughly, a noun's case is the role it plays in the sentence.) So we have:

- the sixth case (*ik-ah*), which can be translated as “of.”
- the first case (*yaṇ*), which is usually the subject of a sentence.
- the seventh case (*ac-i*), which can be translated as “in.”

Because we know what the rule *should* be, we can guess what the rule is trying to express. But this guesswork doesn't feel satisfying. It feels like something crucial is missing.

**How to interpret cases in formal grammar**

The solution is to rely on three new *paribhāṣā* rules. Together, they describe how we should interpret these cases in the context of formal grammar:
What do these rules mean? It's simple. In the context of a substitution:

- the sixth case marks the term that will be replaced
- the fifth case marks the term that must appear before the substitution
- the seventh case marks the term that must appear after it

And by normal Sanskrit semantics, the first case will define the replacement. With these principles in mind, we can reinterpret the case semantics in rule 6.1.77:

- *ik* is in the sixth case (*ikah*), so it will be replaced.
- *yaṇ* in the first case (*yaṇ*), so it is the substitute.
- *ac* in the seventh case (*aci*), so it follows the substitution.

Now rule 6.1.77 has a clearer meaning:

**Substitution with two lists**

There is still a subtle problem with rule 6.1.77 above: which *yaṇ* sound do we use? We know that *y* is the right choice, but the rule does not say so explicitly. So it would be legal to produce this incorrect result:
Draupadī अश्वम इच्छति → * द्रापदश्वम इच्छति

draupadi aśvam icchati → * draupadraśvam icchati
Draupadi wants a horse.

Our rule is too loose. How do we fix this?

Pāṇini offers several rules for performing a substitution correctly, but just one is relevant to us here:

यथासंख्यमनुदेशः समानाम्। १.३.१०
yathāsaṃkhyamanudeśaḥ samānām (1.3.10)
yathā-saṃkhyam anudeśaḥ samānām
Substitution of [items with] the same [size] is according to their relative number.

More plainly, rule 1.3.10 states that if a rule says to replace one list (call it A) with another (call it B) of the same size, what it really means is that we replace the item 1 of A with item 1 of B, item 2 of A with item 2 of B, and so on for the rest of the list.

Now rule 6.1.77 has a clear, consistent meaning:

इको यणचि। ६.१.७७
iko yaṇaci (6.1.77)
ikaḥ yaṇ aci
An ik vowel is replaced by its respective yaṇ sound when a vowel follows [in saṃhitā].

If we return to our original example, we know that ik denotes the four vowels i, u, r, and l. And we know that yaṇ denotes the four semivowels y, v, r, and l. So by rule 1.3.10, we see what the correct replacements are:

<table>
<thead>
<tr>
<th>इ</th>
<th>य</th>
</tr>
</thead>
<tbody>
<tr>
<td>i</td>
<td>y</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>उ</th>
<th>व</th>
</tr>
</thead>
<tbody>
<tr>
<td>u</td>
<td>v</td>
</tr>
</tbody>
</table>
Therefore, the replacement for $i$ is $y$, and we get our desired result:

\[
\text{драупади аśвам иччхатि} \rightarrow \text{драупадыаśвам иччхатि}
\]

\[
draupadī aśvam icchati \rightarrow draupadaśvam icchati
\]

Draupadi wants a horse.

**Review**

Understanding rule 6.1.77 took a lot of work and several extra rules. But these new rules give us a precise and concise way to define different operations. We will use these rules over and over as we continue to explore the *Aṣṭādhyāyī*.

There's just one small catch: rule 6.1.77 has an important flaw. In the next lesson, we will fix this flaw and build a basic model for vowel sandhi.
ac sandhi

ac sandhi is the general name for sandhi changes that involve two vowels. For example, the rule we studied in the previous lesson is an example of ac sandhi:

इको यणाचि | ६.१.७७

isko yanaci (6.1.77)

An ik vowel is replaced by its respective yan sound when a vowel follows [in samhita].

ac sandhi has many rules of varying importance. Some are truly minor, and others are important general patterns. Here, we will focus on the important general patterns and complete our basic picture of ac sandhi.

But there is also an important issue we should address: rule 6.1.77 has a serious flaw. In Sanskrit, two similar vowels should combine and become long:

德拉ुपडी इन्द्रम् अपश्यत् → ड्रौपदीन्द्रम् अपश्यत्

draupadi indram apaśyat → draupadindram apaśyat
Draupadi saw Indra.

But rule 6.1.77 will produce an error:

德拉ुपडी इन्द्रम् अपश्यत् → *德拉ुपडयिन्द्रम् अपश्यत्

draupad indram apaśyat → *draupadyindram apaśyat
Draupadi saw Indra.

So in addition to completing our basic picture of ac sandhi, we will also ensure that our system handles the example above correctly.

As in the previous lesson, the rules below will borrow context from the adhikāra rule 6.1.72:


**ec as first vowel**

Once we understand rule 6.1.77 (*iko yaṇaci*), we can easily understand 6.1.78:

\[
\text{एचमो ऽयवरायरावअः। ६.१.७८}
\]

\[
\text{eco 'yavāyāvaḥ (6.1.78)}
\]

\[
\text{ecaḥ ay-av-āy-āvaḥ}
\]

An *ec* vowel becomes *ay*, *av*, *āy*, or *āv*, respectively [when a vowel follows in *saṃhitā*].

So we get sandhi changes like this:

<table>
<thead>
<tr>
<th>Sanskrit</th>
<th>Devanagari</th>
</tr>
</thead>
<tbody>
<tr>
<td>ने + अ → नय</td>
<td>ne + a → naya</td>
</tr>
<tr>
<td>भो + अ → भव</td>
<td>bho + a → bhava</td>
</tr>
</tbody>
</table>

Rule 6.1.78 is nice and simple. Now let’s turn to the rules where *a* is first:

**a as first vowel**

In Sanskrit, *a* will combine with most vowels to form a compound vowel:

\[
\text{सीता इन्द्रम् अपश्यत् → सीतेन्द्रम् अपश्यत्}
\]

\[
\text{sitā indram apaśyat → sitendram apaśyat}
\]

Sita saw Indra.

Here, one vowel (*e*) replaces two vowels (*ā* and *i*). How might we model this behavior with our rules?
Pāṇini approaches this problem by creating a new *adhiṅkaṇa* rule:

\begin{center}
\begin{tabular}{l}
एकः पूर्वपरयोः। ६.१.८४\\
ekah pūrvaparayoḥ (6.1.84)\\
\end{tabular}
\end{center}

A single [term] is substituted for the previous and following.

What does this rule mean? Recall that we represent “previous” terms with the fifth case and “following” terms with the seventh. So, this rule means that in the scope of this *adhiṅkaṇa* rule, terms in the fifth and seventh case are both replaced by a single term.

With this context in place, we can model what happens when *a* is the first vowel. In general, the change is simple. With the help of a new term:

\begin{center}
\begin{tabular}{l}
अदयेषुणअः। १.१.२\\
adeṅguṇaḥ (1.1.2)\\
\end{tabular}
\end{center}

The vowels *a*, *e*, and *o* are called *guṇa*.

we can define our rule:

\begin{center}
\begin{tabular}{l}
आ षु णअः। ६.१.८७\\
ādguṇaḥ (6.1.87)\\
\end{tabular}
\end{center}

*a* [and the following vowel] become [a single] *guṇa* [in *saṃhitā*].

But if the second vowel is a compound vowel, we use a slightly different rule. Again, we define a new term:

\begin{center}
\begin{tabular}{l}
व्र्द्दिरादैच्। १.१.१\\
vṛddhirādaic (1.1.1)\\
\end{tabular}
\end{center}

The vowels *ā*, *ai*, and *au* are called *vṛddhi*.

And use it in our rule:
The terms *guna* and *vṛddhi* are important and will be used throughout the grammar. We will return to them later on.

**Some notes on rule 1.1.1**

Let’s pause on rule 1.1.1 for a moment. This is the first rule of the entire *Aṣṭādhyāyī*. And to understand it, we must understand all of the following:

- the Shiva Sutras
- the definition of a *pratyāhāra*
- the fact that *a* (in the *pratyāhāra*) refers to both short *a* and long *ā*
- the definition of *t* when it follows a vowel

This is part of why it is so difficult to enter into the Pāṇinian system and understand how it works. (If we have made it easier, please do let us know.)

**Substitution with the closest option**

Unfortunately, rules 6.1.87 and 6.1.88 have a problem that we’ve seen before: these rules don’t tell us which specific vowel to use. We know what the correct result should be, but these rules allow some clearly incorrect results. For example, we could apply rule 6.1.87:

\[
\text{sītā indram apaśyat} \rightarrow * \text{sītonḍram apaśyat}
\]

*Sita saw Indra.*

To prevent such results, Pāṇini offers this rule to help us perform the correct substitution:
Roughly, “closeness” refers to properties like places of articulation, semantics, and so on. Since these rules are about sounds, the closest replacement is the one that matches the places of articulation of the sounds being replaced.

If we return to our example above:

Sītā indram āpaśyat → ???

We must choose which guṇa vowel to use, per 6.1.87 (ādguṇah). Since ā is pronounced at the soft palate and i is pronounced at the hard palate, we just need to find which sound is the best match:

- short a uses just one of these places of articulation, so it is not a good match.
- et uses both of these places of articulation, so it is a good match.
- o uses the soft palate, but it uses the lips instead of the hard palate. So o is not a good match.

Thus e is the best option:

अ + इ → ए

And likewise, o is better if the combination is a and u:

अ + उ → ओ
Addition of r

The rules above seem to work as intended. But if we test this rule against our Sanskrit knowledge, we find another problem. In Sanskrit, r has no compound vowel. Instead, it combines with a with some help from the semivowel r:

\[ \text{sītā ṛcchati} → \text{sitarcchati} \]

Sītā goes.

But with our current system, rule 6.1.87 (ādguṇaḥ) can hardly function. at seems like the closest guṇa vowel, but this produces a bad result:

\[ \text{sītā ṛcchati} → * \text{sitacchati} \]

Sītā goes.

The fix is another paribhāṣā about how to perform a substitution:

\[ \text{uṛaṇrparaḥ} (1.1.51) \]

\[ \text{uḥ aṇ ra-paraḥ} \]

[In substitution,] an aṇ vowel that replaces an ṛ is followed by r.

And with this rule in hand, we can perform the substitution correctly and get the desired result.

Two similar vowels

Finally, we can return to the example from the start of this lesson and complete our basic picture of vowel sandhi. Recall the example we wish to model:

\[ \text{draupadi indram} → \text{draupadīndram} \]

To handle this special case, we just need a new rule:
The meaning of this rule is clear. And with rule 1.1.50 (sthāne'ntaratamaḥ), it is also clear what the result should be for each vowel:

\[
\begin{align*}
\text{अ + अ} & \rightarrow \text{आ} \\
a + a & \rightarrow ā \\
\text{इ + इ} & \rightarrow \text{ई} \\
i + i & \rightarrow ī \\
\text{उ + उ} & \rightarrow \text{ऊ} \\
u + u & \rightarrow ū \\
\text{ऋ + ऋ} & \rightarrow \text{ॠ} \\
ṛ + ṛ & \rightarrowṝ \\
\end{align*}
\]

Review

With just a few short rules, we have fully characterized the basic patterns of ac sandhi. This is the power the Pāṇinian system gives us. As a quick review, here are the main rules of vowel sandhi:

\[
\text{इको यणचि} \quad 6.1.77
\]

iko yaṇaci (6.1.77)

īkaḥ yaṇ aci

An ik vowel is replaced by its respective yaṇ sound when a vowel follows [in samhitā].

\[
\text{आदगुनाः} \quad 6.1.87
\]

ādgunaḥ (6.1.87)

āt guṇaḥ

a [and the following vowel] become [a single] guṇa [in samhitā].
व्रddhirv $vṛddhireci \ (6.1.88)$
$vṛddhiḥ eci$
[a and the following] ec vowel become [a single] \(vṛddhi\) [in \(saṁhitā\)].

अकः सवर्णं दीर्घः | ६.१.१०१
$akaḥ \ savarṇe \ dīrghaḥ \ (6.1.101)$
$akaḥ \ savarṇe \ dīrghaḥ$
ak and a following savarṇa [vowel] become a \(dīrgha\) (long) [in \(saṁhitā\)].

In the next lesson, we will explore a critical problem with our current system and learn how Pāṇini decides to solve it.
The *asiddha* section

Most of the *Aṣṭādhyāyī*’s sandhi rules are in an unusual section of the text. To understand that section, we must first understand how the Pāṇinian system works at a high level. We’ll then discuss a major problem with its approach and how Pāṇini solves it.

*prakriyā*

When we use the *Aṣṭādhyāyī*, we start with an incomplete expression. We then apply one rule at a time. The output of one rule is the input to the next. And as we keep applying rules, our result gets closer and closer to a valid Sanskrit expression.

This full process, including the rules we apply and the results we get, is called a *prakriyā* (“procedure”, “derivation”). When we use the *Aṣṭādhyāyī*, we must know not only what rules mean but also how to apply them to generate a correct prakriyā.

What do we mean by a “correct” prakriyā? At each step in the prakriyā, multiple rules could apply, and we must choose which one to use. There are a few basic principles that help us here. (For example, we should prefer more specific rules to less specific rules.) And when we can no longer apply any rules, the prakriyā is complete.

**Finishing a prakriyā**

Let’s focus on the phrase “when we can no longer apply any rules.” What does this mean? For example, we might have this incomplete expression that has had no sandhi rules applied:

\[
ते इच्छन्ति
\]

\[
te icchanti
\]

They want.

If we use rule 6.1.78 from the previous lesson:
An ec vowel becomes ay, av, āy, or āv, respectively [when a vowel follows in saṃhitā].

then we can create a new result:

ते इच्छन्ति → तय्य इच्छन्ति

te icchanti → tay icchanti

But if you know Sanskrit, you know that this isn’t the typical result. The e at the end of a word usually becomes a when it is followed by a vowel. There is a vidhi rule that makes the appropriate change. And by applying that rule, we get the correct result:

तय्य इच्छन्ति → त इच्छन्ति

tay icchanti → ta icchanti

A serious problem

The problem is that the prakriyā is not actually complete, because another rule can now be applied. Specifically, it’s rule 6.1.87, which we saw in the previous lesson:

आद्वाण: | ६.१.८७

āt gunah (6.1.87)

a [and the following vowel] become [a single] guṇa [in saṃhitā].

6.1.87 can apply, and there is no other rule that takes priority over it. So it must and will apply, which gives us a bad result:

त इच्छन्ति → * तेच्छन्ति

ta icchanti → * tecchanti
It is as if a good man and a thief both come to us to ask for food. We want to give our food to the good man and not to the thief. But if we give our food to the good man, the thief will beat him and steal it. We must ensure that once we give our food to the good man, the thief will not be able to take it from him.

Pāṇini's solution

Pāṇini's solution to this problem is to offer this rule:

<table>
<thead>
<tr>
<th>पूर्वत्रासिद्धम् ८.२.१</th>
</tr>
</thead>
<tbody>
<tr>
<td>pūrvatrāsiddham (8.2.1)</td>
</tr>
<tr>
<td>pūrvatra a-siddham</td>
</tr>
<tr>
<td>... is asiddha (inert) in the previous [area].</td>
</tr>
</tbody>
</table>

Rule 8.2.1 is an adhikāra that lasts until the very end of the Aṣṭādhyāyī. So, all rules that follow rule 8.2.1 will be in its scope. But what does rule 8.2.1 mean, and what does it do?

Understanding rule 8.2.1

First, let's understand the two words pūrvatra and asiddham.

pūrvatra literally means “in the previous (area).” Here, it refers to all previous rules in the grammar. Every rule after 8.2.1 will inherit the word pūrvatra. So for each of these rules, every rule before it is pūrvatra.

asiddham literally means “not accomplished” or “not enacted.” Here, it essentially means that the rule cannot be used.

We can update our translation like so:

<table>
<thead>
<tr>
<th>पूर्वत्रासिद्धम् ८.२.१</th>
</tr>
</thead>
<tbody>
<tr>
<td>pūrvatrāsiddham (8.2.1)</td>
</tr>
<tr>
<td>pūrvatra a-siddham</td>
</tr>
<tr>
<td>... is disabled with respect to prior rules.</td>
</tr>
</tbody>
</table>

What does this mean? Let's return to the example of the good man and the thief. Once we give our food to the good man, it is as if he becomes invisible. Try as he might, the thief cannot find him.
But rule 8.2.1 also has an interesting implication: we must apply the rules of the *asiddha* section in order. If we have two rules $A$ and $B$, and if $A$ comes before $B$, then once we apply $A$, we can no longer apply $B$.

**Rule 8.2.1 for programmers**

If you are familiar with computer programs, rule 8.2.1 is straightforward. All prior rules are a kind of *event-driven programming*, where we select the rules that best match our current context. Then rule 8.2.2 is the start of an *iterative program*, where we apply each rule in sequence.

As far as we can tell, this observation was first made by Professor Amba Kulkarni in 2008, in her presentation titled *Pāṇini's Aṣṭādhyāyi: A Computer Scientist's viewpoint*.

**The practical meaning of rule 8.2.1**

Rules after 8.2.1 should be applied in order, and they should be applied after all other rules. This means that all of our *prakriyās* should have this structure:

1. First, we apply rules before 8.2.1.
2. Then, we apply rules after 8.2.1. But these rules must be applied in order; we cannot go back and apply an earlier rule.

To return to our example above, the *vidhi* rule that changes *te* to *ta* is after rule 8.2.1. So once we apply it, we cannot go back and apply 6.1.78 (*ād guṇaḥ*). We thus get the result we were aiming for:

\[
\text{ते इच्छन्ति} \rightarrow \text{त इच्छन्ति}
\]

*te icchanti* → *ta icchanti*

and our *prakriyā* is complete.

**Occasional exceptions to the *asiddha* section**

A *very* small number of rules can be applied after the rules in the *asiddha* section. How is this possible?
Simply, these are rules that would be purposeless (vyartha) otherwise. As for why they are stated outside of the asiddha section, that is part of a much longer discussion about rule inference (anuvṛtti) and concision (lāghava) in the Aṣṭādhyāyī.
**hal sandhi**

*hal sandhi* is the general name for sandhi changes where the first sound is a consonant. Here are some simple examples:

\[ \text{क्र + अ} \rightarrow \text{ग्र} \]

\[ k + a \rightarrow ga \]

\[ \text{ष्ट + त} \rightarrow \text{ष्टा} \]

\[ s + ta \rightarrow sta \]

Many of the rules of *hal* sandhi appear after rule 8.2.1 (*pūrvatrāsiddham*), so they are *asiddha* with respect to prior rules. In plain English, this means that we must apply these rules in order.

*hal* sandhi is much more extensive than *ac* sandhi, and there is no simple picture of it we can provide. Instead, we will focus on four kinds of changes that we will see repeatedly throughout this series. These are:

- changes involving the *anusvāra*
- changes involving the *visarga*
- changes of *s* to *ṣ*
- changes of *n* to *ṇ*

This lesson will focus on the first two.

**adhikāra rules**

We have this new *adhikāra*:

*पदय्स| ८.१.१६*  
*padaysa* (8.1.16)  
*padaysa*  
Of a *pada* (word), ...

The rules below also inherit the word *saṃhitāyām* (“in *saṃhitā*”) by *anuvṛtti* from an earlier rule.
Changes involving the *anusvāra*

Generally, the *anusvāra* is a sound that appears only due to sandhi. In the *Aṣṭādhyāyī*, the sound *m* and *n* become the *anusvāra* under different conditions.

First is a general rule about *m* at the end of a word. This rule inherits the term *hali* (“when a consonant follows”) from the rule before it:

\[\text{मो उनस्वारः} \quad \text{8.3.23}\]
\[mo \ 'nusvārah} \quad \text{8.3.23}\]
\[maḥ anusvāraḥ\]

*m* becomes the *anusvāra* [at the end of a *pada* in *saṃhitā* when a consonant follows].

By this rule, we get results like this:

\[\text{नगरम् गच्छामि} \quad \text{→ नगरं गच्छामि}\]
\[nagaram gacchāmi \quad → \quad nagaram gacchāmi\]

I go to the city.

We also have a second rule about *m* and *n* when they are not at the end of a *pada*:

\[\text{नश्चरापदान्तस्य झलि} \quad \text{8.3.24}\]
\[naścāpadāntasya jhali} \quad \text{8.3.24}\]
\[naḥ ca a-pada-antasya jhali\]

[m] and [n] [become the *anusvāra* in *saṃhitā*] if not at the end of a *pada*, when followed by a *jhal* consonant.

By this rule, we get results like these:

\[\text{मन्स्यसे} \quad \text{→ मांस्यसे}\]
\[mansyase → maṃsyase\]

You will think.

\[\text{रम्स्यसे} \quad \text{→ रांस्यसे}\]
\[ramsyase → raṃsyase\]

You will delight.
But the *anusvāra* itself might be changed by later rules. These rules appear after the scope of 8.1.16 (*padasya*) has ended:

\[
\begin{align*}
\text{आनुस्वारस्य ययि परस्वर्णः। ८.४.५८} \\
anusvārasya yayi parasavarṇaḥ (8.4.58) \\
anusvārasya yayi para-savarṇaḥ
\end{align*}
\]

[In *saṃhitā*], the *anusvāra* becomes *savarna* to the following [sound] when followed by a *yay* sound,

\[
\begin{align*}
\text{वा पदान्तस्य। ८.४.५९} \\
vā padāntasya (8.4.59) \\
vā pada-antasya
\end{align*}
\]

[yay] includes all consonants except for the sibilants (*ś, ṣ, s, h*). So the following changes are mandatory by rule 8.4.58:

\[
\begin{align*}
\text{अंकित} & \rightarrow \text{अंकित} \\
aṅkita & \rightarrow aṅkita \\
\text{रुण्थैत} & \rightarrow \text{रुण्थैत} \\
rūmdhanti & \rightarrow rundhanti
\end{align*}
\]

And the following changes are optional, by rule 8.4.59:

\[
\begin{align*}
\text{नगरं गच्छामि} & \rightarrow \text{नगरं गच्छामि} , \text{नगरं गच्छामि} \\
nagaraṃ gacchāmi & \rightarrow nagaraṃ gacchāmi , nagaraṇ gacchāmi \\
\text{अहम् प्रच्छामि} & \rightarrow \text{अहम् प्रच्छामि} , \text{अहम् प्रच्छामि} \\
aham prṛcchāmi & \rightarrow aham prṛcchāmi , aham prṛcchāmi
\end{align*}
\]

There are two ideas worth noting here. First, 8.4.59 is the first rule we’ve seen where we can choose whether to apply the rule or not. Many rules in the *Aṣṭādhyāyī* are optional, though certain choices do tend to become conventions over time.
Second, notice how the word *rundhanti* is treated by these rules. Since we must apply these rules in order, we have a derivation like this, where *rundhanti* is first changed by rule 8.3.23:

\[
\begin{align*}
\text{रुन्धन्ति} & \rightarrow \text{रुन्धन्ति} \\
rundhanti & \rightarrow ruṃdhanti
\end{align*}
\]

and then converted back to its original form by rule 8.4.58:

\[
\begin{align*}
\text{रुन्धन्ति} & \rightarrow \text{रुन्धन्ति} \\
ruṃdhanti & \rightarrow rundhanti
\end{align*}
\]

This kind of behavior is common in the *asiddha* section.

A note on *anusvāra* usage

The *Aṣṭādhyāyī* is clear that rule 8.4.58 is mandatory. Printed texts, however, will occasionally use the *anusvāra* rather than laboriously write out the correct nasal sound.

Rules that use the *visarga*

Like the *anusvāra*, the *visarga* is also a sound that appears only due to sandhi. In the *Aṣṭādhyāyī*, the sounds *s* and *r* become the *visarga* under different conditions.

Let’s focus on how *s* changes, since those changes are more common. Our first rule is still in the scope of 8.1.16 (*padasya*) above:

\[
\begin{align*}
\text{ससजुषो} & \rightarrow \text{रुअः} \\
\text{sasajuṣo ruḥ} & (8.2.66) \\
\text{sa-sajuṣoḥ ruḥ}
\end{align*}
\]

The *s* [at the end of a *pada*] and the [last letter of the word] *sajuṣ* are replaced with *ru*.

*sajuṣ* is a rare word that we can set aside. *ru*, meanwhile, is a temporary symbol that we will replace in later rules. For example, it might be replaced by rule 8.3.15 below:
Let’s discuss both of these rules in more detail. Rule 8.3.14 accounts for changes like the following:

<table>
<thead>
<tr>
<th>Sanskrit</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>द्वार रोहिता</td>
<td>The door is red.</td>
</tr>
<tr>
<td>dvār rohitā</td>
<td></td>
</tr>
</tbody>
</table>

And the raḥ of rule 8.3.14 also includes ruँ:

What are khar and avasāna? Khar is a pratyāhāra that refers to any unvoiced consonant. And avasāna is defined in rule 1.4.110:

<table>
<thead>
<tr>
<th>Sanskrit</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>विरामोवसानम्</td>
<td>Cessation [of speech] is called avasāna.</td>
</tr>
<tr>
<td>virāmo'vasānam</td>
<td></td>
</tr>
<tr>
<td>virāmaḥ avasānam</td>
<td></td>
</tr>
</tbody>
</table>

So r becomes the visarga when at the end of an utterance or when followed by an unvoiced consonant:

<table>
<thead>
<tr>
<th>Sanskrit</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>रामस् खादति</td>
<td>Rama eats.</td>
</tr>
<tr>
<td>rāmas khādati</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
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<th>English</th>
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<tr>
<td>रामस् खादति</td>
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</tr>
<tr>
<td>rāmas khādati</td>
<td></td>
</tr>
</tbody>
</table>
Review

In addition to describing some common changes, the rules above also give a clearer idea of how rules in the \textit{asiddha} section work. In the next lesson, we will finish our tour through sounds and sandhi by learning about two common changes that occur within a single word.
ṣatva and ṇatva

In the previous lesson, we learned about various small changes involving the anusvāra and the visarga. These changes also gave a clearer demonstration of how rules in the asiddha section work.

Here, we will take a quick look at two common changes that we will use repeatedly throughout our series. These are:

- the change of $s$ to ʂ. This is commonly called ṣatva (sa-ness).
- the change of $n$ to ɳ. This is commonly called ṇatva (ṇa-ness).

Both ṣatva and ṇatva have many exceptions and minor rules. So as usual, we will focus on just the common patterns.

**Change of $s$ to ʂ**

The consonant $s$ can become ʂ in several different circumstances. Here we'll look at just one. To understand this rule, we must first consider four rules that are either adhikāra rules or rules that establish anuvṛtti:

\[
\begin{align*}
\text{अपदान्तस्य मूर्धन्यः:} & \quad 8.3.55 \\
apadāntasya mūrdhanyaḥ & \quad (8.3.55) \\
a-pada-antasya mūrdhanyaḥ & \\
\text{Of a non-word-final, ... a retroflex.} \\
\text{सहे साडः सः:} & \quad 8.3.56 \\
saheḥ sāḍaḥ saḥ & \quad (8.3.56) \\
[The non-word-final] s [of saḥ in the form sāḍ] becomes a retroflex [ṣa in sanhitā]. (This rule is minor, but the term saḥ will continue through anuvṛtti.) \\
\text{इण्कोह:} & \quad 8.3.57 \\
in-koḥ & \quad (8.3.57) \\
in-koḥ & \\
\text{After the letters in (i, u) or ku*(k, kh, g, gh, ɳ), ...} 
\end{align*}
\]
Rule 8.3.59 is our focus:

अदेशप्रत्यययमोअः। ८.३.५९
ādeśapratyayayoḥ (8.3.59)
ādeśa-pratyayayoḥ

[The non-word-final s that follows in or ku becomes a retroflex s in samhitā] when it is of an ādeśa (substitution) or pratyaya (suffix) [even if separated by nuṁ, the visarjanīya, or a āśa sound].

Rule 8.3.59 inherits different pieces from each of the four rules before it. So in addition to teaching us a useful rule, rule 8.3.59 shows how much the Aṣṭādhyāyī relies on the context of prior rules.

Now, what does rule 8.3.59 actually mean? For now, let’s set aside certain pieces of this rule. We will return to ādeśa in a future lesson, and likewise for nuṁ. So, let’s work with this simplified version of the rule:

आदेशप्रत्यययमोअः। ८.३.५९
ādeśapratyayayoḥ (8.3.59)
ādeśa-pratyayayoḥ

In samhitā, the non-final s of a pratyaya (suffix) becomes s when it follows in or ku, even if separated by the viṣarga or a āśa sound.

The interpretation of this rule is quite clear. We get changes like the following:

आग्नि + सू → आग्निषू
agni + su → agnīṣu

गुरु + सू → गुरुषू
guru + su → guruṣu

वाक्ष + सू → वाक्षू
vākṣ + su → vākṣu
Even if certain other sounds intervene:

\[
\text{हविः} + \text{ सु} \rightarrow \text{हविःषु}
\]

\[
haviḥ + su \rightarrow haviḥṣu
\]

**Change of n to ṇ**

Similarly, we have this change of \( n \) to \( ṇ \):

\[
\text{रषरारासं नमो णअः रानपदये। ८.४.१}
\]

\[
raṣābhyāṃ no ṇaḥ samānapade (8.4.1)
\]

\[
ra-ṣābhyām nah ṇah samāna-pade
\]

When following \( r \) or \( ṣ \) in the same \( pada \) (word), \( n \) becomes \( ṇ \) [in \( saṃhitā\)],

\[
\text{अटकुराषुम्वराययेऽप। ८.४.२}
\]

\[
aṭkupvāṅnumvyavāye api (8.4.2)
\]

\[
aṭ-ku̐-pu̐-āṅ-nu̐-m-vyavāye api
\]

even if they are separated by \( aṭ \) sounds, \( ku̐ \) and \( pu̐ \) sounds, \( āṅ \), or \( nu̐m \).

Rule 8.4.1 is straightforward. And rule 8.4.2 includes all kinds of sounds:

- the \( pratyāhāra \) \( aṭ \) (\( a, ā, i, t, u, ū, r, ṛ, e, ai, o, au, h, y, v, r \))
- \( ku̐ \) or \( pu̐ \) (\( k, kh, g, gh, n, p, ph, b, bh, m \));
- the word \( ā \), which is called \( āṅ \) in the \( Aṣṭādhyāyī\). \( ā \) is the prefix used in words like \( āgacchati \), but it has other uses as well.
- \( nu̐m \) will be discussed in a later lesson.

If rule 8.3.59 (\( ādeśapratyayayoḥ \)) shows the power of \( anuvṛtti \), rule 8.4.2 shows the power of Pāṇini’s notation. Pāṇini describes a complex set of conditions in just 8 syllables. And by applying these rules, we get changes like the following:

\[
\text{रमेन} \rightarrow \text{रमेण}
\]

\[
rāmena \rightarrow rāmeṇa
\]

By Rama
Review

The other sandhi rules follow the same principles we've seen already. Studying more sandhi rules might be interesting for its own sake, but it won't teach us anything fundamental about the Pāṇinian system.

Therefore, now is a good time for us to review what we've learned and consolidate our knowledge. Once we've done so, we'll be ready to explore the rest of the Pāṇinian system.
Review

In this unit, we built up the basics of the Pāṇinian system from scratch. These fundamental rules and concepts apply to nearly every part of the Aṣṭādhyāyī and will serve as an invaluable foundation as we go forward.

Before we move on, let's take a moment to review what we've learned.

We learned about *it* letters, which let us concisely add extra information to terms in the grammar:

<table>
<thead>
<tr>
<th>उपदेशे उजनुनासिक इतः। १.३.२</th>
</tr>
</thead>
<tbody>
<tr>
<td>upadeśe 'janunāsika it (1.3.2)</td>
</tr>
<tr>
<td>upadeśe ac anunāsikaḥ it</td>
</tr>
<tr>
<td>In upadeśa, nasal vowels are called <em>it</em>.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>हलन्त्यम्। १.३.३</th>
</tr>
</thead>
<tbody>
<tr>
<td>halantyam (1.3.3)</td>
</tr>
<tr>
<td>hal antyam</td>
</tr>
<tr>
<td>Final consonants are called <em>it</em> in upadeśa.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>न विभक्तों तुस्मा:। १.३.४</th>
</tr>
</thead>
<tbody>
<tr>
<td>na vibhaktau tasmāḥ (1.3.4)</td>
</tr>
<tr>
<td>na vibhaktau tu-s-māḥ</td>
</tr>
<tr>
<td>The tu sounds, s, and m are not called <em>it</em> in upadeśa when they are in a vibhakti (verb or nominal case ending).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>आदिरितुदवः। १.३.५</th>
</tr>
</thead>
<tbody>
<tr>
<td>ādiriṇiṭudavaḥ (1.3.5)</td>
</tr>
<tr>
<td>ādiḥ ni-tu-davaḥ</td>
</tr>
<tr>
<td>Initial ni, tu, and du [are called <em>it</em> in upadeśa].</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>षः प्रत्ययस्य। १.३.६</th>
</tr>
</thead>
<tbody>
<tr>
<td>ṣaḥ pratyayasya (1.3.6)</td>
</tr>
<tr>
<td>ṣaḥ pratyayasya</td>
</tr>
<tr>
<td>The initial ṣ of a pratyaya (suffix) is called <em>it</em> in upadeśa.</td>
</tr>
</tbody>
</table>
The [initial] cu sounds and tu sounds [of a pratyaya are called it in upadeśa].

The [initial] l, ś, and the ku sounds [of a pratyaya are called it in upadeśa] when not in a taddhita (nominal suffix).

It [i.e. any it letter] undergoes lopa.

By using these it sounds, we can then create pratyāhāras and define a simple notation for describing savarṇa letters:

[Sounds with] the same āsya (place of articulation) and prayatna (articulatory effort) are called savarṇa (similar).

But vowels and consonants are not [savarṇa with each other].

A word [denotes] its own form if it is not a definition (saṃjñā).
The an sounds and udit [sounds] also [denote] their savarna [sounds], if they are not pratyaya (suffixes).

[A sound] bordered by t [refers to the sound] with that duration.

We then created a variety of sandhi rules by applying these fundamental paribhasa rules:

The sixth case can signify sthāne (in the place of).

In substitution, the closest [is preferred].

[In substitution,] an an vowel that replaces an r is followed by r.

When the seventh case is specified, [substitution is] of the previous.
We also learned about the basic types of rules: *vidhi* (operation), *saṃjñā* (definition), *adhikāra* (government), *paribhāṣā* (interpretation), and a fifth type called *atideśa* (analogy) that we will use later on.

Finally, we learned about the basics of a *prakriyā* and how we should choose which rules to apply during the derivation. We will learn much more about this in the lessons to come.
tiñanta
Introduction

In the previous unit, we started from scratch and built up a basic version of the Aṣṭādhyāyī’s core. We first learned about it sounds, pratyāhāras, and other devices that let us refer to sounds concisely. We then applied that knowledge by defining various sandhi rules.

Now that we have a basic understanding of the Pāṇinian system, we can explore the rest of the Aṣṭādhyāyī. We’ll start by exploring how the Aṣṭādhyāyī creates different words. Sanskrit words can be classified in many different ways, but the Aṣṭādhyāyī uses a simple system:

\[ \text{suptiṅantaṃ padam } (1.4.14) \]
\[ \text{sup-tiṅ-antam padam} \]

That which ends in sup or tiṅ [is called] a pada (word).

\( \text{sup} \) and \( \text{tiṅ} \) are both pratyāhāras that refer to different word endings. \( \text{tiṅ} \) refers to the endings used for verbs. So in the Pāṇinian system, verbs are called tiṅ-anta (“ending in a tiṅ suffix”).

In this unit, we will learn how the Aṣṭādhyāyī creates tiṅantas. We will also create complete prakriyās (derivations) for a variety of basic verbs.

Basics of tiṅanta-prakriyā

At a high level, here is what a tiṅanta-prakriyā is like. We start with the specific semantics we wish to express. Perhaps we want the semantics of the root \( \text{bhū} \) in the present tense as applied to a single third-person entity. Based on those semantic conditions, we can follow the rules of the grammar to introduce specific terms:

\[ \text{bhū + laṭ} \]

Here, laṭ is an abstract suffix that usually expresses the present tense. Based on our semantic conditions, we then replace with a specific ending:
This suffix allows other operations to apply. For example, here we should introduce a new affix \( a \) between the root and the ending:

\[
\text{भू + अ + ति} \\
\text{bhū + a + ti}
\]

Then we should apply the sound changes that are conditioned by the affix:

\[
\text{भो + अ + ति} \\
\text{bho + a + ti}
\]

Finally, we apply normal sandhi changes and get a complete word:

\[
\text{भवति} \\
\text{bhavati}
\]

(He) becomes.

Of course, this isn't the full prakriyā for the word bhavati. There are several small but important steps that we've left out. But in the lessons to come, we will learn how to create a complete and correct prakriyā for bhavati and for many other verbs.

**Verbs for beginners**

The notes below provide a summary of the Sanskrit verb system. If you know Sanskrit already, you can continue to the next lesson.

Verbs usually describe some kind of action, such as running, thinking, or deciding. Sanskrit verbs express many different kinds of information at once, and their underlying structure is complex.

Sanskrit verbs start with a basic verb root. Here are some example verb roots:
By adding prefixes and suffixes to this root, we create different verbs forms. Here are some examples:

नेष्यति

nesyati

(Someone) will lead.

कुर्याम्

kuryām

I might do.

Sanskrit verbs are highly expressive. They can express three different persons (third person, second person, first person), three different numbers (singular, dual, plural), and ten different tense-mood combinations.

Sanskrit verbs also express something called prayoga, which loosely corresponds to the active/passive voice distinction in English. We have kartari prayoga (“agent usage,” similar to the active voice), karmani prayoga (“object usage”, similar to the passive voice), and bhāve prayoga (“stative usage”, used only by intransitive verbs).

For a given prayoga, we have 3 persons × 3 numbers × 10 tense-moods = 90 standard forms. But in addition, we can use certain verb suffixes to create derived roots:

नी → निनीष

nī → ninīṣa

lead → want to lead
And these derived roots can themselves be used in different persons, numbers, tenses, and prayogas:

निनीष → निनीषसि
ninīṣa → ninīṣasi
want to lead → you want to lead

कारि → कारयेयुः
kāri → kārayeyuḥ
make do → they might make (someone) do
Our prakriyā begins with a dhātu (“element,” “verb root”). If we think of the Aṣṭādhyāyī as a factory that makes metal sculptures, then dhātus are like the ores and metals that enter the factory. We then apply various procedures to convert the dhātu into the shape we desire.

Here is how dhātus are defined:

| भूवाद्यो धातवः । १.३.१ |
| bhūvādayo dhātavaḥ (1.3.1) |
| bhū-ādayaḥ dhātavaḥ |

The items bhū, etc. [are called] dhātu.

The word bhūvādayaḥ refers to a list of items starting with bhū. But where do we find that list?

The Dhātupāṭha

The Dhātupāṭha is one of the secondary texts that we use with the Aṣṭādhyāyī. It is a list of roughly 2000 different dhātu, and it also contains a small number of extra rules that describe these dhātus.

Each dhātu is listed with its basic meaning:

| भू सत्तायाम् । १.१ |
| bhū sattāyām (1.1) |
| bhū in the sense of existing |

This is the first entry we’ve seen from the Dhātupāṭha, so let’s dwell on it for a moment. First is the dhātu (bhū). Next is its meaning, given as an abstract noun (sattā) in the seventh case. The 1.1 means that this is the first root of the first gana (“collection”) of the text. There are ten ganas in all, and each corresponds to a different class of Sanskrit verb.
You can click on the 1.1 to see this dhātu's entry on ashtadhyayī.com. There, you can see many of the forms that derive from this dhātu, and you can click on a form to view a computer-generated prakriyā.

The dhātus in the Dhātupāṭha are provided in their upadeśa forms. bhū above is also an upadeśa, and it looks quite simple. But other upadeśas might seem especially strange:

\[ \text{ḍukṛñ karaṇe} \] (8.10)
\text{kṛ in the sense of doing}

\[ \text{ṣaha’marṣaṇe} \] (1.188)
\text{sah in the sense of enduring}

\[ \text{nī˜ prāpaṇe} \] (1.1049)
\text{nī in the sense of obtaining or leading}

\[ \text{vadi’abhivādanastuṭyoḥ} \] (1.11)
\text{vand in the sense of greeting or praising}

An upadeśa may look strange, but it has a deliberate design and conveys plenty of useful information. In the sections below, we will convert these upadeśas into their more recognizable forms. Along the way, we will learn more about why these upadeśas have the strange forms they do.

**it sounds**

Do you remember where we first saw the word upadeśa? It was a part of rule 1.3.2 (upadeśejanunasika it), which defines which sounds are *it* and which are not. By applying the rules from this section, we can remove the *its* from the dhātus above and create more recognizable forms:

\[ \text{ḍukṛñ} \]
Although it is incomplete, this is our first look at a prakriyā. When we write a prakriyā, the left side shows the result and the right side shows which rules we applied to get that result. As usual, you can click on the numbers for some rule to see some information about that rule on ashtadhyayi.com.

The root kr has the it sounds ḍu and ı. In other words, we can say that it is dvit (“having ḍu as an it”) and űit. dvit roots are allowed to use the -tri nominal suffix, which is minor and rare. And űit roots have a special function that we will study in our lesson on parasmaipada and ātmanepada endings.

Not all it letters have some special meaning. For example:

\[ \text{ṣaha}^* \]
\[ \text{ṣah} \]

If a were absent, then the last h of ṣah would become an it sound by 1.3.3 (halantyam). So we use a to protect the root’s last consonant sound.

As for űīṅ, it is űīt just like kr:

\[ \text{ṅīṅ} \]
\[ \text{ṅī} \]

and vadi is idit (“having short i as an it”), which we will discuss further below:
Even after applying these rules, the roots ṣah, ṇī, and vad still seem strange. Let’s apply some more rules to convert them to a more recognizable form.

**satva and natva**

We can handle ṣah and ṇī by using these two rules:

| धात्वादे: ष: स: | ६.१.६४ |
| dhātvādeḥ ṣaḥ saḥ (6.1.64) |
| dhātu-ādeḥ ṣaḥ saḥ |
| The ṣ that begins a dhātu is replaced with s; |

| णो न: | ६.१.६५ |
| no naḥ (6.1.65) |
| nah naḥ |
| and likewise, ṇ with n. |

The replacement of ṣ with s is sometimes called **satva** (“ṣa-ness”), and likewise for **natva**. We can cause satva for ṣah:

| ṣaha* |
| ṣah |
| 1.3.2 upadeśe’janunāsika it |
| 1.3.9 tasya lopah |

| saḥ |
| 6.1.64 dhātvādeḥ ṣaḥ saḥ |

and natva for ṇī:

| ṇīñ |
| ṇī |
| 1.3.3 halantyam |
| 1.3.9 tasya lopah |

| nī |
| nī |
| 6.1.65 no naḥ |
But why were these roots stated in such a strange way in the first place? To answer that question, let’s return to a rule from the previous unit:

आदेशप्रत्यययोः। ८.३.५९
ādeśapratyayayoh (8.3.59)
ādeśa-pratyayayoḥ

[The non-word-final \( s \) that follows \( iṅ \) or \( kȗ \) becomes a retroflex \( ṣa \) in \(\text{samhitā} \) when it is of an \( ādeśa \) (substitution) or \( pratyaya \) (suffix) [even if separated by \( \text{nuṅ} \), the \( \text{visarjantya} \), or a \( \text{ṣar} \) sound].

The \( ādeśa \) in this rule refers to the result of a rule like 6.1.64 (\( dhātvādeḥ ṣaḥ saḥ \)). If the first \( s \) of a \( dhātu \) was created by rule 6.1.64, then we can apply rule 8.3.59 to make changes like this:

व ह म् → वषह म्
\( vi sah \rightarrow viṣah \)

But several roots don’t make this kind of change, even though they start with \( s \). In order to distinguish which roots are which, Pāṇini thought of a clever way to concisely split the roots that start with \( s \) into two classes:

- If a \( dhātu \)'s first \( s \) is able to become \( ṣ \), replace the \( s \) with \( ṣ \) in the \( upadeśa \).
- If a \( dhātu \)'s first \( s \) is not able to become \( ṣ \), do nothing.

With this split, some of these roots will be in scope for rule 8.3.59 and some of these roots won’t. A similar line of thought applies for the change from \( ṇ \) to \( n \).

\( nuṅ \)

Last but not least, here is how we handle \( idit \) roots:

इदितो नु धातोः। ७.१.५८
\( idito nuṅ dhātoḥ \) (7.1.58)
\( it-itaḥ nuṅ dhātoḥ \)

Roots that are \( idit \) take \( nuṅ \) as a substitute.
nuṁ is stated as an upadeśa. Once we apply 1.3.2 (upadeśe’janunāsika it) and 1.3.3 (halantyam) to it, all that we are left with is n. u has no special meaning here, but m does:

आद्यलौ टकतलौ। १.१.४६
ādyantau ṭakitau (1.1.46)
[Substitutes that are] tit or kit are placed before and after [the substitution], respectively.

मिद्वोन्त्यत्परः। १.१.४७
midaco’ntyāt paraḥ (1.1.47)
[Substitutes that are] mit are placed after [the substitution’s] last vowel.

What does rule 1.1.47 mean? It means that when the grammar asks us to replace a term with nuṁ, what we really do is insert an n after the term’s last vowel. You can see this insertion in the prakriyā below. Note the use of rules 8.3.24 and 8.4.58, which are from the asiddha section of the Aṣṭādhyāyī:

<table>
<thead>
<tr>
<th>vadi&quot;</th>
<th>vad</th>
<th>va nuṁ d</th>
<th>va n d</th>
<th>va m d</th>
<th>va n d</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1.3.2 upadeśe’janunāsika it</td>
<td>7.1.58 idito nuṁ dhātoḥ</td>
<td>1.3.2 upadeśe’janunāsika it</td>
<td>8.3.24 naścāpadāntasya jhali</td>
<td>8.4.58 anusvārasya yayi parasa-varṇaḥ</td>
</tr>
<tr>
<td></td>
<td>1.3.9 tasya lopaḥ</td>
<td>1.1.47 midaco’ntyātparaḥ</td>
<td>1.3.9 tasya lopaḥ</td>
<td>1.3.9 tasya lopaḥ</td>
<td></td>
</tr>
</tbody>
</table>

Why do we use nuṁ at all? Ultimately, it is for reasons similar to why we use ś and ṇ in our roots.
sanādyanta-dhātus

On the subject of dhātus, there is one more type of dhātu worth knowing about:

This rule refers to various “derived” dhātus that we create by adding suffixes to the basic dhātus we discussed above. Specifically, the rule refers to various suffixes listed from rules 3.1.5 to rules 3.1.31. These suffixes include san, which usually creates verbs that express “wanting” to do something:

\[
\begin{align*}
\text{nī} + \text{san} & \rightarrow \text{ninīṣa} \rightarrow \text{ninīṣati} \\
\text{He wants to lead.}
\end{align*}
\]

\[
\begin{align*}
\text{pā} + \text{san} & \rightarrow \text{pipāsa} \rightarrow \text{pipāsati} \\
\text{He wants to drink.}
\end{align*}
\]

and ṇic, which usually creates causal verbs:

\[
\begin{align*}
\text{nī} + \text{ṇic} & \rightarrow \text{nāyi} \rightarrow \text{nāyayati} \\
\text{He makes (someone) lead.}
\end{align*}
\]

Once we add such suffixes, we can treat the result like any other root. That is why these results are called dhātu as well.

Review

In this lesson, we learned how to read roots in the Dhātupāṭha and convert a root's raw upadeśa form into a form we can more easily recognize and understand:
Now that we have our dhātu, it's time to start using it. In the next lesson, we will begin the process of verb derivation by adding a verb suffix to our root.
In the previous lesson, we learned about the dhātu in the Dhātupāṭha and how to convert their upadeśa forms into something more usable. But to create a verb, a dhātu alone is not enough. We must also add a suffix to express the semantics we have in mind.

The verb suffixes in the Aṣṭādhyāyī have names like laṭ, liṅ, and so on. And because all of these suffixes start with the sound l, they are called the la-kāra ("the letters la").

The rules below describe some of the basic semantics associated with each lakāra. Most of these lakāras have special uses outside of the basic ones here. But rather than getting lost in details right now, let’s focus on the bigger picture.

**adhikāra rules**

All of the lakāras are defined under the following adhikāra rules:

```
pratyayah (3.1.1)  
pratyayah  
... is a pratyaya (suffix).

paraśca (3.1.2)  
paraḥ ca  
... and [it is inserted] after [the base].

dhātoḥ (3.1.91)  
dhātoḥ  
After a dhātu ...
```
In other words, a lakāra is a pratyaya that is inserted after a dhātu. And since a lakāra will later be replaced by a tiṅ suffix, it will not be called kṛt. (kṛt is a suffix that combines with dhātus to make nominal stems.)

Since we have a dhātu, let's select the right lakāra to use. Six of the lakāras refer to specific tenses (kāla), and four refer to specific moods (artha).

**The six kālas**

Generally, luṅ, laṅ, and liṭ describe the past tense:

bhūte 3.2.84

bhūte (3.2.84)

In bhūta (the past tense), …

luṅ 3.2.110

luṅ (3.2.110)

[The pratyaya] luṅ [is added after a dhātu in the sense of past action]

anadyatane laṅ 3.2.111

anadyatane laṅ (3.2.111)

[The pratyaya] laṅ [is added after a dhātu in the sense of past action] that did not occur today.

parokṣe liṭ 3.2.115

parokṣe liṭ (3.2.115)

[The pratyaya] liṭ [is added after a dhātu in the sense of past action] that was unwitnessed.
*laṭ* describes the present tense:

<table>
<thead>
<tr>
<th>वर्तमाने लट्। ३.२.१२३</th>
</tr>
</thead>
<tbody>
<tr>
<td>vartamāne laṭ (3.2.123)</td>
</tr>
<tr>
<td>vartamāne laṭ</td>
</tr>
</tbody>
</table>
| [The pratyaya *laṭ* is added after a *dhātu* in the sense of present action.]

And *lṛṭ* and *luṭ* describe the future tense. Rule 3.3.13 here inherits the word *bhaviṣyati* (“in the future”) from a prior rule:

<table>
<thead>
<tr>
<th>लृट शेषे च। ३.३.१३</th>
</tr>
</thead>
<tbody>
<tr>
<td>lṛṭ śeṣe ca (3.3.13)</td>
</tr>
<tr>
<td>lṛṭ śeṣe ca</td>
</tr>
</tbody>
</table>
| [The pratyaya *lṛt* is added after a *dhātu* in the sense of future action], and in the other [minor senses described in previous rules].

<table>
<thead>
<tr>
<th>अनद्यतने लुट्। ३.३.१५</th>
</tr>
</thead>
<tbody>
<tr>
<td>anadyatane luṭ (3.3.15)</td>
</tr>
<tr>
<td>anadyatane luṭ</td>
</tr>
</tbody>
</table>
| [The pratyaya *luṭ* is added after a *dhātu* in the sense of future action] that will not occur today.

Here are examples of all six *kālas*, as well as their meanings within the Pāṇinian system:

- **अभूत्**
  - *abhūt*
  - He was. (*luṅ*)

- **अभवत्**
  - *abhavat*
  - He (before yesterday) was. (*laṅ*)

- **बभूत्**
  - *babhūva*
  - He (long ago) was. (*liṭ*)
भवति  
*bhavati*  
He is or becomes. (*laṭ*)

भविष्यति  
*bhaviṣyati*  
He will be. (*lṛṭ*)

भविता  
*bhavitā*  
He will (eventually) be. (*luṭ*)

The four *arthas*

*lṛṇ* has the sense of “would” or “would have”. Rule 3.3.139 below has the word *bhaviṣyati* (“in the future”) through *anuvṛtti*:

<table>
<thead>
<tr>
<th>सिद्धिमित्ते लुष्ट्रियातिपत्त्वः ३.३.१३९</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>linnimitte lṛṅkriyātipattau (3.3.139)</em></td>
</tr>
<tr>
<td><em>liṅ-nimitte lṛṅ kriyā-atipattau</em></td>
</tr>
</tbody>
</table>

[The *pratyaya* *lṛṇ* [is added after a *dhātu*] in a cause-effect relationship [*liṅ-nimitta*] in the future [*bhaviṣyati*] when the action is not accomplished.]

भूते च। ३.३.१४०

*bhūte ca (3.3.140)*

*bhūte ca*

and [likewise] in the past.

This complex description is easier to understand with an example:

दक्षिणेन चेदु आयास्यन् न शकटेन पर्याभविष्यत्

*dakṣiṇena ced āyāsyan na śakaṭeṃ paryabhaviṣyaṭ*

If he *would come* by the southern road, the cart *would not overturn*.

*līṅ* and *loṭ* have several senses in common:
This overlap has a counterpart in English. For example, depending on the context, we might say either “Eat!” or “You should eat.” The second statement is softer than the first one, but it often expresses the same semantics:

**खाद्य**

khāda

*eat! (loṭ)*

**खाद्यं**

khādeḥ

*You should (or could, or might) eat. (liṅ)*

*liṅ* has many different senses, but here are two more worth knowing about:

**शक लङ्च**

śaki liṅca (3.3.172)

śaki liṅ ca

[The *pratyaya* liṅ and [some suffixes from an earlier rule are added after a *dhātu*] in the sense of *śak* (be able to).]
In the sense of āśih, liṅ uses special forms. Usually, we say that these forms use āśir-liṅ (“liṅ in the sense of āśih”) as opposed to the regular vidhi-liṅ (“liṅ in the sense of vidhi”):

भवेत
bhavet
He might be. (vidhi-liṅ)

भूयात
bhūyāt
May you be. (āśir-liṅ)

Finally, we have leṭ, which is used only in Vedic compositions. leṭ has a meaning similar to liṅ:

लङथर्णे लयेट म् । ३.४.७
liṅarthe leṭ (3.4.7)
liṅ-arthe leṭ
[The prayaya] leṭ [is added after a dhātu] in the sense of liṅ.

Review

By adding a lakāra to the end of our dhātu, we continue the process of deriving our verb:
A lakāra is abstract, and we need to convert it into a suffix we can recognize and understand. In the next lesson, we will learn how to do so and get one step closer to completing our prakriyā.
In the previous lesson, we learned about the abstract verb endings called *lakāras*. If we use the *laṭ-lakāra*, which usually implies action in the present tense, we can extend our example *prakriyā* one more step:

\[ \text{nīṅ} \]
\[ \text{nī} \]
\[ \text{nī} \]
\[ \text{nī laṭ} \]

Since *laṭ* is an *upadeśa*, we can apply rules 1.3.2 (*upadeśe'janunāsika it*) and 1.3.3 (*halantyam*) to remove its *it* sounds:

\[ \text{nī l} \]

We could also remove *l* by 1.3.8 (*laśakvataddhite*), but this will make it difficult to use rule 3.4.77 later:

\[ \text{lasya ३.४.७७} \]

\[ \text{lasya (३.४.७७)} \]
\[ \text{lasya} \]
\[ \text{la is replaced by ...} \]

So we keep this *l* and don't apply rule 1.3.8.

**Avoiding rule 1.3.8**

Why can't we apply 1.3.8 (*laśakvataddhite*) and remove *l*?
If we do, we will no longer be able to use rule 3.4.77 above. Rule 3.4.77 would thus become a useless rule, and we would not be able to derive any verbs. So we should avoid deleting $l$.

This is part of an important principle when using the *Aṣṭādhyāyī*: if a certain approach to *prakriyā* would make a rule useless, that approach is invalid. Every rule in the *Aṣṭādhyāyī* is present for a reason.

### *tiṅ-pratyāhāra*

**तस्य | ३.४.७७**

*lasya (3.4.77)*

*lasya*

*la* is replaced by ...

**तितस्मिन्द्रामिनिपवस्मस्-तातांशासाताधवासोर्धमिद्धिहित्र | ३.४.७८**


*tip-tas-jhi-sip-thas-tha-mip-vas-mas-ta-ātām-jha-thās-āthām-dhvam-iḍ-vahi-mahiṅ*

[the pratyayas] *tip, thas, jhi, sip, thas, tha, mip, vas, mas, ta, ātām, jha, thās, āthām, dhvam, iḍ, vahi, and mahiṅ.*

The $ṅ$ at the end of *mahiṅ* is present just so we can make a *pratyāhāra*. If we take the first term and use $ṅ$, we have *tiṅ*, the set of all verb endings in Sanskrit.

We can also make some minor observations about these *tiṅ* suffixes:

- Many of these endings are marked with various *iṭ* sounds. $ṅ$ lets us create the *pratyāhāra*. $p$ causes vowel changes for certain kinds of verb stems. And the $t$ on *iṭ* is so that we can more easily refer to this specific ending later.
- We also notice the strange endings *jhi* and *jha*. *jh* has a special role that we will discuss two lessons from now. For the time being, rest assured that these will become the more regular endings *nti* and *nta*. 
More importantly, however, notice that there are eighteen endings to choose from. It is not obvious which one we should choose for our verb. How do we choose the correct one?

We do so by adding different *saṃjñās* (designations) to these suffixes. Each of these *saṃjñās* implies different semantics. Based on the semantics we wish to express, we can then choose the correct suffix.

**adhikāra rules**

These *saṃjñās* are defined under the following adhikāra:

- आ कडारादेका संज्ञा । १.४.१
  - ā kaḍārādeka *saṃjñā* (1.4.1)
  - ā kaḍārāt ēka *saṃjñā*
  - Up to the *kaḍāra* rule (rule 2.2.38), one *saṃjñā* [is allowed].

And the following paribhāṣā:

- विप्रतिषेधे परम कार्यम् । १.४.२
  - *vipratiṣedhe param kāryam* (1.4.2)
  - *vipratiṣedhe param kāryam*
  - In matters of conflict, the later [rule] should be applied.

The idea of the first rule is that if one *saṃjñā* is a subset of another, only one of these two *saṃjñās* applies. We will see a concrete example of this further below.

**puruṣa and vacana**

First, we have distinctions of *puruṣa* (person) and *vacana* (number):

- तिनन्नीणि त्रीणि प्रथममध्यमूत्तमाः । १.४.१०१
  - *tināstrīṇi trīṇi prathama-madhyama-uttamaḥ* (1.4.101)
  - *tināḥ trīṇi trīṇi prathama-madhyama-uttamāḥ*
  - Taken three by three, the *tiṇi* [suffixes] are called *prathama* (first), *madhyama* (middle), and *uttama* (last).
They [i.e. these triples] are called *ekavacana* (singular), *dvivacana* (dual), and *bahuvacana* (plural) when taken one by one.

*ekavacana* and *dvivacana* also apply for the triples] of *sup* (i.e. the nominal endings).

And [these triples are each called] *vibhakti*.

Before we move on, note that rule 1.4.104 is vital. Normally, we would remove the final *s* and *m* sounds of all of the *tiṅ* suffixes by rule 1.3.3 (*halantyam*). But if these endings are called *vibhakti*, then rule 1.3.4 (*na vibhaktau tusmāḥ*) blocks rule 1.3.3 and leaves our endings intact.

Now: what are the semantics of *prathama*, *madhyama*, and *uttama*? They are defined in next few rules:
Otherwise, prathama [is used].

And what are the semantics of vacana? These two rules define them:

Otherwise, prathama [is used].

Otherwise, prathama [is used].

By choosing a puruṣa, we narrow down eighteen endings to six. By choosing a vacana, we narrow down six endings to two. That leaves us with one last distinction to make:

parasmaipada and ātmanepada

By choosing a pratyāhāra formed with the tenth tiṅ suffix ta. By 1.4.1 (a kaḍārādekā saṃjñā) and 1.4.2 (vipratiṣedhe paraṃ kāryam), the first nine tiṅ suffixes are called parasmaipada and the rest are called ātmanepada.
The terms *parasmaipada* and *ātmanepada* refer to a concept that is more complicated than *puruṣa* or *vacana*. Since it's hard to convey in a concise way, let's continue our discussion in the next lesson.

**Review**

In the next lesson, we will discuss *parasmaipada* and *ātmanepada* properly and finally choose an ending for our verb.
parasmaipada and ātmanepada

There are eighteen tin suffixes in total. By choosing a particular person (prathama, madhyama, or uttama), we reduce eighteen to six. And by choosing a particular number (ekavacana, dvivacana, or bahuvacana), we reduce six to two.

To finally choose an ending, there is one last distinction we should make: whether to use a parasmaipada ending or an ātmanepada ending.

There are two important questions we should answer here:

1. What does it mean for an ending to be parasmaipada or ātmanepada?
2. How do we decide which of these types to use?

The first question has a complex answer. parasmai-pada literally means “word for another,” and ātmane-pada literally means “word for oneself.” So a naive guess is that parasmaipada endings are used for general actions and ātmanepada endings are used for self-interested actions.

But although this may have been true at one point in time, it is only half-true in the Aṣṭādhyāyī. While some verbs do express the idea of self-interested action, many verbs use ātmanepada endings with no special semantics at all. And in later Sanskrit, the distinction is almost entirely absent.

The second question is a little easier. To decide which ending to use, we can refer to a specific section of the Aṣṭādhyāyī, which starts at rule 1.3.12. Based on those rules and the semantics we want to express, here are the outcomes we might have:

**Outcome 1: only ātmanepada**

अनुदत्तनित आत्मनेपदम् | १.३.१२

anudāttaṅita ātmanepadam (1.3.12)
anudātta-ṅitaḥ ātmanepadam

ātmanepada is used [after a dhātu that is] either anudāttet (i.e. having anudātta on an it vowel) or nīt.
anudātta is one of the three vowel accents, along with udātta and svarita. Here, it refers to the accent an it vowel has in the upadeśa. ſ, meanwhile, refers to roots with ſ as an it.

**Accents in the Aṣṭādhyāyī**

Originally, the Aṣṭādhyāyī and its secondary texts were all accented. They used udātta, anudātta, and svarita extensively to encode different kinds of information. But we no longer have these texts in an accented form.

Thankfully, the many commentaries on the Aṣṭādhyāyī clarify where the original accents were placed. With the help of these commentaries, we still have the information we need.

Note that rule 1.3.12 does not imply any special semantics; there is no sense of “for oneself” being implied. But there are other conditions where we might use ātmanepada endings with a clearer semantic difference:

| भावकर्मणो: | १.३.११ |
| bhāvakarmanoḥ (1.3.13) |
| bhāva-karmanoḥ |
| [ātmanepada is used after a dhātu] in bhāve [prayoga] or karmaṇi [prayoga]. |

| कर्तारि कर्मव्यतिहारे: | १.३.१४ |
| kartari karmavyatihāre (1.3.14) |
| kartari karma-vyatihāre |
| [ātmanepada is used after a dhātu] in kartari [prayoga] in the sense of mutual action, |

| न गतिहिंसासार्थभयः: | १.३.१५ |
| na gatihimsā-arthebhyaḥ (1.3.15) |
| na gati-himsā-arthebhyaḥ |
| but not [in the sense of mutual action] after [dhātus] that denote motion or violence, |
Here are examples of rules 1.3.13 and 1.3.14:

त्वया सुप्यते
	tvayā supyate
You sleep. (bhāve: “There is sleeping by you.”)

कट: कियते
	kaṭaḥ kriyate
The mat is being made.

व्यतिलुनते
	vyatilunate
They cut each other.

After rule 1.3.16, the Aṣṭādhyāyī continues with a list of small exceptions, usually for specific combinations of verbs and prefixes:

नेविशा: १.३.१७

नेविशा (1.3.17)

नेह विशा

[ātmanepada is used after dhātu] viś with the prefix ni [in kartari prayoga].

Since these exceptions are quite minor, let's skip them and consider the second outcome we could have:

**Outcome 2: optional ātmanepada**

A select number of roots can use ātmanepada optionally. And when they do so, they express extra semantics:
The distinction, in theory, is that if the agent performs the action for their own benefit, we may optionally use ātmanepada for certain roots. Here is the classic example:

\[ \text{देवदत्त ओदनं पचति।} \]
\[ devadatta odanaṃ pacati. \]
Devadatta cooks rice (for others).

\[ \text{देवदत्त ओदनं पचते।} \]
\[ devadatta odanaṃ pacate. \]
Devadatta cooks rice (for himself).

This is why roots like ्निन and ्ढुक्रन are marked with ्न as an \textit{it}. Because they are ्नित, they can use ātmanepada endings per rule 1.3.72.

Rule 1.3.72 is again followed by some minor exceptions. So let’s skip them and consider the third outcome we could have:

**Outcome 3: Only \textbf{parasmaipada}**

All other roots use \textit{parasmaipada} by default:

\[ \text{शेषात् कर्तरि परस्मैपदम्।} \]
\[ šeṣāt kartari parasmaipadam (1.3.78) \]
\[ šeṣāt kartari parasmaipadam \]
After any other [dhātu] in kartari [prayoga], \textit{parasmaipada} [is used].

For example, the first root in the \textit{Dhātupātha} is \textit{bhū}. \textit{bhū} is neither anudātta nor svarita, and it has no \textit{it} sounds attached to it. So by rule 1.3.78, it uses \textit{parasmaipada} endings.
Review

By considering person and number, we narrow eighteen endings down to just two. And by applying the procedure above, we can finally select the right ending.

For our example rootṇīñ, we have two choices. We can either reject rule 1.3.72 and use a parasmaipada ending by rule 1.3.78 (śeṣāt kartari parasmaipadam):

\[
\begin{array}{l}
\text{ṇīñ} \\
\text{ṇī} \\
\text{ṇī} \\
\text{ṇī laṭ} \\
\text{ṇī tip} \\
\text{ṇī ti} \\
\end{array}
\]
\[
\begin{array}{l}
1.3.3 \text{ halantyam} \\
1.3.9 \text{ tasya lopah} \\
6.1.65 \text{ no nah} \\
3.2.123 \text{ vartamane lat} \\
1.3.78 \text{ śeṣāt kartari parasmaipadam} \\
3.4.78 \text{ tiptasjhisiptasthamivasmastāṭāṃjhathāsāthā...} \\
1.3.3 \text{ halantyam} \\
1.3.9 \text{ tasya lopah} \\
\end{array}
\]

Or we can accept rule 1.3.72 and use an ātmanepada ending:

\[
\begin{array}{l}
\text{ṇīñ} \\
\text{ṇī} \\
\text{ṇī} \\
\text{ṇī laṭ} \\
\text{ṇī ta} \\
\end{array}
\]
\[
\begin{array}{l}
1.3.3 \text{ halantyam} \\
1.3.9 \text{ tasya lopah} \\
6.1.65 \text{ no nah} \\
3.2.123 \text{ vartamane lat} \\
1.3.72 \text{ svaritaṁitaḥ kartrabhiprāye kriyāphale} \\
3.4.78 \text{ tiptasjhisiptasthamivasmastāṭāṃjhathāsāthā...} \\
\end{array}
\]

But if you know some Sanskrit, perhaps you’ve noticed a small problem. For the ātmanepada form, we should expect *nayate, but the prakriyā above looks like it will give us the incorrect *nayata instead. How do we ensure that our prakriyā give us the correct result? In the next lesson, we will learn about the rules that help us do so.
**tiṅ-siddhi**

In the previous lesson, we noticed a small problem with one of our *prakriyās*. When using an *ātmanepada* suffix, what we expect is *te*, but what we actually receive is *ta*. This ending will give us the incorrect *nayata* instead of the correct *nayate*.

How do we ensure that our ending is correct? The answer is a set of rules near the end of chapter 3 of the *Aṣṭādhyāyī*. These rules transform the basic endings in the *tiṅ pratyāhāra* to suit the specific semantics we wish to express. We can call the process of applying these rules *tiṅ-siddhi* (“*tiṅ* completion”).

As you read the rules below, keep this critical *paribhāṣā* in mind:

<table>
<thead>
<tr>
<th>स्थानिनवदादेशो नन्तिल्विधो। १.१.५६</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>sthānivadādeśo 'nalvidhau</em> (1.1.56)</td>
</tr>
<tr>
<td><em>sthānivat ādeśaḥ an-al-vidhau</em></td>
</tr>
</tbody>
</table>

An *ādeśa* (replacement) is [treated] like its *sthānin* (replaced term) [in terms of the properties it inherits, etc.], excluding rules that concern a single sound.

This is an *atideśa* (“analogy,” “extension”) rule. The idea is that even if the suffix *ta* replaces *laṭ*, *ta* should still be treated as if it were *laṭ*.

### Creating *laṭ ātmanepada* suffixes

Using rule 1.1.56 (*sthānivadādeśo'nalvidhau*) above, we can transform the basic endings in the *tiṅ pratyāhāra* into the form we expect. First, we have this *adhikāra*, which we saw earlier:

<table>
<thead>
<tr>
<th>लस्य। ३.४.७७</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>lasya</em> (3.4.77)</td>
</tr>
<tr>
<td><em>lasya</em></td>
</tr>
<tr>
<td><em>la</em> is replaced by …</td>
</tr>
</tbody>
</table>
To convert our ātmanepada suffixes to the right form, we need to first define a new term:

अचोठ्न्त्यादि टि। १.१.६४
aco'ntyādi ṭi (1.1.64)
açaḥ antya-ādi ṭi
From the last vowel onward [is called] ṭi.

Now we can use this term to create the changes we need:

टित आत्मनेपदानां टेरे। ३.४.७९
ṭita ātmanepadānāṃ ṭere (3.4.79)
ṭitaḥ ātmanepadānām ṭeḥ e
For the ātmanepada endings of a la that is ṭit, ṭi is replaced by e,

थाससे। ३.४.८०
thāsasse (3.4.80)
thāsaḥ se
[but] thās is replaced by se.

Simply, rule 3.4.79 means that for each ṭit ending, we replace all letters from the last vowel onward with e. Rule 3.4.80 is an exception for the ending thās.

laṭ is ṭit by rule 1.3.3 (halantyam). And even if laṭ has been replaced by ta, rule 3.4.79 still applies due to rule 1.1.56 (sthānivadādeśo'nalvidhau).

By applying rules 3.4.79 and 3.4.80, we get the following results:

त आताम ् झ थास ् आथाम ् धवम् ् इट वहि महिन्
ta ātām jha thās āthām dhvam īṭ vahi mahiṅ
(default endings)

→ ते आते झे से आथे ध्वे प वहे महे
→ te āte jhe se āthe dhve e vahe mahe
(after 3.4.79 and 3.4.80)
Rule 3.4.81 to 3.4.112 are all transformation rules similar to the ones above. We don't have any plans to cover them, but if you are interested, let us know and we'll add them.

Some extra *saṃjñās*

At the end of this section, there are four rules that add some extra *saṃjñās* to our endings:

<table>
<thead>
<tr>
<th>तिङ्सितसार्वधातुकम्। ३.४.११३</th>
<th><em>tinśitsārvadhātukam</em> (3.4.113)</th>
</tr>
</thead>
<tbody>
<tr>
<td>तिङ-शित सार्वधातुकम्</td>
<td><em>tiṅ-śit sārvadhātukam</em></td>
</tr>
<tr>
<td><em>tiṅ</em> suffixes and <em>śit</em> (with ś as an it) <em>kṛt</em> suffixes are called <em>sārvadhātuka</em>.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>आधर्णधातुक शेषः। ३.४.११४</th>
<th><em>ārdhadhātukam śeṣaḥ</em> (3.4.114)</th>
</tr>
</thead>
<tbody>
<tr>
<td>आधर्णधातुकम शेषः</td>
<td><em>ārdhadhātukam śeṣaḥ</em></td>
</tr>
<tr>
<td>All others are called <em>ārdhadhātuka</em>.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>लिट् च। ३.४.११५</th>
<th><em>liṭ ca</em> (3.4.115)</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>liṭ ca</em></td>
<td>And <em>liṭ</em> [is also called <em>ārdhadhātuka</em>],</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>लिनाशिषि। ३.४.११६</th>
<th><em>lināśiṣi</em> (3.4.116)</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>liṅ āśiṣi</em></td>
<td>[as well as] <em>liṅ</em> in the sense of <em>āśīḥ</em> (benediction).</td>
</tr>
</tbody>
</table>

Like *parasmaipada* and *ātmanepada*, *sārvadhātuka* and *ārdhadhātuka* refer to complex concepts that are hard to summarize concisely. So let's pause our discussion here and continue in the next lesson.

**Review**

The rules in this section of the *Aṣṭādhyāyī* transform our basic set of verb endings into the precise endings we need for our specific *lakāra*. 
In the next lesson, we will examine what the term *sārvadhātuka* means and what implications it has for our *prakriyā*. 
vikaraṇa

In the previous lesson, we continued our prakriyā by replacing laṭ with the ending ti:

ṇīṅ
ṇī         1.3.3 halantyam
           1.3.9 tasya lopaḥ
nt         6.1.65 no naḥ
nt laṭ     3.2.123 vartamāne laṭ
nt tip     1.3.78 śeṣāt kartari parasmaipadam
nt ti      1.3.3 halantyam
           1.3.9 tasya lopaḥ

This ti ending is called sārvadhātuka by 3.4.113 (tiṅśitsārvadhātukam). And a sārvadhātuka ending can cause various kinds of changes to the term before it.

One common change is that a sārvadhātuka causes a new pratyaya to be added to the derivation. It is through these pratyayas that we get the various classes of Sanskrit verbs. In the examples below, you can see an example of each verb class in the present tense:

भू → भवति
bhū → bhavati

अद → अति
ad → atti

हु → जुहोति
hu → juhoti

दिव → दीव्यति
div → divyati

सु → सुनोति
su → sunoti
These affixes are commonly called *vikaraṇa*.

In this lesson, we will learn how to continue our *prakriyā* by adding the appropriate *vikaraṇa* after the root.

**adhikāra rules**

The rules below are within the scope of these *adhikāra* rules:

<table>
<thead>
<tr>
<th>प्रत्ययः । ३.१.१</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>pratyayah</em> (3.1.1)</td>
</tr>
<tr>
<td><em>pratyayah</em></td>
</tr>
<tr>
<td>... is a <em>pratyaya</em> (suffix).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>परश्च। ३.१.२</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>paraśca</em> (3.1.2)</td>
</tr>
<tr>
<td><em>paraḥ ca</em></td>
</tr>
<tr>
<td>... and [it is inserted] after [the base].</td>
</tr>
</tbody>
</table>

**The vikaraṇas**

We start with the general case:
Rule 3.1.68 is a restriction on rule 3.1.67. We use śap by default in kartari prayoga, and we use yak in the other prayogas.

The rules that follow add further restrictions to the rules above. For example, this rule defines the correct vikaraṇa for div and some other roots:

How do we know which roots are in the div list? Ultimately, we must consult the Dhātupāṭha. When we do, we see that div is the first rule of the fourth major list (gaṇa):

divu’kṛiḍāvijīgaṇśāvyavahāradyutistutimodadāsavapnakāntigatiṣu (4.1)
div in the senses of: kṛiḍā (play), vijīgaṇśā (desire to win), vyavahāra (transaction), dyuti (glowing or shining), stuti (praising), moda (pleasing), mada (boasting), svapna (sleeping), kānti (desiring), or gati (motion)
So, all of the roots in the div list will use the vikaraṇa śyan instead of śap.

Next we have the su class:

svādibhyḥ śnuḥ (3.1.73)
su-ādibhyḥ śnuḥ
[The kṛt pratyaya] śnu [is added in kartari-prayoga after the dhātus] in the list beginning with su [when a sārvadātuka suffix follows].

śruvaḥ śṛ ca (3.1.74)
śruvaḥ śṛ ca
And [likewise] of śru [which becomes] śṛ.

The tud class:

tudādibhyḥ śaḥ (3.1.77)
tud-ādibhyḥ śaḥ
[The kṛt pratyaya] śa [is added in kartari-prayoga after the dhātus] in the list beginning with tud [when a sārvadātuka suffix follows].

And the rudh class:

rūdhādibhyḥ śnam (3.1.78)
rudh-ādibhyḥ śnam
[The kṛt pratyaya] śnam [is added in kartari-prayoga after the dhātus] in the list beginning with rudh [when a sārvadātuka suffix follows].

Note that the rudh roots use the vikaraṇa śnam. The actual suffix is na, which is śit and mit. By rule 1.1.47 (midaco’ntyātparaḥ), na will be inserted after the last vowel of the root:

ruḍḥ → ru ṃ ṛ ḍh

rudh → ru na dh
Next we have the tan class:

\[ \text{तनादिकृत्य उः। ३.१.७९} \]
\[ tanādikṛtibhyā uḥ \ (3.1.79) \]
\[ tan-ādikṛtibhyā uḥ \]

[The \text{kr} \text{t pratyaya} \ u \ [is added in kartari-prayoga after the \text{dhātus}] \ in the list beginning with \text{tan}, and also after \text{kr}, \ [when a sārvadhātuka suffix follows].

And the \text{kr} \text{t} class:

\[ \text{क्रयादिकृत्य श्ना। ३.१.८१} \]
\[ kryādibhyā śnā \ (3.1.81) \]
\[ kry-ādibhyā śnā \]

[The \text{kr} \text{t pratyaya} \ śnā \ [is added in kartari-prayoga after the \text{dhātus}] \ in the list beginning with \text{krī} \ [when a sārvadhātuka suffix follows].

The ad, hu, and cur classes

The other three classes use a slightly different approach.

The ad class replaces \text{śap} with \text{luk}, which causes \text{lopa}. In the rule below, \text{luk} is available through \text{anuvṛtti} from a previous rule:

\[ \text{अद-प्रभर्‌तिभ्य श्या। २.४.७२} \]
\[ adi-prabhṛtibhyā śapah \ (2.4.72) \]
\[ adi-prabhṛtibhyā śapah \]

[luk] replaces \text{śap} when it follows [the \text{dhātus in the list}] starting with \text{ad}.

The hu class uses the suffix \text{ślu}, which causes \text{lopa} and also causes the root sound to be doubled (\text{hu} \rightarrow \text{juhu}):

\[ \text{जुहोत्‌यादिकृत्य श्यू। २.४.७५} \]
\[ juhotyādibhyā śluḥ \ (2.4.75) \]
\[ juhoti-adibhyā śluḥ \]

[The deletion suffix] \text{ślu} replaces \text{śap} when it follows [the \text{dhātus in the list}] starting with \text{hu}. 
The *cur* class, meanwhile, uses the suffix *ṇic*, which will come before *śap*. This is the same suffix used by causal verbs:

<table>
<thead>
<tr>
<th>सत्यापपाशःपश्चविणातूलश्रेष्ठेरवसनालोमतवचर्मवर्णचूर्णचुरादिभ्यो गिन्न । ३.१.२५</th>
</tr>
</thead>
<tbody>
<tr>
<td>satyāpapāśarūpavīṇātūlaślokasenālomatvackavarmavarnacūrṇacurādibhyoṇic (3.1.25)</td>
</tr>
<tr>
<td>सत्याप-पाश-रूप-विना-तुला-श्लोकसेना-लोम-तव-वर्मा-वर्ण-कुर्ण-कुड़ि-दभियाः णिच</td>
</tr>
</tbody>
</table>

[The suffix] *ṇic* is added after *satyāpa*, *pāśa*, *rūpa*, *vīṇa*, *tūla*, *śloka*, *senā*, *loma*, *tvaca*, *varma*, *varṇa*, *cūrṇa*, and [the dhātu in the list] starting with *cur*;

<table>
<thead>
<tr>
<th>हेतुमति च। ३.१.२६</th>
</tr>
</thead>
<tbody>
<tr>
<td>hetumati ca (3.1.26)</td>
</tr>
<tr>
<td>hetumati ca</td>
</tr>
</tbody>
</table>

and likewise in the sense of causal action.

**Review**

We can now continue our *prakriyā* a few more steps:

<table>
<thead>
<tr>
<th>नी</th>
<th>1.3.1 bhūvādayo dhātavaḥ</th>
</tr>
</thead>
<tbody>
<tr>
<td>नी</td>
<td>1.3.3 halantyam</td>
</tr>
<tr>
<td>नी</td>
<td>1.3.9 tasya lopaḥ</td>
</tr>
<tr>
<td>नी</td>
<td>6.1.65 ṇo naḥ</td>
</tr>
<tr>
<td>नी लात्</td>
<td>3.2.123 vartamāne laṭ</td>
</tr>
<tr>
<td>नी ल</td>
<td>1.3.2 upadeśe'janunāsika it</td>
</tr>
<tr>
<td>नी ल</td>
<td>1.3.3 halantyam</td>
</tr>
<tr>
<td>नी ल</td>
<td>1.3.9 tasya lopaḥ</td>
</tr>
<tr>
<td>नी टिप</td>
<td>3.4.78 tiptasjhisiphasthamibvasmastätāṃjathāsāthāḥ…</td>
</tr>
<tr>
<td>नी टि</td>
<td>1.3.3 halantyam</td>
</tr>
<tr>
<td>नी टि</td>
<td>1.3.9 tasya lopaḥ</td>
</tr>
<tr>
<td>नी शाप टि</td>
<td>3.4.113 tiṅśitsārvadhātukam</td>
</tr>
<tr>
<td>नी शाप टि</td>
<td>3.1.68 kartari śap</td>
</tr>
</tbody>
</table>
(Note that śap is called sārvadhātuka by rule 3.4.113 because it has ś as an it.)

Our verb is almost ready. In the next lesson, we will learn the last few rules we need to complete the prakriya and get our finished verb.
guṇa

Now that our suffixes are in place, it is time to apply any rules that are conditioned by these suffixes. For sārvadhātuka suffixes specifically, there is one particular operation we should learn about: the replacement of the root vowel with its guṇa form. Here is an example:

नै अ ते → ने अ ते
nī a te → ne a te

In this lesson, we will learn more about guṇa and some of the rules that use it.

The first six rules

The first six rules of the Aṣṭādhyāyī are all about guṇa and vṛddhi. The first two rules define the terms guṇa and vṛddhi, and the next four then define how guṇa and vṛddhi interact with other terms:

वृद्धिरादच्चैः १.१.१
vṛddhirādaic (1.1.1)
vṛddhiḥ āt-aic
The vowels ā, ai, and au are called vṛddhi.

अदेन्गुणाः १.१.२
adeṅguṇah (1.1.2)
at-eṅ guṇah
The vowels a, e, and o are called guṇa.

इको गुणवृद्धि १.१.३
iko guṇavṛddhi (1.1.3)
ikaḥ guṇa-vṛddhi
guṇa and vṛddhi replace the ik vowels,
Let's set some of these rules aside. We saw rules 1.1.1 and 1.1.2 in a previous lesson, so we don't need to dwell on them further. And rules 1.1.4 and 1.1.6 are minor, so we can set them aside as well. That leaves us with rules 1.1.3 and 1.1.5.

Rule 1.1.3 defines the basic function of guṇa and vṛddhi vowels: they replace the īk vowels (i, u, r, l). And rule 1.1.5 restricts this substitution: the substitution is blocked if the following term is nīt or kit.

Which kinds of terms are kit or nīt? As a small example, the common suffix -ta is stated as kta in the Aṣṭādhyāyī. Because kta is kit, it will not cause guṇa or vṛddhi changes.

Interpreting rule 1.1.5

The traditional interpretation of rule 1.1.5 is that it refers not only to kit and nīt but also to git, which is hidden by sandhi. This interpretation is part of a series of small changes that fixes one of the incorrect words that the Aṣṭādhyāyī would otherwise produce.
Here, we use the more straightforward interpretation. \textit{git} is a minor point, and there are also strong arguments that Pāṇini did not intend to imply \textit{git} here.

\textit{ṅittva}

There are also several suffixes that are treated as if they are \textit{ṅit} suffixes. Those suffixes are defined in the following four \textit{atideśa} ("analogy", "extension") rules. All of these rules are useful, but rule 1.2.4 is our focus here:

\textbf{गाङकुटिङ्गनितिः। १.२.१}
\textit{gāṅkuṭādibhyoṅṅinṅit} (1.2.1)
\textit{gāṅ-kuṭ-ādibhyah a-ṅ-ṅit ṅit}
The following are \textit{ṅit}: [a term] after \textit{gāṅ} and the root list starting with \textit{kuṭ}, if the term is not \textit{ṅit} or \textit{ṅit};

\textbf{विज इट। १.२.२}
\textit{vija iṭ} (1.2.2)
\textit{vijaḥ iṭ}
the \textit{iṭ} after the [root] \textit{vij};

\textbf{विभाषोणः। १.२.३}
\textit{vibhāṣorṇoḥ} (1.2.3)
\textit{vibhāṣā ūṛṇoḥ}
optionally, [the \textit{iṭ} after the root] \textit{ūṛṇu};

\textbf{सार्वधातुकमपित्। १.२.४}
\textit{sārvadhātukamapit} (1.2.4)
\textit{sārvadhātukam a-pit}
and \textit{sārvadhātuka} [suffixes] that are not \textit{pit}.

More plainly: a \textit{sārvadhātuka} affix that is not \textit{pit} will be treated as \textit{ṅit}. And since it is treated as \textit{ṅit}, it will not be able to cause any \textit{guṇa} changes to the root sound.

Since \textit{śap} is \textit{pit}, rule 1.2.4 will not apply to it, and it will still be able to cause \textit{guṇa} changes by rule 7.3.84, which we discuss further below.
**adhikāra rules**

There is one relevant adhikāra here:

\[
\text{अंगस्या} ६.४.१
\]

\[
aṅgasya (6.4.1)
\]

\[
aṅgasya
\]

Of an aṅga, …

And what is an aṅga?

\[
\text{यस्माद प्रत्ययविधिस्तदे प्रत्ययेण अः} १.४.१३
\]

\[
yasmā pratyayavidhistādē pratyayeṅgam (1.4.13)
\]

\[
yasmā pratyaya-vidhiḥ tat-ādi pratyaye aṅgam
\]

If a rule introduces a pratyaya after some specific term, everything from that term up to the pratyaya [is called] an aṅga.

So if a pratyaya is introduced after a dhātu, that dhātu is called aṅga with respect to the pratyaya.

**Replacement by guṇa**

Rule 7.3.84 contains the word guṇa by anuvṛtti from a previous rule:

\[
\text{सार्वद्वातूकार्धधातुकयोः} ७.३.८४
\]

\[
sārvadhātukārārdhadhātukayoḥ (7.3.84)
\]

\[
sārvadhātuka-ārdhadhātukayoḥ
\]

[An aṅga is replaced with guṇa] when followed by a sārvadhātuka or ārdhadhātuka suffix.

But to properly understand this rule, we must refer to two other rules. First, we know from rule 1.1.3 (iko guṇavrddhi) that guṇa and vrddhi sounds can replace only an ik vowel. But which ik vowel do we replace? We can decide which vowel to replace by referring to a new paribhāṣā:
In other words, the rule applies to the final sound of the aṅga. If we use rules 1.1.3 and 1.1.72, we can properly understand rule 7.3.84:

\[ \text{sārvadhātukārdhadhātukayoḥ (7.3.84)} \]
\[ \text{sārvadhātuka-ārdhadhātukayoḥ} \]

[An aṅga's last ik vowel is replaced with guṇa] when followed by a sārvadhātuka or ārdhadhātuka suffix.

Then we can continue with our prakriyā:

\[ \text{ni a ti 1.3.3 halantyam} \]
\[ \text{1.3.8 laśakvataddhite} \]
\[ \text{1.3.9 tasya lopaḥ} \]
\[ \text{ne a ti 7.3.84 sārvadhātukārdhadhātukayoḥ} \]

**laghu and guru**

There is another important instance where guṇa can apply. If we define the terms laghu:

\[ \text{halo'nantarāḥ saṃyogaḥ (1.1.7)} \]
\[ \text{halaḥ anantarāḥ saṃyogaḥ} \]

Consonants without an interval between them are called saṃyoga (con-junct).
A hrasva (short vowel) is called laghu,

but it is called guru when followed by samyoga.

And dīrgha is also [called guru].

The sound before the last sound is called upadhā (penultimate).

And [the last \( \text{aṅga} \) ending with \( \text{pu}k \) or whose upadhā (penultimate sound) is laghu (a light syllable) [is replaced with guṇa when followed by a sārvadhātuka or ārdhadhātuka suffix].

Let's set aside \( \text{pu}k \), since it is a minor point. Then the rule has a plain meaning: if the penultimate sound of the \( \text{aṅga} \) is laghu, then we can replace that sound with its guṇa.

Together, rules 7.3.84 and 7.3.86 cause guṇa in a variety of roots:
नी + शप् → ने अ
$nī + śap → ne a$

भू + शप् → भो अ
$bhū + śap → bho a$

शुच् + शप् → शोच् अ
$śuc + śap → śoc a$

and leave others alone:

निन्द् + शप् → निन्द् अ
$nind + śap → nind a$
$(upadhā is not a vowel.)$

जीव् + शप् → जीव् अ
$jīv + śap → jīv a$
$(upadhā is long.)$

Review

We now have all of the essential components we need to complete our prakriyā. In the next lesson, we will generate all eighteen forms of the root $nī$ in the present tense (laṭ) with kartari prayoga.
At last, we are ready to complete our prakriyā. Using everything we’ve learned in the previous lessons, we can now fully derive the word nayati. And with the help of three new rules, we can derive all eighteen of the forms of nī in kartari prayoga with laṭ-lakāra.

Here are the basic steps we will follow:

1. Choose a dhātu from the Dhātupāṭha.
2. Choose the right lakāra.
3. Determine whether the root uses parasmaipada or ātmanepada endings.
4. Replace the lakāra with the appropriate tiṅ ending.
5. Add a vikaraṇa as needed.
6. Apply guṇa changes as needed.
7. Apply sandhi rules.

Our first prakriyā

We wish to express the idea of leading someone. We want to express this for some third-party agent and express a sense of the present tense.

Based on these meaning conditions, we select a root. We start with the dhātu nī as given in the Dhātupāṭha:

\[ \text{णीञ म् प्ररापणे। १.१०४९} \]

ṇī prāpane (1.1049)

nī in the sense of obtaining or leading

We then apply rules to remove the it letters and obtain natva of the initial nī:

| nī | 1.3.1 bhūvādayo dhātavaḥ |
| nī | 1.3.3 halantyaṁ |
| nī | 1.3.9 tasya lopaḥ |
| nī | 6.1.65 no naḥ |
We can then add \( \text{la} \tilde{\text{t}} \) to denote the present tense:

\[
\text{nī \text{la} \tilde{\text{t}}} \quad 3.2.123 \text{ vartamāne \text{la} \tilde{\text{t}}}
\]

This is then replaced with the appropriate ending, according to our semantic conditions:

\[
\begin{align*}
\text{nī l} & \quad 1.3.2 \text{ upadeśe’janunāsika it} \\
& \quad 1.3.3 \text{ halantyam} \\
& \quad 1.3.9 \text{ tasya lopaḥ} \\
\text{nī tip} & \quad 3.4.78 \text{ tiptajhispasthamibvamasmastāmjhathāsathā…} \\
\text{nī ti} & \quad 1.3.3 \text{ halantyam} \\
& \quad 1.3.9 \text{ tasya lopaḥ}
\end{align*}
\]

Then we introduce the appropriate \textit{vikaraṇa}:

\[
\begin{align*}
\text{nī śap ti} & \quad 3.4.113 \text{ tiṁṣītsārvadhātukam} \\
& \quad 3.1.68 \text{ kartari śap} \\
\text{nī a ti} & \quad 1.3.3 \text{ halantyam} \\
& \quad 1.3.8 \text{ laśakvataddhite} \\
& \quad 1.3.9 \text{ tasya lopaḥ}
\end{align*}
\]

Finally, we apply the necessary sound changes:

\[
\begin{align*}
\text{ne a ti} & \quad 7.3.84 \text{ sārvadhātukārdhadhātukayoḥ} \\
\text{nayati} & \quad 6.1.78 \text{ eco’yavāyavaḥ}
\end{align*}
\]

Here is our complete \textit{prakriyā} from start to finish:

\[
\begin{align*}
\text{nīñ} & \quad 1.3.1 \text{ bhūvādayo dhātavaḥ} \\
\text{nī} & \quad 1.3.3 \text{ halantyam} \\
& \quad 1.3.9 \text{ tasya lopaḥ}
\end{align*}
\]
A more experienced grammarian will skip the low-level steps and use something like this:

<table>
<thead>
<tr>
<th>Rule</th>
<th>Reference</th>
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<tbody>
<tr>
<td>nī</td>
<td>6.1.65 no naḥ</td>
</tr>
<tr>
<td>nī laṭ</td>
<td>3.2.123 vartamāne laṭ</td>
</tr>
<tr>
<td>nī l</td>
<td>1.3.2 upadeśe'janunāsika it</td>
</tr>
<tr>
<td>nī ti</td>
<td>1.3.3 halantyam</td>
</tr>
<tr>
<td>nī śap ti</td>
<td>1.3.9 tasya lopaha</td>
</tr>
<tr>
<td>nī a ti</td>
<td>3.4.78 tiptasjhisipthamibvasmāstātramjathāsāthā…</td>
</tr>
<tr>
<td>nayati</td>
<td>1.3.3 halantyam</td>
</tr>
<tr>
<td>nayati</td>
<td>1.3.9 tasya lopaha</td>
</tr>
<tr>
<td>nayati</td>
<td>3.4.113 tinśitsārvadhātukam</td>
</tr>
<tr>
<td>nayati</td>
<td>3.1.68 kartari śap</td>
</tr>
<tr>
<td>nayati</td>
<td>1.3.3 halantyam</td>
</tr>
<tr>
<td>nayati</td>
<td>1.3.8 laśakvataddhite</td>
</tr>
<tr>
<td>nayati</td>
<td>1.3.9 tasya lopaha</td>
</tr>
<tr>
<td>nayati</td>
<td>7.3.84 sārvadhātukārdhadhātukayoh</td>
</tr>
<tr>
<td>nayati</td>
<td>6.1.78 eco'yavāyāvah</td>
</tr>
</tbody>
</table>

Some miscellaneous rules

Here are a few miscellaneous rules that we will refer to further below. First, a simple one:
The letters *v* and *y* are replaced with *lopa* when followed by a *val* sound (i.e. any consonant except *y*).

Next, a rule that depends on several terms from *anuvṛtti*:

- *ekāḥ pūrvaparayoḥ* (“A single replaces the previous and following”)
- *apadāntāt* (“non-word-final”)
- *para-rūpam* (“the form of the second”)
- *aci* (“when a vowel follows”)

[Non-word-final] *a* and a following *guna* [vowel] are both replaced with the *guna* (i.e. the *a* is deleted).

Then rule 7.1.3, which replaces the *jh* in *jhi* and *jha*. Rule 7.1.3 uses *pratyayādinām* (“of the beginning of a *pratyaya*”) by *anuvṛtti*:

The [initial] *jh* [of a *pratyaya*] is replaced with *antaḥ*.

Why does Pāṇini use *jh* in the first place? It is because some verbs will use replacements other than *antaḥ*. But for now, that’s a minor point.

Finally, we have two rules that inherit *sārvadhātuke* (“when a *sārvadhātuka* follows”) by *anuvṛtti* and *aṅgasya* (“of an *aṅga*”) from an *adhikāra* rule. Rule 7.2.81 also inherits *antaḥ* (“after a”) by *anuvṛtti*:
For the specific usages of these two rules, see the prakriyās further below.

**ntī and ṇaṭ (parasmaipada)**

Now let’s derive the other eight forms of ntī in ṇaṭ with parasmaipada endings.

ntī is like nayati, with some extra sandhi rules from the asiddha section:

<table>
<thead>
<tr>
<th>Form</th>
<th>Rule</th>
</tr>
</thead>
<tbody>
<tr>
<td>ntī tas</td>
<td>3.4.78 tiptasjhispasthamibvasmastatāmjhathāsāthā…</td>
</tr>
<tr>
<td>ntī śap tas</td>
<td>3.4.113 tiṇśitsārvadhātukam</td>
</tr>
<tr>
<td></td>
<td>3.1.68 kartari śap</td>
</tr>
<tr>
<td>ntī a tas</td>
<td>1.3.3 halantyam</td>
</tr>
<tr>
<td></td>
<td>1.3.8 lasakvataddhite</td>
</tr>
<tr>
<td></td>
<td>1.3.9 tasya lopah</td>
</tr>
<tr>
<td>ne a tas</td>
<td>7.3.84 sārvadhātukārdhadhātukayōḥ</td>
</tr>
<tr>
<td>nay a tas</td>
<td>6.1.78 eco’yavāyāvaḥ</td>
</tr>
<tr>
<td>nayata ru’</td>
<td>8.2.66 sasajuṣo ruḥ</td>
</tr>
<tr>
<td>nayataḥ</td>
<td>8.3.15 kharavaṇānayorvisarjantīyaḥ</td>
</tr>
</tbody>
</table>

nayanti is like nayati, but there are some extra rules to modify jhi. Rule 6.1.97 (ato guṇe) deletes the extra a. Note the rules from the asiddha section, which apply then revert a sandhi change:

<table>
<thead>
<tr>
<th>Form</th>
<th>Rule</th>
</tr>
</thead>
<tbody>
<tr>
<td>ntī jhi</td>
<td>3.4.78 tiptasjhisipthasthamibvasmastatāmjhathāsāthā…</td>
</tr>
</tbody>
</table>
nī śap jhi 3.4.113 tiṅśitsārvadhātukam
3.1.68 kartari śap
nī a jhi 1.3.3 halantyam
1.3.8 laśakvataddhite
1.3.9 tasya lopaḥ
nī a anti 7.1.3 jho’ntaḥ
ne a anti 7.3.84 sārvadhātukārdhadhātukayoḥ
nay a anti 6.1.78 eco’yavāyāvah
nay anti 6.1.97 ato guṇe
nay aṃti 8.3.24 naścāpadāntasya jhali
nayanti 8.4.58 anuvārasya yai parasavarṇaḥ

nayasi is like nayati, nayathaḥ like nayataḥ, and nayatha like nayati again. Then we come to nayāmi, which lengthens the vowel of the āṅga:

nī mip 3.4.78 tiptasjhisipthashamibvamastātmajhathasāthā...
3.4.113 tiṅśitsārvadhātukam
nī mi 1.3.3 halantyam
1.3.9 tasya lopaḥ
nī śap mi 3.4.113 tiṅśitsārvadhātukam
3.1.68 kartari śap
nī a mi 1.3.3 halantyam
1.3.8 laśakvataddhite
1.3.9 tasya lopaḥ
ne a mi 7.3.84 sārvadhātukārdhadhātukayoḥ
nay a mi 6.1.78 eco’yavāyāvah
nayāmi 7.3.101 ato dīrgho yañi

nayāvah is like nayāmi, with some extra sandhi rules from the asiddha section:

nī vas 3.4.78 tiptasjhisipthashamibvamastātmajhathasāthā...
3.4.113 tiṅśitsārvadhātukam
nī śap vas 3.4.113 tiṅśitsārvadhātukam
3.1.68 kartari śap
nī a vas  
1.3.3 halantyam  
1.3.8 laśakvataddhite  
1.3.9 tasya lopah

ne a vas  
7.3.84 sārvadhātukārdhadhātukayoḥ

ne ā vas  
7.3.101 ato dirgho yañi

nay ā vas  
6.1.78 eco’yavāyāvah

nay ā va ru*  
8.2.66 sasajuṣo ruḥ

nayāvah  
8.3.15 kharavasānayorvisarjanīyāḥ

And nayāmaḥ is like nayāvah.

nī and laṭ (ātmanepada)

The prakriyās with ātmanepada endings are similar:

nī ta  
1.3.72 svaritaṇitaḥ kartrabhīprāye kriyāphale  
3.4.78 tiptasjhisipthasamibrāmśvamastātmajhathāsūthā...

nī te  
3.4.79 tiṭa ātmanepadānāṃ ṭere

nī śap te  
3.4.113 tinśitsārvadhātukam

nī a te  
1.3.3 halantyam  
1.3.8 laśakvataddhite  
1.3.9 tasya lopah

ne a te  
7.3.84 sārvadhātukārdhadhātukayoḥ

nayate  
6.1.78 eco’yavāyāvah

For nayete, the rules 7.2.81 (āto niitaḥ) and 6.1.66 (lopo vyorvali) apply to change āte to ēte:

nī ātāṃ  
1.3.72 svaritaṇitaḥ kartrabhīprāye kriyāphale  
3.4.78 tiptasjhisipthasamibrāmśvamastātmajhathāsūthā...

nī ēte  
3.4.79 tiṭa ātmanepadānāṃ ṭere

nī śap ēte  
3.4.113 tinśitsārvadhātukam

3.1.68 kartari śap
nī a āte

1.3.3 halantyam
1.3.8 laśakvataddhite
1.3.9 tasya lopah

nī a iy te

7.2.81 ato ŋitaḥ

nī a i te

6.1.66 lopo vyorvali

ne a i te

7.3.84 sārvadhātukārdhadhātukayoḥ

nay a i te

6.1.78 eco’yaṇvāvāḥ

nayete

6.1.87 ādgunaḥ

nayante is like nayanti, but with an ātmanepada ending instead. For nayase, we replace the ending with 3.4.80 (thāsasse) then continue as normal:

nī thās

1.3.72 svaritaṇitaḥ kartrabhīpraye kriyāphale
3.4.78 tiptasjhispthasamivamastātmajathāsāthāa...

nī se

3.4.80 thāsasse

nī śap se

3.4.113 tiṇśitsārvadhātukam
3.1.68 kartari śap

nī a se

1.3.3 halantyam
1.3.8 laśakvataddhite
1.3.9 tasya lopah

ne a se

7.3.84 sārvadhātukārdhadhātukayoḥ

nayase

6.1.87 ādgunaḥ

nayete is like nayete, and nayadhve is like nayate. naye is a little trickier and requires the application of rule 6.1.97 (ato guṇe):

nī ṭiṭ

1.3.72 svaritaṇitaḥ kartrabhīpraye kriyāphale
3.4.78 tiptasjhispthasamivamastātmajathāsāthāa...

nī i

1.3.3 halantyam
1.3.9 tasya lopah

nī e

3.4.79 ṭita ātmanepadānāṃ ṭere

nī śap e

3.4.113 tiṇśitsārvadhātukam
3.1.68 kartari śap
nī a e

1.3.3 halantyam
1.3.8 laśakvataddhite
1.3.9 tasya lopah

ne a e

7.3.84 sārvadhātukārdhātukayoḥ

nay a e

6.1.78 eco'yavāyāvah

nayē

6.1.97 ato guṇe

nayāvahe is like nayāvaḥ but without the asiddha rules:

nī vahi

3.4.78 tiptasjhisipthasthamibvasmastātmajhathāsāthā…

nī vahe

3.4.79 tita ātmanepadānāṃ tere

nī śap vahe

3.4.113 tinśitsārvadhātukam

3.1.68 kartari śap

nī a vahe

1.3.3 halantyam
1.3.8 laśakvataddhite
1.3.9 tasya lopah

ne a vahe

7.3.84 sārvadhātukārdhātukayoḥ

ne ā vahe

7.3.101 ato dirgho yañī

nayāvahe

6.1.78 eco'yavāyāvah

And nayāmahe is like nayāvahe.
Review

In this unit, we applied our basic system to the task of deriving Sanskrit verbs. We saw that the process has a few basic steps:

1. Choose a dhātu from the Dhātupāṭha.
2. Choose the right lakāra.
3. Determine whether the root uses parasmaipada or ātmanepada endings.
4. Replace the lakāra with the appropriate tiṅ ending.
5. Add a vikarana as needed.
6. Apply guṇa changes as needed.
7. Apply sandhi rules.

This unit focused on verbs created with laṭ-lakāra, but all verbs will follow this basic framework.

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subanta
Introduction

In the previous unit, we built on our basic system and learned about how to use the *Aṣṭādhyāyī* to create different *tiṅantas* (verbs). As a reminder, *tiṅantas* are one of the two major word types in the *Aṣṭādhyāyī*:

```
सुप्तिङ्ग-न्तं पदम्। १.४.१४
suptiṅantam padam (1.4.14)
sup-tiṅ-antam padam
That which ends in sup or tiṅ [is called] a pada (word).
```

We know already that *tiṅ* is a *pratyāhāra* that refers to different verb endings. *sup*, meanwhile, is a *pratyāhāra* that refers to different nominal endings. So in the Pāṇinian system, nominals are called *sub-anta* (“ending in a sup suffix”).

In this unit, we will learn how the *Aṣṭādhyāyī* creates *subantas*. We will also create complete *prakriyās* for a variety of basic nominal words.

What is a *subanta*?

The term *subanta* refers to a wide variety of different words, including nouns, adjectives, and pronouns:

- **रामः**
  - *rāmaḥ*
  - Rama

- **शुक्लः**
  - *śuklā*
  - white

- **अहम्**
  - *aham*
  - I

But perhaps more surprisingly, it also refers to indeclinable words:
Our main focus in this unit will be on nouns and adjectives. But at the end of this unit, we will return to why indeclinables are considered subantas and how this decision makes sense within the Pāñinian system.

**Basics of subanta-prakriyā**

Roughly, we derive a subanta as follows. We start with the specific semantics we wish to express. For example, perhaps we want to express that Rama is acting as the subject of our sentence.

Based on the meaning we want to express, we choose a stem and an ending:

\[
\text{राम + स्} \\
\text{rāma + s}
\]

We then apply extra substitution rules as needed. (For the example above, no extra rules are necessary.) Then we combine the stem and the ending and apply normal sandhi rules. The result is a complete Sanskrit word:

\[
\text{राम:} \\
\text{rāmaḥ}
\]

Choosing a stem is simple, and we already know how to apply sandhi rules. But what is more interesting here is how we decide which ending to choose. To choose an ending, we must understand how the *Aṣṭādhyāyī* models the meanings
of different words. In the lessons to come, that is where we will focus our time and energy.

**Nominals for beginners**

The notes below are a brief summary of the Sanskrit nominal system. If you know Sanskrit already, you can continue to the next lesson.

Sanskrit nominals have two main parts: a *stem* and an *ending*. The stem carries the word’s basic meaning, and the ending modifies that basic meaning to create a complete word.

Sanskrit nominals are highly expressive. They can express three different *genders* (masculine, feminine, and neuter) and three different *numbers* (singular, dual, plural). In Western terms, they also express eight different *cases* (nominative, accusative, instrumental, dative, ablative, genitive, locative, and vocative).

Sanskrit nouns generally use a single fixed gender. So for a given noun, we usually have $3 \times 8 = 24$ different forms.

What we call “case” in English does not have a counterpart in व्याकरण. Instead, व्याकरण uses the two concepts of कारक and विभक्ति, which we will explore in the next few lessons.
Our prakriyā begins with a prātipadika (“pre-word,” “nominal stem”). We then find an appropriate ending for the prātipadika, apply any necessary operations, and obtain our final word.

How do we define a prātipadika? First, we should remember this important paribhāṣā:

येन विधिस्तस्तन्तस्य। १.१.७२
yena vidhistadantasya (1.1.72)
yena vidhiḥ tat-antasya
[A term] by which a rule [is specified refers to an item that] ends in that [term].

We previously used this rule to define guṇa substitutions of the last vowel of an aṅga:

नी + अ → ने अ
nī + a → ne a

But here, we will use it to refer to different suffixes instead:

अर्थवद्यातरप्रत्ययः प्रातिपदिकम्। १.२.४५
arthavatāturapratyayaḥ prātipadikam (1.2.45)
arthavat a-dhātuḥ a-pratyayaḥ prātipadikam
A meaningful [term] that is neither a dhātu (verb root) nor a pratyaya (suffix), [nor a term ending in a pratyaya, is called] prātipadika,

कृत्तद्धितसमासास्त्र। १.२.४६
kṛttaddhitasamāsāśca (1.2.46)
kṛt-taddhita-samāsāḥ ca
and [terms ending with] kṛt or taddhita [suffixes], as well as samāsas (compounds), [are called prātipadika].
kṛt suffixes attach to verb roots (as in man + tra → mantra), taddhita suffixes attach to other prātipadikas (amṛta + tva → amṛtatva), and samāsas are just compounds.

As a reminder, Sanskrit noun stems all express a certain gender, and the nominal endings we use with that stem should match the stem's gender. For example, if we want to use the masculine stem rāma, we should not apply endings associated with the feminine gender. But how do we know the gender associated with the prātipadika?

In some instances, we don't have enough information to decide. But in general, we can look at the different pratyayas that were used to create the prātipadika. Based on these affixes, we can determine which gender is associated with the prātipadika and which endings to use.

**Review**

In the next lesson, we will continue the process of creating a subanta.
sup-pratyāhāra

In the previous lesson, we learned about the prātipadika. By combining a prātipadika with one of the sup suffixes, we create a complete subanta.

In this lesson, we’ll learn about the basic sup endings.

adhikāra rules

The sup endings are defined in the scope of three adhikāra rules. The first two are familiar:

<table>
<thead>
<tr>
<th>प्रत्ययः । १.१.१</th>
</tr>
</thead>
<tbody>
<tr>
<td>pratyayaḥ (3.1.1)</td>
</tr>
<tr>
<td>pratyayaḥ</td>
</tr>
<tr>
<td>… is a pratyaya (suffix).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>परश्च। २.१.२</th>
</tr>
</thead>
<tbody>
<tr>
<td>paraśca (3.1.2)</td>
</tr>
<tr>
<td>paraḥ ca</td>
</tr>
<tr>
<td>… and [it is inserted] after [the base].</td>
</tr>
</tbody>
</table>

And the last is new:

<table>
<thead>
<tr>
<th>ज्याप्रातिपदिकात् । ४.१.१</th>
</tr>
</thead>
<tbody>
<tr>
<td>nyāpprātipadikāt (4.1.1)</td>
</tr>
<tr>
<td>nī-āp-prātipadikāt</td>
</tr>
<tr>
<td>After [the suffixes] nī or āp, or after a prātipadika (stem), …</td>
</tr>
</tbody>
</table>

ńī and āp are pratyayas that create feminine bases, and we can set them aside for now.

sup-pratyāhāra

Here are the endings in the sup pratyāhāra:
There are several points worth noticing here.

First, notice that many of these endings have it sounds attached to them:

- Some of these it letters are for the sake of making pratyāhāras. For example, *suṭ* uses the ṭ of *auṭ* to refer to just the first five of these endings. Likewise, *sup* uses the su from *su* and the p of the final *sup* to refer to all twenty-one of these endings.

- Some are labeled systematically. For example, the ṇi it endings — that is, the endings with ṇ as an it — are often replaced, depending on the prātipadika and its gender.

- Some of these it letters are for the sake of easier pronunciation, or they have other miscellaneous functions. Thus we have *su*, *nasī*, and the like.

Second, notice that these endings are not the standard endings we would use for a stem like *rāma*. Pāṇini examined many different nominal ending patterns and chose this set to represent what they have in common. Then we can apply various vidhi rules to get the endings we need, as we did for the *tiṅ* endings.

How do we choose which ending to use? In part, we can reuse these rules from when we studied the *tiṅ* endings:
They [i.e. these triples] are called ekavacana (singular), dvivacana (dual), and bahuvacana (plural) when taken one by one.

[sup: I.4.103]

supaḥ (1.4.103)
supaḥ
[ekavacana, dvicana, and bahuvacana also apply for the triples] of sup (i.e. the nominal endings).

[vibhakti: I.4.104]
vibhaktiśca (1.4.104)
vibhaktiḥ ca
And [these triples are each called] vibhakti.

By choosing a specific vacana (number), we narrow twenty-one endings down to seven. That leaves us with a very important distinction to make:

**vibhakti**

The different sup vibhaktis don’t have any special names. They are simply called prathamā (first), dvitīyā (second), and the like:

सु औ जस्
su au jas
(prathamā)

अम् औट शस्
am auṭ śas
(dvitīyā)

How do we choose which vibhakti to use? As you might guess, these vibhaktis imply different semantics. But the route we take from semantics to a specific vibhakti is an interesting one. The next two lessons will focus on this process.
**kāraka**

The Pāṇinian school assumes that sentences have a basic structure. There is a verb, like *gacchati* ("goes"), that describes some action. And there are different components involved in this action:

राम: सीताये वने मार्गेन कुठ्या मृगं गच्छति।
*rāmaḥ sītāyai vane mārgena kutyā mṛgaṃ gacchati.*
Rama goes to the deer in the forest from the hut via the path for Sita.

The different components of some action are called *kāraka*. Roughly, you can think of a *kāraka* as an intermediate idea between the meaning we want to express and the actual *svap* ending we use.

For more information on *kāraka*, see the “Further reading” section of our Review lesson.

**adhikāra rules**

The *Aṣṭādhyāyī* describes six main *kāraka* and does so within the scope of these two rules, which we’ve seen before:

आ कडारेका सम्ज़ा। १.४.१
*a kaḍārādekā samjñā* (1.4.1)
*a kaḍārat ekā samjñā*
Up to the *kaḍāra* rule (rule 2.2.38), one *samjñā* [is allowed].

विप्रतिषेधे परं कार्यम्। १.४.२
*vipratiṣedhe param kāryam* (1.4.2)
*vipratiṣedhe param kāryam*
In matters of conflict, the later [rule] should be applied.

The *kāraka* section then begins with this *adhikāra*:
The six kārakas

Below, we present the basic semantics of the six kārakas. We also include some common secondary semantics. Most of these six kārakas can convey several other kinds of semantics, but we have omitted them here to keep this lesson at a reasonable length.

The first kāraka is apādāna, which is usually expressed by the fifth (“ablative”) case:

In the sense of movement away, [a kāraka that is] the fixed point is called apādāna (ablation).

Here are some examples of these two rules:

The man goes from the forest to the village.

Ravana is afraid of Rama.
रामः सीतां राक्षसात् नासन्त्रायते।

rāmāḥ sītāṃ rākṣasāt trāyate.

Rama protects Sita from a rakshasa.

Next is **sampradāna**, which is usually expressed by the fourth (“dative”) case:

<table>
<thead>
<tr>
<th>कर्मणा यम् अभिप्रैति स सम्मन्दानम्। १.४.३२</th>
</tr>
</thead>
<tbody>
<tr>
<td>karmāṇā yam abhiprāiti sa sampradānam (1.4.32)</td>
</tr>
<tr>
<td>karmāṇā yam abhiprāiti sa sampradānam</td>
</tr>
<tr>
<td>[A kāraka that is] whom one aims to benefit with the action is called <strong>sampradāna</strong> (beneficiary).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>रूच्यर्थानं प्रीयमाण्। १.४.३३</th>
</tr>
</thead>
<tbody>
<tr>
<td>rucyaṁarthānāṃ priyāmaṇaḥ (1.4.33)</td>
</tr>
<tr>
<td>rucyaṁarthānāṃ priyāmaṇaḥ</td>
</tr>
<tr>
<td>For [roots] meaning ruc (please), [a kāraka that is] the one being pleased [is called <strong>sampradāna</strong>].</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>श्लागहनुँस्थासपसं ज्ञिप्यानाः। १.४.३४</th>
</tr>
</thead>
<tbody>
<tr>
<td>ślāghahnuṁsthāśapāṁ jñīpsyamānaḥ (1.4.34)</td>
</tr>
<tr>
<td>ślāgha-ḥnuṁ-sthā-śapāṁ jñīpsyamānaḥ</td>
</tr>
<tr>
<td>For the roots ślāgh (praise), hnu (hide), sthā (stay, stand), and śap (vow, curse), [a kāraka that is] the one whom one wishes to be informed [of the action is called <strong>sampradāna</strong>].</td>
</tr>
</tbody>
</table>

Here are some examples of these three rules:

**देवदत्तः फलं ददति।**

*devadattāya phalam dadāti*  
He gives a fruit to Devadatta. (1.4.32)

**देवदत्तः रोच्ते फलम्।**

*devadattāya rocate phalam.*  
Devadatta likes the fruit. (1.4.33)
He praises Devadatta. (1.4.34)

Next is *karaṇa*, which is usually expressed by the third (“instrumental”) case:

<table>
<thead>
<tr>
<th>साधकतमं करणम्। १.४.४२</th>
</tr>
</thead>
<tbody>
<tr>
<td>sādhakatamam karaṇam (1.4.42)</td>
</tr>
<tr>
<td>sādhakatamam karaṇam</td>
</tr>
</tbody>
</table>

[A kāraka that is] the most effectual means [is called] *karaṇa* (means).

And an example:

रामो धनुषा रावणां हन्ति।
rāmo dhanuṣā rāvaṇaṁ hanti.
Rama kills Ravana with his bow.

Then *adhikaraṇa*, which is usually expressed by the seventh (“locative”) case:

<table>
<thead>
<tr>
<th>आधरारो अधिकरणम्। १.४.४५</th>
</tr>
</thead>
<tbody>
<tr>
<td>ādhāro ‘dhikaraṇam (1.4.45)</td>
</tr>
<tr>
<td>ādhāraḥ adhikaraṇam</td>
</tr>
</tbody>
</table>

[A kāraka that is] the locus of action [is called] *adhikaraṇa* (locus).

And an example:

अर्जुनः क्षेत्रे युध्यते।
arjunaḥ kṣetre yudhyate.
Arjuna fights in the field.

Then *karma*, which is usually expressed by the second (“accusative”) case:

<table>
<thead>
<tr>
<th>कर्तुरीपिततमं कर्म। १.४.४९</th>
</tr>
</thead>
<tbody>
<tr>
<td>karturīpsitatamam karma (1.4.49)</td>
</tr>
<tr>
<td>kartuḥ īpsitatamam karma</td>
</tr>
</tbody>
</table>

[A kāraka that is] what the agent most desires [is called] *karma* (object),
What does rule 1.4.50 mean? To help us understand, here is an ancient example:

While eating rice, he eats poison.

Here, odanam (“rice”) is what the eater desires by his action, so it is karma by rule 1.4.49. viṣam (“poison”) is not desired; perhaps the eater doesn’t know that the poison is present. So viṣam is out of scope in rule 1.4.49. However, viṣam has a similar relation to odanam, since it is connected with odanam by being mixed with it. Thus viṣam can be called karma by rule 1.1.50.

Our last kāraka is kartṛ, which is usually expressed in either the first (“nominative”) or the third (“instrumental”) case, depending on the verb's prayoga:

Here are some examples of these rules:

Devadatta cooks rice.
राम ओदनं देवदत्तेन पाचयति।

*rāma* odanaṁ devadattena pācayati.

Rama makes Devadatta cook rice.

**Review**

*kāraka* is a complex concept, but we hope the rules above give you some intuition for what it represents. Even so, we're still left with two questions:

- How do we map a *kāraka* to a specific ending?
- What if we want to express something that isn't a *kāraka*?

In the next lesson, we will answer these questions and finally select a *vibhakti*.
vibhakti

Sanskrit resources written in English often say that Sanskrit nominals use eight different cases. Roughly, the English concept of case is like a combination of two Sanskrit categories: kāraka and vibhakti.

vibhakti is simply a group of three endings, as we saw previously. The sup pratyāhāra has twenty-one endings, so it has seven vibhaktis in total.

A given vibhakti can express multiple kārakas, and it can also express relationships that aren’t kārakas. By using the rules below, we can pick the right vibhakti for our prātipadika and get one step closer to our completed word.

adhikāra rules

There is only one adhikāra we should consider here, but it is a significant one:

अनभहिते। र०.३.१
anabhihite (2.3.1)

anabhihite

When not otherwise expressed, ...

The idea is that the rules below can only be applied if their information has not been expressed already. To understand what this means, we can start by examining the use of the second vibhakti:

The second vibhakti

The first rule after rule 2.3.1 (anabhihite) is about the second vibhakti:

कर्मणि द्वितीया। र०.३.२

karmanī dvītyā (2.3.2)

karmanī dvītyā

[When not otherwise expressed,] the second [vibhakti is used] in the sense of karma.

Suppose the verb in our sentence is gacchati (“goes”). gacchati is in kartari prayoga, which means that expresses the kāraka of kartr. gacchati does not ex-
press any information about the *karma*, so we can apply rule 2.3.2 and create a valid sentence:

\[
\text{ग्रामं गच्छति}
\]
\[
grāmaṁ gacchati
\]
He goes to the village.

But suppose that the verb in our sentence is *gamyate* (“is gone to”). *gamyate* is in *karmaṇi prayoga*, which means that it expresses the *kāraka* of *karma*. Since *karma* is already expressed, we cannot apply rule 2.3.2. So we are prevented from saying *grāmaṁ gamyate*, which would be an error. This is the purpose of rule 2.3.1 (*anabhihite*).

**The fourth vibhakti**

Continuing on, we see some rules about the fourth vibhakti:

\[
\text{चतुर्थी सम्प्रदाने} \text{ २.३.१३}
\]
\[
caturthī sampradāne (2.3.13)
\]
\[
caturthī sampradāne
\]
[When not otherwise expressed,] the fourth [vibhakti is used] in the sense of *sampradāna*.

\[
\text{तुम्बर्थाच्छ भाववचनेन} \text{ २.३.१५}
\]
\[
tumarthācca bhāvavacanāt (2.3.15)
\]
\[
tum-arthāt ca bhāva-vacanāt
\]
And after words that express *bhāva* (state) in the sense of (the *pratyaya*) - tum.

Rule 2.3.13 is straightforward. Rule 2.3.15 refers to usages like the one below:

\[
\text{दर्शनाय गच्छति} \text{ ।}
\]
\[
darśanāya gacchati.
\]
He goes to see (“for seeing”).

**The third vibhakti**

Next we have the third *vibhakti*:
Rule 2.3.18 has the same behavior as karmani dvittyā above. If the verb is in kartari prayoga (gacchati), it may express the karaṇa:

अश्वयेन गच्छति।
aśvena gacchati.  
He goes by horse.

And if the verb is in karmani prayoga (gamyate), it may express the kartr:

नरेण ग्रामो गम्यते।
nareṇa grāmo gamyate.  
The man goes to the village. (“The village is gone to by the man.”)

The fifth vibhakti

Next we have the fifth vibhakti:

अपादाने पञ्चमी।
apādāne pañcamī  (2.3.28)
apādāne pañcamī  
[When not otherwise expressed,] the fifth [vibhakti is used] in the sense of apādāna.

This is straightforward.
The seventh vibhakti

Next is the seventh vibhakti. It inherits some context from a previous rule. This extra context is minor, but we include it for the sake of completeness:

प्तिम्यधकरणये च। २.३.३५
saptamyadhikarane ca (2.3.35)
saptamī adhikaraṇe ca
[When not otherwise expressed,] the seventh [vibhakti] is used in the sense of adhikaraṇa, [and after words that mean dūra (far) or antika (near)].

The first vibhakti

The first vibhakti has a surprising definition. This rule, especially, makes clear the difference between case and vibhakti:

प्ररातपदकराथर्णलपरराणवचनराये प्रथरा। २.३.४६
prātipadikārthālīṅgalpārīmaṇavacanamātre prathamā (2.3.46)
prātipadika-artha-liṅga-parimāṇa-vacana-mātre prathamā
[When not otherwise expressed,] the first [vibhakti] is used only to express the prātipadika meaning, gender, measure, and number.

Let’s leave aside “measure,” which is a minor point. What this rule says is that the first vibhakti does not express any kāraka at all!

Why is this so? Once again, consider the verb that would be used with this subanta. If the verb is gacchati, then kartṛ is already expressed. So the only new information that the first vibhakti can express is the basic information listed in the rule above. And the same applies if the verb is gamyate:

रामो गच्छति।
rāmo gacchati.
Rama goes.

रामो गम्यते।
rāmo gamyate.
Rama is gone to.
Finally, the first vibhakti can express the same semantics as the vocative case:

\[ \text{सम्बोधने च। २.३.४७} \]

\[ sambodhane ca (2.3.47) \]

\[ sambodhane ca \]

[When not otherwise expressed, the first vibhakti] is also used in the sense of \text{sambodhana} (“calling out”)

\[ \text{एकवचन सम्बुधिः। २.३.४९} \]

\[ ekavacanam sambuddhiḥ (2.3.49) \]

\[ ekavacanam sambuddhiḥ \]

[When not otherwise expressed, the first vibhakti] \text{ekavacanam} (singular) [is called] \text{sambuddhī}.

The sixth vibhakti

Finally, we have the sixth vibhakti:

\[ \text{षनी शयेषये। २.३.५०} \]

\[ ṣaṣṭhī śeṣe (2.3.50) \]

\[ ṣaṣṭhī śeṣe \]

[When not otherwise expressed], the sixth vibhakti is used in all remaining senses.

Thus the sixth vibhakti is a “catch-all” that expresses all sorts of complex relationships.

Review

In the next lesson, we will use what we have learned so far to generate different forms of the feminine stem \text{nau}. 
Forms of *nau*

To consolidate what we’ve learned so far, let’s see how the rules we’ve learned so far will let us generate the various forms of the stem *nau*, which means “boat.”

*nau* is called *prātipadika* by rule 1.2.45 (*arthavadadhāturapratyayāḥ prātipadikam*), so we can add sup endings to it. If we have a verb that expresses *kartari prayoga*, then we can use *prathamā-vibhakti* by rule 2.3.46 (*prātipadikārthalingaparimāṇavacanamātre prathamā*).

Once we have applied these rules, we can create our *pada*:

<table>
<thead>
<tr>
<th>Form</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>nau su</em></td>
<td>4.1.2 svaujasamaṭṭhaḥāmbhisnebhāmbhyānasi...</td>
</tr>
<tr>
<td><em>nau s</em></td>
<td>1.3.2 upadeśeśjanunāsika it</td>
</tr>
<tr>
<td></td>
<td>1.3.9 tasya lopaḥ</td>
</tr>
<tr>
<td><em>nau ru</em></td>
<td>8.2.66 sasajuṣo ruḥ</td>
</tr>
<tr>
<td><em>nauḥ</em></td>
<td>8.3.15 kharavasānayorvisarjanṭyaḥ</td>
</tr>
</tbody>
</table>

The dual is simple:

<table>
<thead>
<tr>
<th>Form</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>nau au</em></td>
<td>4.1.2 svaujasamaṭṭhaḥāmbhisnebhāmbhyānasi...</td>
</tr>
<tr>
<td><em>nāvau</em></td>
<td>6.1.78 eco’yavāyāvah</td>
</tr>
</tbody>
</table>

As is the plural:

<table>
<thead>
<tr>
<th>Form</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>nau jas</em></td>
<td>4.1.2 svaujasamaṭṭhaḥāmbhisnebhāmbhyānasi...</td>
</tr>
<tr>
<td><em>nau as</em></td>
<td>1.3.7 cuṭū</td>
</tr>
<tr>
<td></td>
<td>1.3.9 tasya lopaḥ</td>
</tr>
<tr>
<td><em>nāv as</em></td>
<td>6.1.78 eco’yavāyāvah</td>
</tr>
<tr>
<td><em>nāv a ru</em></td>
<td>8.2.66 sasajuṣo ruḥ</td>
</tr>
<tr>
<td><em>nāvaḥ</em></td>
<td>8.3.15 kharavasānayorvisarjanṭyaḥ</td>
</tr>
</tbody>
</table>
We select dvītyā-vibhakti with rule 2.3.2 (karmaṇi dvītyā) and can follow similar steps to the ones above. We can follow a similar approach for tṛṭyā, caturthī, pañcamī, and saṣṭhī.

The plural of saptamī-vibhakti has a small complication due to śatva. We can obtain śatva because rule 8.3.59 (ādeśapratyayaḥ) also includes pratyayas:

| nau su | 4.1.2 svaajasamaucashaṣṭābhyāmbhisnebhāmbhyasñasi...
| nauṣu  | 8.3.59 ādeśapratyayaḥ |

Finally, the condition of sambodhana selects prathamā-vibhakti, which produces the forms we saw above.
Uninflected words are called **avyaya** (“unchanging”). In the Paninian system, they are treated like a kind of **subanta**, which makes them a type of **pada**:

That which ends in *sup* or *tiṅ* [is called] a **pada** (word).

Although it may seem strange that an **avyaya** is treated as a **subanta**, doing so simplifies some other aspects of the grammar. Let’s see how the system models **avyayas**.

**What is an **avyaya**?**

The **avyaya** is a large category that includes many different kinds of terms:

The words in the list beginning with *svar*, as well as a **nipāta**, are called **avyaya**.

Likewise for **taddhita** suffixes not used in all **vibhakti**s;

**kṛt** suffixes that end in *m* or an **ec** vowel;
The suffixes tvā, tosu, and kasu;

and the avyayībhāva.

svarādi refers to a list of words in the Gaṇapāṭha, one of the secondary texts used with the Aṣṭādhyāyī. The svarādi list includes words like svar, antar, and hyas, among many others. nipāta refers to a subtype of avyaya that includes words like ca, pra, and so on.

The other rules are more straightforward:

- Rule 1.1.38 refers to various minor taddhita suffixes, as used for words like tatra and tadā.
- Rule 1.1.39 refers to various minor kṛt suffixes. The most common of these is the suffix tumuḥ, as in gantum (“to go”).
- Rule 1.1.40 refers to the common suffix ktvā and a few minor suffixes used mainly in Vedic works.
- Rule 1.1.41 refers to the avyayībhāva, a type of compound.

How do we derive an avyaya?

Since an avyaya is a prātipadika, we first add a sup affix. We then immediately replace it with the luk suffix by 2.4.82:

And luk will then cause lopa of the sup affix:
Disappearance is [called] lopa.

[lopa of] a pratyaya by (the words) luk, ślu, and lup (is referred to by those terms, respectively).
Review

In this unit, we extended our basic system to the task of deriving Sanskrit nomin-
als. We saw that the process has a few basic steps:

1. Choose or create a prātipadika.
2. Choose the appropriate kāraka (if applicable) and vibhakti.
3. Select an appropriate sup-pratyaya.
4. Apply any relevant changes to the sup-pratyaya.
5. Apply sandhi rules.

Index of rules

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<td>2.3.1 - 2.3.73</td>
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For further reading

The closest English counterpart to kāraka is the theta role (Wikipedia). But we should be very careful about understanding Indian categories through a Western lens.

$kṛt$
Introduction

Almost all of chapter 3 of the *Aṣṭādhyāyī* focuses specifically on the *pratyayas* (suffixes) that we add directly to a *dhātu*. These *pratyayas* come in four main types.

The first type is the *sanādi-pratyaya*, which creates new *dhātu*:

\[
\begin{align*}
gam + san & \rightarrow jigamisa \\
kr + nic & \rightarrow kāri
\end{align*}
\]

want to go

cause to do or make

The second type is the *tiṅ-pratyaya*, which creates *tiṅantas* (verbs):

\[
\begin{align*}
gam + tip & \rightarrow gacchati \\
kṛ + nal & \rightarrow cakāra
\end{align*}
\]

(someone) goes

(someone) did

The third type is the *vikaraṇa*, which we add between a *dhātu* and the *pratyaya* that follows it:

\[
\begin{align*}
bhū + šap + ti & \rightarrow bhavati \\
krī + śnā + mi & \rightarrow krīṇāmi
\end{align*}
\]

(someone) becomes

I buy
And the fourth type, the *kṛt-pratyaya*, is any other *pratyaya* we can add. *kṛt-pratyayas* create *prātipadika* (stems) that eventually become *subanta*:

\[ \text{युज्} + \text{घञ} \rightarrow \text{योग:} \]
\[ yuj + ghañ \rightarrow yogāḥ \]
\[ \text{योग} \]
\[ \text{yoga} \]

\[ \text{बुध्} + \text{त्वा} \rightarrow \text{बुद्धा} \]
\[ budh + ktvā \rightarrow buddhvā \]
\[ \text{after waking up} \]

\[ \text{पच्} + \text{णुत्} \rightarrow \text{पाचक:} \]
\[ pac + nvul \rightarrow pācakaḥ \]
\[ \text{cooker} \]

In this unit, we will learn about some of common *kṛt-pratyayas* and understand some of the sandhi changes they cause.

**General rules for *kṛt-pratyayas***

All *kṛt-pratyayas* are declared within the scope of these four *adhikāra* rules:

<table>
<thead>
<tr>
<th>प्रत्ययः</th>
<th>३.१.१</th>
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<tr>
<td>pratyayah (3.1.1)</td>
<td></td>
</tr>
<tr>
<td>pratyayah</td>
<td></td>
</tr>
<tr>
<td>... is a <em>pratyaya</em> (suffix).</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>परश्च</th>
<th>३.१.२</th>
</tr>
</thead>
<tbody>
<tr>
<td>paraśca (3.1.2)</td>
<td></td>
</tr>
<tr>
<td>paraḥ ca</td>
<td></td>
</tr>
<tr>
<td>... and [it is inserted] after [the base].</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>धातोः</th>
<th>३.१.९१</th>
</tr>
</thead>
<tbody>
<tr>
<td>dhātoḥ (3.1.91)</td>
<td></td>
</tr>
<tr>
<td>dhātoḥ</td>
<td></td>
</tr>
<tr>
<td>After a <em>dhātu</em>, ...</td>
<td></td>
</tr>
</tbody>
</table>
Together, these four adhikāra rules mean “... is added as a kṛt-pratyaya after a dhātu, if it is not a tiṅ-pratyaya.”

Further, these two samjñā rules will add extra labels to any pratyaya we introduce within the scope of these rules:

That is, kṛt-pratyayas are generally labeled ārdhadhātuka; but if they have ś as an it letter, they are labeled sārvadhātuka instead.

**Sound changes**

kṛt-pratyayas cause various sound changes. Generally, they cause guṇa changes by the following rules:
मिदेर्गुणः ७.३.८२
miderguṇah (7.3.82)
mideḥ guṇah
The i of mid [as an aṅga] becomes guṇa.

सार्वधातुकार्धदह्तुकायोः ७.३.८४
sārvadhātuकārdadhātuकayoh (7.3.84)
sārvadhātu-ārdhadhātuकayoh
[The final of an aṅga is replaced with guṇa] when followed by a sārvadhātu or ārdhadhātu suffix.

पुगान्तलघूपादस्य च ७.३.८६
pugantalaghūpadhasya ca (7.3.86)
puk-anta-laghu-upadhasya ca
And [the last ik vowel of an aṅga] ending with puk or whose upadhā (penultimate sound) is laghu (a light syllable) [is replaced with guṇa when followed by a sārvadhātu or ārdhadhātu suffix].

But if they have ń or ṇ as it letters, they can cause vṛddhi changes instead:

मृजेर्वर्द्धि ७.२.११४
mrjervṛddhiḥ (7.2.114)
mrjeḥ vṛddhiḥ
The r of mrj [as an aṅga] becomes vṛddhi.

अचो निन्निति ७.२.११५
aco ŋṇiti (7.2.115)
acaḥ ŋṇiti
The ac [of an aṅga becomes vṛddhi] if followed by ŋit or ṇit.

अत उपधयायः ७.२.११६
ata upadhāyāḥ (7.2.116)
ataḥ upadhāyāḥ
The penultimate at [of an aṅga becomes vṛddhi if followed by ŋit or ṇit].

And as a reminder, guṇa and vṛddhi substitutions are defined only for specific vowels:
And they are blocked if the pratyaya has $k$ or $ṅ$ as an $iṅ$ letter:

But if the dhātu has an anudātta accent in its upadeśa form, then $iṅ$ is not used:
After [a dhātu] that has exactly one vowel and that has an anudātta accent in upadeśa, [iṭ is not used].
Let’s begin by studying a subtype of the kṛt-pratyaya called kṛtya. kṛtya-pratyayas include common suffixes like -tavya and -anīya. They generally convey the sense that something “should be done” or “must be done.”

**Defining the pratyaya**

We start with a new adhikāra:

<table>
<thead>
<tr>
<th>कृत्या:</th>
<th>३.१.९५</th>
</tr>
</thead>
<tbody>
<tr>
<td>kṛtyāḥ (3.1.95)</td>
<td></td>
</tr>
<tr>
<td>kṛtyāḥ</td>
<td></td>
</tr>
<tr>
<td>... is a kṛtya suffix.</td>
<td></td>
</tr>
</tbody>
</table>

The rules that follow this adhikāra define all of the members of the class, but since the list is quite long, we include only a few of the more common ones:

<table>
<thead>
<tr>
<th>तव्यत्वानीयरः</th>
<th>३.१.९६</th>
</tr>
</thead>
<tbody>
<tr>
<td>tavyattavyānīyaraḥ (3.1.96)</td>
<td></td>
</tr>
<tr>
<td>tavyat-tavya-anīyaraḥ</td>
<td></td>
</tr>
<tr>
<td>[The following are called kṛtya, kṛt, and pratyaya and follow a dhātu]:</td>
<td></td>
</tr>
<tr>
<td>tavyat, tavya, and anīyar;</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>अचो यत्</th>
<th>३.१.९७</th>
</tr>
</thead>
<tbody>
<tr>
<td>aco yat (3.1.97)</td>
<td></td>
</tr>
<tr>
<td>acaḥ yat</td>
<td></td>
</tr>
<tr>
<td>After vowels, yat;</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ऋञ्चलोण्यर्णत</th>
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</tr>
</thead>
<tbody>
<tr>
<td>ṛhalorṇyat (3.1.124)</td>
<td></td>
</tr>
<tr>
<td>ṛ-haloh nyat</td>
<td></td>
</tr>
<tr>
<td>After r, r, or a consonant, nyat.</td>
<td></td>
</tr>
</tbody>
</table>

All of these pratyayas are stated in their upadeśa form. Here, the last t on tavyat, yat, and nyat is stated for accent purposes; by rule 6.1.185 (tītsvaritam), all three of these pratyayas will have a svarita on their first vowels.
Meanwhile, the meaning of the *kṛtya-pratyaya* is defined later in chapter 3:

> आवश्यकाधमर्ययर्णयमोणनअः। ३.३.१७०
> āvaśyakādhamarṇyayorṇiniḥ (3.3.170)
> āvaśyaka-ādhamarṇyayoḥ ṇiniḥ

The [pratyaya] ṇini is used in the sense of āvaśyaka (necessity) or ādhamarṇya (owing a debt).

**कृत्याथयः ३.३.१७१**

*kṛtyāśca* (3.3.171)

*kṛtyāḥ ca*

Likewise for the *kṛtya* [pratyayas],

**शक लङ्च। ३.३.१७२**

*śaki liṅca* (3.3.172)

*śaki liṅ ca*

which, along with liṅ, also has the sense of śak (to be capable of).

*kṛtya* expresses only *karmani* and *bhāve prayoga*, per rule 3.4.69 below:

> लः कर्मणि च भावे चाकर्मकेभ्यं। ३.४.६९
> laḥ karmanī ca bhāve cākarmakebhyaḥ (3.4.69)
> laḥ karmanī ca bhāve ca akarmakebhyaḥ

The lakāras denote [kartari prayoga] as well as karmanī and bhāve prayoga when the verb is akarmaka (intransitive).

**तयोरेव कृत्यात्तत्तितर्था:। ३.४.७०**

*tayoreva kṛtyaktakhalarthāḥ* (3.4.70)

tayoh eva kṛtya-kta-khalarthāḥ

*kṛtya*, kta, and [a pratyaya] having the meaning of khal express these two [i.e. karmanī and bhāve prayoga].

**Sound changes**

*kṛtya-pratyayas* follow the normal pattern of all *kṛt-pratyayas* and generally cause guṇa changes to the vowel in the *aṅga*. 
For pratyayas that start with t, such as tavya, various sandhi changes might occur between that t and the dhātu’s last consonant. Those changes are complicated and detailed, so we will omit them from this lesson.

Sample prakriyās

Here are some example prakriyās that use the rules above. Typically, only the essential rules of a prakriyā are provided. But for clarity, we will include all of the applicable rules here.

First, an example with kṛ and tavya-pratyaya. Since kṛ has an anudātta accent in its upadeśa form, it is prevented from using the connecting iṭ vowel by rule 7.2.10:

| dhūkrña | 1.3.1 bhūvādayo dhātavaḥ |
| kṛ      | 1.3.3 halantyam          |
|         | 1.3.5 ādiriṇiṭudavāḥ      |
|         | 1.3.9 tasya lopaḥ         |
| kṛ tavya| 3.3.171 kṛtyāśca         |
|         | 3.1.96 tavyattavyāntyāraḥ |
|         | 3.4.114 ārdhadhātukaṁ śeṣaḥ |
| kṛ tavya| 7.2.10 ekāca upadeśe’nudāttāt |
| kartavya| 7.3.84 sārvadhātukārdhadhātukayoḥ |
|         | 1.1.51 uraṇ raparāḥ      |

Next, an example with bhū and tavya-pratyaya again. Since bhū does not have an anudātta accent in its upadeśa form, it uses the connecting iṭ vowel by rule 7.2.35:

| bhū      | 1.3.1 bhūvādayo dhātavaḥ |
| bhū tavya| 3.3.171 kṛtyāśca         |
|         | 3.1.96 tavyattavyāntyāraḥ |
|         | 3.4.114 ārdhadhātukaṁ śeṣaḥ |
| bhū iṭ tavya| 7.2.35 ārdhadhātukasye’d valādeḥ |
Third, an example with bhū and antya-pratyaya. Since antya starts with a vowel, it is not in scope for 7.2.35 (ārdhadhātukasyeḍ valādeḥ), which would otherwise add a connecting iṭ vowel:

bhū 1.3.1 bhūvādayo dhātavaḥ
bhū antya 3.3.171 kṛtyāśca
3.1.96 tavyattavyāntyaraḥ
3.4.114 ārdhadhātukam śeṣaḥ
bho antya 7.3.84 sārvadhātukārdhadhātukayoḥ
bhavantya 6.1.78 eco’yavāyāvah

Fourth, an example with kṛ and nyat-pratyaya. Since nyat has η as an it, it causes a vṛddhi change instead of a guṇa change:

ḍukṛṇi 1.3.1 bhūvādayo dhātavaḥ
kṛ 1.3.3 halantyam
1.3.5 adirñitudavaḥ
1.3.9 tasya lopah
kṛ nyat 3.3.171 kṛtyāśca
3.1.124 ṛhalornyat
3.4.114 ārdhadhātukam śeṣaḥ
kṛ ya 1.3.3 halantyam
1.3.7 cuṭū
1.3.9 tasya lopah
kārya 7.2.115 aco ŋniti
1.1.51 uraṇ raparaḥ

Finally, an example with bhū and yat-pratyaya:
bhū  \[1.3.1\] bhūvādayo dhātavaḥ

bhū yat  \[3.3.171\] kṛtyāśca
          \[3.1.97\] aco yat
          \[3.4.114\] ārdhadhātukaṁ śeṣaḥ

bhū ya  \[1.3.3\] halantyam
          \[1.3.9\] tasya lopah

bho ya  \[7.3.84\] sārvadhātukārdhadhātukayoḥ

bhavya  \[6.1.79\] vānto yi prataye

For bhavya, we use rule 6.1.79, which we have not previously seen:

\begin{tabular}{|l|l|}
\hline
एचमो ऽयवरायरावअः। ६.१.७८ & \textit{eco} ‘yavāyāvaḥ} (\textit{6.1.78})
\hline
ecaḥ ay-av-āy-āvah & An \textit{ec} vowel becomes \textit{ay}, \textit{av}, \textit{āy}, or \textit{āv}, respectively [when a vowel follows in saṃhitā].
\hline
वरामो य प्रत्ययये। ६.१.७९ & \textit{vānto} yi prataye (\textit{6.1.79})
\hline
wa-antaḥ yi prataye & (The changes ending in) \textit{v} (i.e. \textit{o} to \textit{av} and \textit{au} to \textit{āv}) (take effect) when followed by the \textit{y} of a \textit{pratyaya}. 
\hline
\end{tabular}
**ghañ**

In the previous lesson, we learned about *kṛtya-pratyayas*, which cause relatively simple sound changes in the *dhātu*. Here we will learn about a slightly more complicated suffix: the *ghañ-pratyaya*.

**Defining the pratyaya**

*ghañ* has many specific uses. Here are three:

---

**पदरुजवशस्कृशमो घञ म् । ३.३.१६**

padarujaviśaspṛśo ghañ **(3.3.16)**

*ghañ* is used [after the *dhātu*] *pad*, *ruj*, *viś*, and *sprś*;

**स्र स्थिरे। ३.३.१७**

*sṛ* sthire **(3.3.17)**

*sṛ* sthire

after *sṛ* in the sense of a fixed agent;

**भावे। ३.३.१८**

*bhāve** (3.3.18)

*bhāve*

and in the sense of abstract action.

---

Examples:

**रुज् → रोग**

*ruj* → *roga*

be sick → disease (3.3.16)

**सृ + घञ् → सार**

*sṛ* + *ghañ* → *sāra*

flow → essence (3.3.17)
Sound changes

ghañ has gh and ŋ as it letters. Or to put it another way, ghañ is ghit and ŋit.

Because it is ŋit, ghañ causes vṛddhi of a final vowel or a penultimate a. If neither of these conditions apply, ghañ causes the usual kṛt guṇa change.

Because it is ghit, ghañ causes a final c or j to become k or g, respectively:

A [final] c or j is replaced by [the corresponding] ku sound when a ghit pratyaya or [the pratyaya] ŋyat follows.

Sample prakriyas

roga, showing the use of rule 3.3.16 (padarujaviśasprśo ghañ) and rule 7.3.52 (cajoḥ ku ghinnyatoḥ):

rujo* 1.3.1 bhūvādayo dhātavaḥ
ruj 1.3.2 upadeśe'janunāsika it
     1.3.9 tasya lopaḥ
ruj ghañ 3.3.16 padarujaviśasprśo ghañ
ruj a 1.3.3 halantyam
     1.3.8 laśakvataddhite
     1.3.9 tasya lopaḥ
rug a 7.3.52 cajoḥ ku ghinnyatoḥ
roga 7.3.86 pugantalaghūpadhasya ca

sāra, showing the use of rule 3.3.17 (ṣṛ śthire):
bhāva, showing the use of rule 3.3.18 (bhāve):

bhū  
1.3.1 bhūvādayo dhatavaḥ

bhū ghañ  
3.3.18 bhāve

bhū a  
1.3.3 halantyam
1.3.8 laśakvataddhite
1.3.9 tasya lopah

bhau a  
7.2.115 aco ŋṇiti

bhāva  
6.1.78 eco’yavāyāvah

tyāga, showing the use of rule 7.2.116 (ata upadhāyāḥ):

tyaja’  
1.3.1 bhūvādayo dhatavaḥ

tyaj  
1.3.2 upadeśe’janunāsika it
1.3.9 tasya lopah

atyaj ghañ  
3.3.18 bhāve

atyaj a  
1.3.3 halantyam
1.3.8 laśakvataddhite
1.3.9 tasya lopah

atyag a  
7.3.52 cajoḥ ku ghinṇyatoḥ

atyāga  
7.2.116 ata upadhāyāḥ
In this lesson, we will learn about a slightly more complicated pratyaya: the *kta-pratyaya*.

*kta* has a *k* as an *it*, which means that it prevents *guṇa* changes. Additionally, *kta* causes certain *dhātu* to undergo a change called *samprasāraṇa*, which we describe further below.

**Defining the pratyaya**

The definition of *kta* is somewhat roundabout. First, both *kta* and *ktavatu* are labeled as *niṣṭhā* by this *saṃjñā* rule:

```
ktaktavatū niṣṭhā (1.1.26)
kta-ktavatū niṣṭhā
```

The (pratyayas) *kta* and *ktavatu* are called *niṣṭhā*.

Through this definition, both of these *pratyayas* are defined as referring to the past tense in chapter 3:

```
bhūte (3.2.84)
bhūte
In the past tense, ...
```

```
niṣṭhā (3.2.102)
niṣṭhā
The *niṣṭhā* pratyayas [are used in the sense of the past tense].
```

However, *kta* (but not *ktavatu*) additionally implies *bhāve* or *karmaṇi prayoga* (roughly, stative or passive action), through rule 3.4.70, which we saw in the lesson on *kṛtya-pratyayas*:
तयोरेव कृत्यक्तकालर्थाः | ३.४.७०

tayoreva kṛtyaktakalantarthāḥ (3.4.70)
tayoh eva kṛtya-kta-khal-arthāḥ

kṛtya, kta, and [a pratyaya] having the meaning of khal express these two [i.e. karmanī and bhāve prayoga].

As well as some minor usages in kartari prayoga:

आदिकर्मणि कः कर्तरी च | ३.४.७१

ādikarmaṇi ktaḥ kartari ca (3.4.71)

ādi-karmaṇi ktaḥ kartari ca

In [the sense of] the start of an action, kta also expresses kartari prayoga.

गत्यर्थकर्मक्षिपशीवाससजनरुहजीयतिमयः | ३.४.७२

gatyarthakarmakaśliṣaśīṅsthāsavasajanaruha+jīryatibhyāḥca (3.4.72)
gatyartha-akarmaka-śliṣa-śīṅ-sthā-āsa-vasa-jana-ruha+jīryatibhyāḥ ca

Likewise after [dhātu]s that imply motion or are intransitive, as well as the [dhātu]s ślis, śt, sthā, ṛṣ, vasa, jan, ruh, and jṝ.

Sound changes

As a reminder, kṛt-pratyayas generally cause a guṇa change based on rule 7.3.84:

सार्वधातुकार्धधातुकायोः | ७.३.८४

sārvadhātukārḍhadhātukāyoh (7.3.84)
sārvadhātukā-ārdhadhātukāyoh

[An aṅga is replaced with guṇa] when followed by a sārvadhātuka or ārdhadhātuka suffix.

But since kta has k as an it — or to put it another way, because kta is kit — this change is blocked by rule 1.1.5:

विनिति च | १.१.५

kniti ca (1.1.5)
k-ṅiti ca

[guṇa and vṛddhi replace the ik vowels, but not] when followed by [terms that are] kit or nīt.
So in general, the vowel change here is simple: there isn't one! But in addition to this general behavior, *kit* pratyayas can also cause specific *dhātus* to undergo extra changes.

One change is that certain roots ending in a nasal sound lose that nasal sound:

अनुदात्तोपदेशवनतिनौत्यदीनामनुनासिकलोपो झलि विन्दिति।
6.4.37
anudāttopadesavanatitanotyādīnāmanunāsikalopojhali kniti (6.4.37)
anudatta-upadeśa-vanati-tanotī-ādinām anunāsika-lopajhali k-niti

A *dhātu* with an *anudātt* vowel in *upadeśa*, as well as [the *dhātu*] *van* and [the *dhātus*] in the list starting with *tan*, lose their final *anunāsika* when followed by a *kit* or *ṇit* [pratyaya] starting with a *jhal* consonant.

An example:

गम् + त → गत
gam + ta → gata
gone (to)

Another change is sometimes called *samprasāraṇa*. Through this process, the semivowel in a *dhātu* first becomes a vowel:

इग्यणअः म्प्ररारण म्। १.१.४५
igyaṇaḥ samprasāraṇam (1.1.45)

The substitution of an *ik* sound in place of a *yaṇ* sound is called *samprasāraṇa*.

And then deletes the following vowel, through a rule of ac-sandhi:

हेम्त्र: सम्प्रसारणम्। ६.१.१०८
samprasāraṇācca (6.1.108)
samprasāraṇat ca

Additionally, [the first of two vowels is retained] when the first vowel is *samprasāraṇa*.

Here are some examples of the change:
वच + त → उअच + त → उच + त
vac + ta → uac + ta → uc + ta
spoken

यज् + त → इअज् + त → इज् + त
yaj + ta → iaj + ta → ij + ta
sacrificed

And here are the dhātuś that use samprasāraṇa when a kit pratyaya follows:

<table>
<thead>
<tr>
<th>dhātuś</th>
<th>samprasāraṇa Form</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>vac</td>
<td>svapi</td>
<td>(6.1.15)</td>
</tr>
<tr>
<td>svap</td>
<td></td>
<td></td>
</tr>
<tr>
<td>yaj</td>
<td>adirñituḍavaḥ</td>
<td>(6.1.16)</td>
</tr>
<tr>
<td>vaś</td>
<td></td>
<td></td>
</tr>
<tr>
<td>vyac</td>
<td></td>
<td></td>
</tr>
<tr>
<td>vrasc</td>
<td></td>
<td></td>
</tr>
<tr>
<td>pracch</td>
<td></td>
<td></td>
</tr>
<tr>
<td>bhrasj</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

This applies to grah, jyā, vay [as a substitution for veñ], vyadh, vaś, vyac, vrasc, pracch, and bhrasj as well, which all also make the same change when followed by a nīt [pratyaya].

Sample prakriyāś

First, an example with kr. Since kr has an anudātta accent in its upadeśa form, it is prevented from using the connecting iṭ vowel by rule 7.2.10:

<table>
<thead>
<tr>
<th>dhātuś</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>ḍukṛṇi</td>
<td>1.3.1 bhūvādayo dhātavaḥ</td>
</tr>
<tr>
<td>kr</td>
<td>1.3.3 halantyam</td>
</tr>
<tr>
<td></td>
<td>1.3.5 adirñituḍavaḥ</td>
</tr>
<tr>
<td></td>
<td>1.3.9 tasya lopah</td>
</tr>
<tr>
<td>kr kta</td>
<td>3.2.102 niṣṭhā</td>
</tr>
<tr>
<td></td>
<td>3.4.70 tayoreva kṛtyaktakhalarthāḥ</td>
</tr>
</tbody>
</table>
Next, an example with gam showing lopa of the final m. gam also has an anudātta accent in its upadeśa form, so it likewise has no connecting īṭ vowel:

gamḷ̐

Finally, an example with sup showing samprasāranā. As in the examples above, īṭ is not used:

ñiṣvapa̐
śatṛ and śānac

To conclude this unit, let’s learn about the pratyayas śatṛ and śānac, which create words like the following:

- गच्छन्
  - gacchan
  - while going

- लभमानः
  - labhamānaḥ
  - while obtaining

śatṛ and śānac are sārvadhātuka pratyayas, so the changes they cause differ slightly from the changes caused by the ārdhadhātuka kṛt-pratyayas that we have seen so far.

Defining the pratyayas

śatṛ and śānac are replacements for laṭ and lṛṭ:

\[
\text{वर्तमाने लट्। ३.२.१२३} \\
vartamāne laṭ (3.2.123) \\
[The pratyaya] laṭ [is added after a dhātu] in the sense of present action.
\]

\[
\text{लटः शत्रःनात्रप्रथमासमाधिकरणेऽ ३.२.१२४} \\
lauḥ śatṛsānacāvaprathamāsamanādhi karāṇe (3.2.124) \\
lauḥ śatṛśānacau a-prathamā-samānādhi karāṇe \\
lauṭ is replaced by śatṛ or śānac when not coreferent with a [nominal] in the first [vibhakti],
\]

\[
\text{लक्षणहेत्वोऽ क्रियायः। ३.२.१२६} \\
lakṣaṇahetvoḥ kriyāḥ (3.2.126) \\
lakṣaṇa-hetvoḥ kriyāḥ \\
or when it is a sign or cause of the action.
These two [pratyayas] are called sat.

But how do we decide whether to use śatṛ or śānac? Simply, we use the one that matches the pada that the dhātu requires. Recall these two rules:

By rule 1.4.99, śatṛ is parasmaipada and replaces a parasmaipada pratyaya. And likewise, śānac is ātmanepada by rule 1.4.100 and replaces an ātmanepada pratyaya.

Adding vikaraṇas

Since śatṛ and śānac are both sīt, they are both sārvadhātuka pratyayas:
which means that they allow the normal vikaraṇa rules to apply. For example:

For a larger list of such rules, refer back to our lesson on vikaraṇas.

Otherwise, these pratyaya cause the standard sound changes.

**Sample prakriyas**

*bhay* is derived as follows:

\[
\begin{align*}
\text{bhū} & \quad 1.3.1 \text{ bhūvādayo dhātavaḥ} \\
\text{bhū laṭ} & \quad 3.2.123 \text{ vartamāne laṭ} \\
\text{bhū l} & \quad 1.3.2 \text{ upadeśe'janunāsika it} \\
& \quad 1.3.3 \text{ halantyam} \\
& \quad 1.3.9 \text{ tasya lopah} \\
\text{bhū l} & \quad 1.3.78 \text{ šeṣāt kartari paraśmaipadam} \\
\text{bhū šatṛ}^* & \quad 3.2.124 \text{ laṭaḥ šatṛśanacāvaprahamāsamānādhikaraṇe} \\
\text{bhū at} & \quad 1.3.2 \text{ upadeśe'janunāsika it} \\
& \quad 1.3.8 \text{ laśakvataddhite} \\
& \quad 1.3.9 \text{ tasya lopah} \\
\text{bhū ūp at} & \quad 3.1.68 \text{ kartari ūp} \\
\text{bhū a at} & \quad 1.3.3 \text{ halantyam} \\
& \quad 1.3.8 \text{ laśakvataddhite} \\
& \quad 1.3.9 \text{ tasya lopah} \\
\text{bhao a at} & \quad 7.3.84 \text{ sārvadhātukārdhadhātukayoḥ}
\end{align*}
\]
This prakriyā uses rule 6.1.97, which prevents the bad result *bhavāt:

अतो गुणे। ६.१.९७
ato guṇe (6.1.97)
ataḥ guṇe

[Non-word-final] a is deleted when a guṇa [vowel] follows.

śṛṇvat is derived as follows:

śṛu
śṛu laṭ
śṛu l
śṛu l
śṛu śatr
śṛu at
śṛ śnu at
śṛ śnu at
śṛ nu at
śṛ nv at
śṛṇvat

This prakriyā uses rule 1.2.4, which prevents the bad result *śarṇvat:
sārvadhātukam a-pit
sārvadhātuka [suffixes] that are not pit [are treated as nīt].
# Review

## Index of rules

$krt$-pratyayas are defined from rule 3.1.91 to 3.4.76.

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<th>Topic</th>
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<td>Definition of $kṛtya$</td>
</tr>
<tr>
<td>3.3.16 - 3.3.55</td>
<td>Definition of $ghañ$</td>
</tr>
<tr>
<td>3.2.124 - 3.2.133</td>
<td>Definition of $śatṛ$ and related pratyayas</td>
</tr>
</tbody>
</table>
taddhita
Introduction

Almost all of chapters 4 and 5 of the *Aṣṭādhyāyī* focuses specifically on the pratyayas (suffixes) that we add directly to a prātipadika. As a reminder, a prātipadika is defined as follows:

अर्थवद्धातुरप्रत्ययः प्रातिपदिकम् । १.२.४५
arthavadadhāturapratyayāḥ prātipadikam (1.2.45)
arthavat a-dhātuḥ a-pratyayaḥ prātipadikam
A meaningful [term] that is neither a dhātu (verb root) nor a pratyaya (suffix), [nor a term ending in a pratyaya, is called] prātipadika,

कृत्तद्धितसमासाश्च। १.२.४६
kṛttaddhitasamāsāśca (1.2.46)
kṛt-taddhita-samāsāḥ ca
and [terms ending with] kṛt or taddhita [pratyayas], as well as samāsas (compounds), [are called prātipadika].

We can add three types of pratyayas to a prātipadika. The first type is the sup-pratyaya, which creates subantas (nominals):

राम + सुँ → रामः
rāma + suʿ → rāmaḥ
Rama

नौ + टा → नावा
nau + ṭā → nāvā
with a boat

The second type is the strī-pratyaya, which creates feminine prātipadikas to which we can add sup-pratyayas:

कर्तृ + डीप् → कर्त्री
kartṛ + ṇīp → kartṛī
(female) doer
And the third type, the **taddhita-pratyaya**, is any other pratyaya we could add. taddhita-pratyayas create prātipadikas (stems) that eventually become *subantas*:

\[
\text{अदतित + अण् → आदित्य} \\
\text{aditi + an → āditya} \\
a descendant of Aditi; a *deva*
\]

\[
\text{सुन्दर + तरप → सुन्दरतर} \\
sundara + tarap → sundaratara \\
more beautiful
\]

**General rules for taddhitas**

Taddhita-pratyayas are introduced under the two pratyaya adhikāras that we’ve already seen:

<table>
<thead>
<tr>
<th>प्रत्ययः</th>
<th>३.१.१</th>
</tr>
</thead>
<tbody>
<tr>
<td>pratyayah (3.1.1)</td>
<td></td>
</tr>
<tr>
<td>pratyayah</td>
<td></td>
</tr>
<tr>
<td>… is a pratyaya (suffix).</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>परश्च</th>
<th>३.१.२</th>
</tr>
</thead>
<tbody>
<tr>
<td>paraśca (3.1.2)</td>
<td></td>
</tr>
<tr>
<td>paraḥ ca</td>
<td></td>
</tr>
<tr>
<td>… and [it is inserted] after [the base].</td>
<td></td>
</tr>
</tbody>
</table>

In addition, taddhita-pratyayas are scoped to appear only after prātipadikas and feminine bases:

<table>
<thead>
<tr>
<th>ख्याप्रतिपदिकात्</th>
<th>४.१.१</th>
</tr>
</thead>
<tbody>
<tr>
<td>nyāpprātipadikāt (4.1.1)</td>
<td></td>
</tr>
<tr>
<td>nī-āp-prātipadikāt</td>
<td></td>
</tr>
<tr>
<td>After [the strī-pratyayas] nī or āp or after a prātipadika, …</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>तद्धिताः</th>
<th>४.१.७६</th>
</tr>
</thead>
<tbody>
<tr>
<td>taddhitāḥ (4.1.76)</td>
<td></td>
</tr>
<tr>
<td>taddhitāḥ</td>
<td></td>
</tr>
<tr>
<td>… is called taddhita.</td>
<td></td>
</tr>
</tbody>
</table>
Traditionally, a *taddhita* is a way to condense a multi-word expression. For example, if we start with an expression like:

उपगोः अपत्यम्

*upagoḥ apatyam*

a descendant of Upagu

Then we can replace the helping word with a *taddhita*:

उपगोः + अपत्यम् → उपगोः + अण्

*upagoḥ + apatyam → upagoḥ + an*

a descendant of Upagu

By using rule 2.4.71, we can delete the *sup-pratyaya* in *upagoḥ*:

<table>
<thead>
<tr>
<th>सुपो धातुप्रतिपदिकयोः। २.४.७१</th>
</tr>
</thead>
<tbody>
<tr>
<td>supo dhātuprātipadikayoḥ (2.4.71)</td>
</tr>
</tbody>
</table>

supaḥ dhātu-prātipadikayoḥ

A *sup* followed by a *dhātu* or a *prātipadika* [is replaced by *luk*].

to create the following result:

उपगोः + अण् → उपगु + अण्

*upagoḥ + an → upagu + an*

a descendant of Upagu

Then we apply the normal sound change rules for *taddhitas* to get our final result:

उपगुः + अण् → औपगावः

*upaguḥ + an → aupagavah*

a descendant of Upagu

But if we start with such a multi-word expression, which word do we add the *taddhita* to? Simply, it is the subordinate one:
Among syntactically related [terms], optionally after the first …

Together, these five adhikāra rules mean “… is optionally added as a taddhita-pratyaya after either a prātipadika or the pratyayas āp and āp, if that term is subordinate in the syntactic relationship.”

Sound changes

taddhita-pratyayas are neither sārvadhātuka nor ārdhadhātuka, so they do not cause guṇa changes by 7.3.84 (sārvadhātukārdhadhātukayoḥ). By default, they cause no sound changes.

However, taddhitas are still able to cause vṛddhi changes, per rules 7.2.117 and 7.2.118:

Additionally, taddhitas might cause some small changes to the vowel they follow. The three rules below use a saṃjñā called bha, which roughly refers to an aṅga followed by a vowel or y:
We will see examples of these rules in the lessons to come.
**apatyā**

Many different *taddhitas* convey the sense of *apatyā* (“offspring”). In this lesson, we’ll consider some of these *taddhitas* and learn about the sound changes they cause.

**adhikāra rules**

In addition to the usual *adhikāras* for *taddhitas*, we have two more to consider. The first states that *aṇ* is a “default” *pratyaya* when no other is specified:

<table>
<thead>
<tr>
<th>प्राग्दीव्यतोषण्</th>
<th>४.१.८३</th>
</tr>
</thead>
<tbody>
<tr>
<td>prāgdīvyatoṇ</td>
<td>(4.1.83)</td>
</tr>
<tr>
<td>prāk dīvyataḥ aṇ</td>
<td></td>
</tr>
</tbody>
</table>

Up to the rule containing *dīvyati* (i.e. 4.4.2), *aṇ-pratyaya* …

And the second starts the *apatyā* section:

<table>
<thead>
<tr>
<th>तस्यापत्यम्</th>
<th>४.१.९२</th>
</tr>
</thead>
<tbody>
<tr>
<td>tasyāpatyam</td>
<td>(4.1.92)</td>
</tr>
<tr>
<td>tasya apatyam</td>
<td></td>
</tr>
</tbody>
</table>

In the sense of “the offspring of,” …

**aṇ**

Because it is *ṇit*, *aṇ* will cause *vṛddhi* changes to the base's first vowel.

**iṅ**

*iṅ* is used in the sense of *apatyā* after bases ending with short *a*:

<table>
<thead>
<tr>
<th>अत इञ</th>
<th>४.१.९५</th>
</tr>
</thead>
<tbody>
<tr>
<td>ata iṅ</td>
<td>(4.1.95)</td>
</tr>
<tr>
<td>atāḥ iṅ</td>
<td></td>
</tr>
</tbody>
</table>

After [a base ending in] *a*, *iṅ* [is an optional *taddhita-pratyaya* conveying the sense of “offspring”].

Because it is *ṇit*, *iṅ* will cause *vṛddhi* changes to the base's first vowel.
After feminine stems, ḍhak is an optional taddhita-pratyaya conveying the sense of “offspring”.

Thus the true pratyaya is eya, with k as an it letter. This taddhita will then cause a vṛddhi change to the first vowel of the base, like so:

\[
\text{vinatā} + \text{ṭṛk} \rightarrow \text{vainateya}
\]

Thus the true pratyaya is eya, with k as an it letter. This taddhita will then cause a vṛddhi change to the first vowel of the base, like so:

\[
\text{vinatā} \rightarrow \text{vainateya}
\]

offspring of Vinata

**dhak and the it-saṃjhita rules**

By rule 1.3.7 (cutū) and 1.3.9 (tasya lopaḥ), we would normally delete the first dh of dhak. But if we did so, then rule 7.1.2 above would have no scope to apply and would be worthless (vyartha).

Since every rule in the system is stated for a reason, we infer that rule 1.3.7 does not apply to any pratyayas that are in scope for rule 7.1.2.

**Sample prakriyās**

Our first example uses an and rule 6.4.146 (orguṇah):

\[
\text{upagoḥ apatyam}
\]
| upagoḥ an | 4.1.92 tasyāpatyam |
| upagu an | 2.4.71 supo dhātuprātipadikayoḥ |
| upagu a  | 1.3.3 halantyam |
|          | 1.3.9 tasya lopaḥ |
| aupagu a | 7.2.117 taddhiteśvacāmādeḥ |
| aupago a | 6.4.146 orguṇaḥ |
| aupagava | 6.1.78 ecoʿyāvāyāvah |

Our next uses iṇ and rule 6.4.148 (yasyeti ca):

<table>
<thead>
<tr>
<th>daśarathasya apatyam</th>
</tr>
</thead>
<tbody>
<tr>
<td>daśarathasya iṇ</td>
</tr>
<tr>
<td>daśaratha iṇ</td>
</tr>
<tr>
<td>daśaratha i</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>dāśaratha i</td>
</tr>
<tr>
<td>dāśarathi</td>
</tr>
</tbody>
</table>

And this one uses ḍhak and again uses rule 6.4.148:

<table>
<thead>
<tr>
<th>vinatāyāḥ apatyam</th>
</tr>
</thead>
<tbody>
<tr>
<td>vinatāyāḥ ḍhak</td>
</tr>
<tr>
<td>vinata ḍhak</td>
</tr>
<tr>
<td>vinata ḍha</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>vinata eya</td>
</tr>
<tr>
<td>vainatā eya</td>
</tr>
<tr>
<td>vainateya</td>
</tr>
</tbody>
</table>
atiśāyana

Four taddhitas convey the sense of atiśāyana (“excellence” or “excess”): tarap, tamap, īyasu, and isthan.

These four taddhitas are specified in the following rules:

अतिशायनेतमाविष्ठनोऽ। ५.३.५५
atiśāyane tamāvīṣṭhanau (5.3.55)
atiśāyane tamap-īṣṭhanau
In the sense of supremacy, tamap or īṣṭhan [is optionally added as a taddhita-pratyaya].

तिनश्च। ५.३.५६
tinaśca (5.3.56)
tinaḥ ca
And [they can also be used in the same sense] after a tin-pratyaya.

dvivacanavibhajyopapade tārabīyasunau। ५.३.५७
dvivacana-vibhajya-upapade tarap-īyasu
[Under the same conditions], when describing two [concepts] or when making a distinction, tarap or īyasu (is used).

अजादी गुणवचनादेव। ५.३.५८
ajādī guṇavacanādeva (5.3.58)
ac-ādī guṇavacanāt eva
The two starting with vowels (i.e. īṣṭhan and īyasu) are used only after [prātipadikas] denoting quality.

Sound changes

tarap and tamap follow the general rules and cause no extra sound changes.

īyasu and īṣṭhan cause lopa of the prātipadika’s last segment. First, recall the definition of the term ṭī:
From the last vowel onward is called ṭi.

With this term, we can define the relevant lopa rules:

The final tr [pratyaya] [of an aṅga undergoes lopa] when followed by [the pratyayas] iṣṭha, iman, or ḫyas.

[Otherwise, these pratyayas condition lopa] of the ṭi [of the aṅga].

Rule 6.4.155 will cause changes like the following:

laghu + iṣṭhan → laghiṣṭha
lightest

Sample prakriyās

For tarap:

sundara 1.2.45 arthavadadhāturapratyayah prātipadikam
sundara tarap 5.3.57 dvivacanavinbhajyopadē tarabīyasunau
sundaratara 1.3.3 halantyam
1.3.9 tasya lopaḥ

For tamap:

sundara 1.2.45 arthavadadhāturapratyayah prātipadikam
sundara tamap  5.3.55 atiśāyane tamabiśṭhanau
sundaratama  1.3.3 halantyam
               1.3.9 tasya lopaḥ

For īyasuḥ:

laghu  1.2.45 arthavadadhāturapratyayah prātipadikam
laghu īyasuḥ  5.3.57 dvivacanavībhajyopade tarabīyasunau
laghu īyas  1.3.2 upadeśe’janunāsika it
               1.3.3 halantyam
               1.3.9 tasya lopaḥ
laghiṣṭha  6.4.155 ṭeḥ

For iṣṭhan:

laghu  1.2.45 arthavadadhāturapratyayah prātipadikam
laghu iṣṭhan  5.3.55 atiśāyane tamabiśṭhanau
laghu iṣṭha  1.3.3 halantyam
               1.3.9 tasya lopaḥ
laghiṣṭha  6.4.155 ṭeḥ
The **matuḥ-pratyaya** creates common words like *hanumān* and *bhagavān*. It has many specific use cases, but here is the general pattern:

\[ \text{तदस्यास्त्यस्मिन्नित्मतुप्} ५.२.९४ \]
\[ tadsasyāstyaśminniti matuḥ (5.2.94) \]
\[ tat asya asti asmin iti matuḥ \]
[The taddhita-pratyaya] matuḥ [is optionally introduced after a prātipadika or theṅī and āp pratyaya] after a term denoting] that which one possesses or contains.

### Sound changes

**matuḥ** generally causes no sound changes. The major exception is that *mat* becomes *vat* when it follows certain sounds.

Here is the specific rule from the *asiddha* section of the *Aṣṭādhyāyī*:

\[ \text{मादुपधायाच मतोर्वन्यावादिभ्यः} ८.२.९ \]
\[ madupadhāyāśca mato'rvan'ya-vādibhyah (8.2.9) \]
\[ m-āt upadhāyāḥ ca matoḥ vāḥ a-yavādibhyāḥ \]
After the sounds *m*, *a*, and *ā*, even if penultimate, [the first letter of the pratyaya] matuḥ becomes *v* if not following an item in the list beginning with *yava*.

And some examples:

\[ \text{भग + मत्} → \text{भगवत्} \]
\[ bhaga + mat → bhagavat \]
(final *a*)

\[ \text{लक्ष्मी + मत्} → \text{लक्ष्मीवत्} \]
\[ lakṣmī + mat → lakṣmīvat \]
(penultimate *m*)
Sample *prakriyās*

With *mat*:

- *mati* 1.2.46 *kṛttaddhitasamāsāśca*
- *matimat* 5.2.94 *tadasyāṭyasminniti matup*

With *vat* and a penultimate *a*:

- *yaśas* 1.2.46 *kṛttaddhitasamāsāśca*
- *yaśas mat* 5.2.94 *tadasyāṭyasminniti matup*
- *yaśasvat* 8.2.9 *mādupadhāyāśca matorvo’yavādibhyah*

With *vat* and a final *a*:

- *bhaga* 1.2.46 *kṛttaddhitasamāsāśca*
- *bhaga mat* 5.2.94 *tadasyāṭyasminniti matup*
- *bhagavat* 8.2.9 *mādupadhāyāśca matorvo’yavādibhyah*
### Review

**Index of rules**

`taddhita-pratyayas` are defined from rule 4.1.76 to the end of chapter 5.

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samāsa
Introduction

In this unit, we will extend the knowledge we’ve built up and focus on *samāsas* (compounds). Most of the rules for *samāsas* are in sections 2.1 and 2.2 of the *As-ṭādhyāyī*.

The *samāsa* is one of Sanskrit’s most notable features. Simple *samāsas* generally have just two words. But *samāsas* can themselves be combined to make longer *samāsas*, so there is no hard limit on how long they can be.

Since we have a basic understanding of *subantas*, we can understand the *samāsa*’s core principles fairly easily. Generally, the idea is that if two *subantas* have some kind of semantic relationship:

\[\text{गजस्य वन म्} \quad \text{gajasya vanam} \quad \text{the elephant's forest}\]

then we can remove the *sup-pratyaya* from the first *subanta* and combine the two into a single word:

\[\text{गजस्य वन म्} \rightarrow \text{गजवन म्} \quad \text{gajasya vanam} \rightarrow \text{gajavanam} \quad \text{the elephant's forest} \rightarrow \text{elephant forest}\]

But there are two subtleties here. First, not all semantic relationships are allowed to be expressed as *samāsas*. Second, some semantic relationships exist only as *samāsas* and cannot be expressed any other way. So in the lessons to come, we will learn how the system defines which are which.

*adhikāra* rules

All *samāsas* are defined under the following two *adhikāra* rules:
Rule 2.1.4 inherits the term sup by anuvṛtti from rule 2.1.2, which is unrelated to samāsas. Together, rules 2.1.3 and 2.1.4 define a samāsa as a combination of two subantas.

**Word ordering in a samāsa**

How do we ensure that we order the words in a samāsa correctly? Simple, we use the following two rules:

In the rules to come, anything stated in the first vibhakti is placed first in the compound, and anything in the third vibhakti is placed second.

**sup deletion in a samāsa**

Finally, we use this rule to delete the sup ending of the first subanta:
A sup followed by a dhātu or a prātipadika is replaced by luk.

However, a very small number of samāsas do not use luk here. Fittingly, they are called aluk-samāsas. For example, the word ātmanepadam is an aluk-samāsa.
The *avyayībhāva* is a compound whose first member is an *avyaya* (uninflected word). An example:

\[
\text{यथाशक्ति}
\]
\[
yathāśakti
\]
according to (one's) power

### Defining the *avyayībhāva*

We first introduce another *adhikāra*:

\[
\text{अयनीभरावअः। २.१.५}
\]
\[
\text{avyayībhāvaḥ (2.1.5)}
\]
\[
\text{avyayībhāvaḥ}
\]
... is an *avyayībhāva*.

Then the definition begins. First, the general case:

\[
\text{अयसं  वभनीपस्कृद्ध्स्कृ म् -अथरार्णभरावरात्ययराम्प्रत-}
\]
\[
\text{शब्दप्ररादुभरार्णवपश्चराद म् -यथरानषुपटूर्णयलौगपद्य-}
\]
\[
\text{रादृश्यसामपत्तिसाकल्यांत्यावचनेषु। २.१.६}
\]
\[
\text{avyayaṃ  vibhaktisamīpasamṛddhy vyṛddhy-arthāḥbhāvātyāyāsampratī-}
\]
\[
\text{śabdaprādurbhāvapaścād-yathānupūryayaugapadya-}
\]
\[
\text{sādṛṣyasampattisākalyāntavacaneṣu (2.1.6)}
\]
\[
\text{avyayaṃ vibhakti-samāpa-samṛddhi-vyṛddhi-arthāḥbhāva-avyaya-asampratī-}
\]
\[
\text{śabdaprādurbhāva-paścāt-yathā-anupūryya-avyagapadya-sādṛṣya-sampatti-}
\]
\[
\text{sākalya-antavacaneṣu}
\]

An *avyaya* [used with a related *subanta* becomes an *avyayībhāva samāsa*] when the *avyaya* has the sense of: a *vibhakti*, nearness, prosperity, loss, absence, expiry, non-presence, appearance of a word, later, accordance, sequence, simultaneity, similarity, entirety, or limit.

Rule 2.1.6 is massive and allows examples like *upakumbham* (“near the pot”), *nirmakṣikam* (“without flies”), and *saṇṭram* (“along with the grass”). The other rules for an *avyayībhāva* are more straightforward:
यथासादृश्ये २.१.७
yathāsādṛṣye (2.1.7)
yathā a-sādṛṣye
yathā when not in the sense of sādṛṣya (similarity) [becomes an avyayībhāva samāsa when used with a related subanta].

यावदवधारणे २.१.८
yāvadavadhāraṇe (2.1.8)
yāvat avadhārane
Likewise for yāvat in the sense of equal quantity;

सुप्रतिनामात्रार्थे २.१.९
suppratiṇā mātrārthe (2.1.9)
sup pratiṇā mātra-arthe
a sup [used] with prati when in the sense of “a small amount”;

अक्षशालकासंख्याः परिणा २.१.१०
akṣaśaḷākāsaṃkhyāḥ pariṇā (2.1.10)
akṣa-śaḷākā-saṃkhyāḥ pariṇā
and the words akṣa (dice), śaḷākā (stick), and numerals with the word pari.

Examples:

यथावृद्धम् ब्राह्मणान् आमन्त्रयस्व
yathāvṛddham brāhmaṇān āmantrayasva
Invite the brahmins who are old (vṛddha)
(2.1.7)

यावत्फलम्
yāvatphalam
as many as there are fruits
(2.1.8)
सूपप्रति
sūparati
a little bit of soup
(2.1.9)

अक्षपरि
aksapari
missed by (one) die
(2.1.10)
tatpuruṣa

The tatpuruṣa is a versatile compound whose first member describes its second:

राज्ञ: पुत्र: → राजपुत्र:
rājñaḥ putraḥ → rājaputraḥ
the king's son; a prince

adhikāra rules

Most of the system's samāsa rules are specifically about the tatpuruṣa. These rules are within the scope of the following two adhikāra rules:

विभाषा। २.१.११
vibhāṣā (2.1.11)
vibhāṣā
Optionally, ...

tatpuruṣa। २.१.२२
tatpuruṣaḥ (2.1.22)
tatpuruṣaḥ
... is a tatpuruṣa.

The first rule states that the tatpuruṣa is optional. For example, both rājñaḥ putraḥ and rājaputraḥ express the same semantics. In comparison, the avyayābhāva is an obligatory (nitya) compound; we cannot break the compound into separate words while keeping the same semantics.

The second rule, meanwhile, just states that the following rules define a tatpuruṣa.

The tatpuruṣa with different vibhaktis

Generally, the first word of the tatpuruṣa can appear in any vibhakti in relation to the second. But some of these vibhaktis are more restricted than others:
dvitīyā śritātītapatitagatātyastaprāptāpannaiḥ (2.1.24)

[A subanta ending in] the second (vibhakti used with the words) śrita, atīta, patita, gata, atyasta, prāpta, āpanna [optionally creates a tatpuruṣa].

tṛtīyā śrita-atīta-patita-gata-atyasta-prāpta-āpannaiḥ (2.1.30)

[Likewise for a subanta ending in] the third (vibhakti) with a word denoting a quality (guṇavacana) when it is the cause of it becoming so;

tṛtīyā tat-kṛta-arthena guṇa-vacanena (2.1.30)

[kartṛkaraṇe kṛtā bahulam (2.1.32)]

[a subanta ending in] the third (vibhakti), variously, with a kṛt in the sense of kartṛ (agent) or karaṇa (instrument);

caturthī tadarthārthabalihitasukharakṣitaiḥ (2.1.36)

caturthī tadartha-artha-bali-hita-sukha-rakṣitaiḥ (2.1.36)

[a subanta ending in] the fourth (vibhakti) with [a subanta] denoting the reason, or that is the word artha, bali, hita, sukha, or rakṣita;

pañcamī bhayena (2.1.37)

pañcamī bhayena (2.1.37)

[a subanta ending in] the fifth (vibhakti) with the word bhaya (fear);

saptamī śauṇḍaiḥ (2.1.40)

saptamī śauṇḍaiḥ (2.1.40)

[a subanta ending in] the seventh (vibhakti when used with the words in the list starting with) śauṇḍa;
Examples:

शरणं गतः — शरणगतः:
śaraṇāṃ gataḥ → śaraṇagataḥ
gone to shelter (2.1.24)

शङ्कुलया क्षणं — शङ्कुलक्षणं:
śaṅkulayā khaṇḍaḥ → śaṅkulākhaṇḍaḥ
a piece (cut off) by shears (2.1.30)

अग्निनां घातः — अग्निदग्धाः:
agninā dagdhāḥ → agnidagdhaḥ
burned by the fire (2.1.32)

कुण्डलया हिरण्यम् — कुण्डलहिरण्यम्
kuṇḍalāya hiraṇyam → kuṇḍalahiraṇyam
gold for earrings (2.1.36)

चौरात् भयम् — चौरभयम्
caurāt bhayam → caurabhayam
fear from thieves (2.1.37)

अक्षेषु सौन्द — अक्षासौन्द
akṣeṣu śauṇḍa → akṣaṣauṇḍa
fond of dice (2.1.40)

In comparison, the first and sixth vibhaktis are less restricted. The sixth vibhakti has no restriction at all:

षष्ठै। २.२.८
ṣaṣṭhī (2.2.8)
ṣaṣṭhī
[A subanta ending in] the sixth (vibhakti) [optionally creates a tatpurusa].

And the first vibhakti is acceptable whenever the first word qualifies the second in some way:
विशेषणम् विशेष्येण बहुलम्। २.१.५७
viśeṣaṇam viśeṣyeṇa bahulam (2.1.57)
viśeṣaṇam viśeṣyeṇa bahulam
An adjective with its qualified term variously [forms a tatpurusa].

Examples:

राजः पुत्रः → राजपुत्रः
rājñaḥ putraḥ → rājaputraḥ
the king’s son; a prince (2.2.8)

नीलः उत्पलः → नीलोपतलः
nīlaḥ utpalaḥ → nīlopatalaḥ
blue lotus (2.1.57)
**bahuvrīhi**

Generally, the *bahuvrīhi* is a compound whose members describe a third idea that is not explicitly stated:

बहुव्रीहि: (री)

*bahuvrīhiḥ* (strī)

(a woman) who has much rice

The *bahuvrīhi* is much less complicated than the *tatpuruṣa*, and we can account for most of its behavior with just a few rules:

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<td>śeṣo bahuvrīhiḥ (2.2.23)</td>
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The remaining *samāsas* are called *bahuvrīhi*.

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<th>अनेकमन्यपदार्थः। २.२.२४</th>
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<td>anekam anya-pada-arthe</td>
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Many related (*padas*) denoting a separate *pada* [optionally become a *bahuvrīhi*].

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<th>तेन सहेति तुल्ययोगे। २.२.२८</th>
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<td>tena saheti tulyayoge (2.2.28)</td>
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<tr>
<td>tena saha iti tulya-yoge</td>
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The word *saha* [with a *subanta*] that has the same relation to the action (as the word it describes) [optionally becomes a *bahuvrīhi*].

Examples:

महान् रथो यस्य → महारथः:

*mahān ratho yasya → mahārathaḥ*

whose chariot is great (2.2.24)
saputrah (āgataḥ)
(came) with his son (2.2.28)
**dvandva**

The *dvandva* is just a collection of words that would otherwise be connected with the word *ca* (“and”):

\[
\text{रामो लक्ष्मणश् च} \rightarrow \text{रामलक्ष्मणों}
\]

*Rama and Lakshmana*

With the following two rules as context:

**विभाषा। २.१.११**

\[
vibhāṣa (2.1.11)
\]

vibhāṣā

Optionally, ...

**अनेकमन्यपदार्थे। २.२.२४**

\[
anekamanyapadārthe (2.2.24)
\]

anekam anya-pada-arthe

Many related (padas) denoting a separate *pada* [optionally become a *bahuvrīhi*].

We can define a *dvandva* quite simply:

**चार्थ द्वन्द्वः। २.२.२९**

\[
cārthe dvandvāḥ (2.2.29)
\]

cā-arthē dvandvāḥ

[Many related *padas*] (connected) in the sense of “and” [optionally become a *dvandva*].
## Review

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