


NTI Reader

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Understanding Buddhist Sanskrit Terms

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Introduction

This document is intended to give the reader some understanding of Sanskrit terms and text, primarily relating to Buddhism. It is incomplete and just a collection of notes at the moment.

You may wonder why Sanskrit and not Pali, since it is the language for the Theravada Canon. Sanskrit was the main language for religious, literary, and academic use throughout Indian history and it is significant that the Mahayana texts were primarily written in Sanskrit.

I hope that readers can overcome several questions obstacles that Buddhists will encounter seeing Sanskrit terms in studying Buddhism:

- What are the strange looking diacritics found on Romanizations of Sanskrit terms? I will describe the Sanskrit alphabet, use of the diacritics in the International Alphabet for Sanskrit Transliteration (IAST), and introduce some tools to decipher them. How can I search for Sanskrit words if I don't know the diacritics? This is a more difficult question because Internet and dictionary search tools may not work but having some knowledge of IAST can help.
- What are the Indic scripts used to write Sanskrit and how can I read them? I will describe the Devanāgarī writing system for Sanskrit and introduce analysis and transliteration tools.
- Why are some Sanskrit words so long? Long compound words are a characteristic of Sanskrit words and their number of combinations is not fixed. Tools are important to break them apart for deciphering their meaning.
- Why are there some many different forms for the same word? Sanskrit is more phonetic than English and subtle changes are spelled out with rules called Sandhi. These are listed below in tabular form. In addition, there are many more forms of inflection of words and Sanskrit grammar is more complex than English. I will give a brief outline of Sanskrit grammar and provide pointers to tools.

Background

Tools

One of the challenges in learning Sanskrit is recognizing the letters, which can be especially difficult with the many diacritics that are used with Devanāgarī. Many people are also not familiar with International Alphabet for Sanskrit Transliteration (IAST) and International Phonetic Alphabet (IPA) symbols. We will see below in the Sanskrit grammar that Sanskrit words are subject to changes based on their grammatical function. These rules can be more complex than English. For example, the letters *ḥ* or *ṃ* are added to Sanskrit nouns depending on whether they are used as subject (nominative case) or object (accusative case). These changes in word morphology may not be listed in dictionaries, which usually only list the reference form. The section Sanskrit grammar will give some to help using online dictionaries.

I have found one of the most useful IAST-Devanāgarī-IAST Converter. See the References section for a pointer to this and other tools.

Historic background

It is informative to give some background on Sanskrit to save the reader from doing his or her own independent study to be able to understand the content of the document. Since English is more closely related to Sanskrit than it is to Chinese and English words for Buddhist concepts, it is important to make direct use of Sanskrit terms, which can be much more meaningful to English readers than Chinese.

Sanskrit is one of the oldest Indo-European languages. It belongs to the Indo-Iranian branch of languages of the Indo-European family. A precursor language to Sanskrit was brought to India by the Aryans sometime after the decline of the Indus Valley Civilization (3300–1300 BCE). The English word Sanskrit (Chinese: 梵語) is derived from the word संस्कृतम् Saṃskṛtam, literally meaning 'refined speech.' The English word 'Aryan' (Chinese: 雅利安人) is derived from the Sanskrit आर्य ārya, meaning 'noble.' The table below comparing names for several numbers in different languages shows the relationship of some core words shared by Indo-European languages.

Language	Three	Four	Five
German	drei	vier	funf
Dutch	Drie	vier	vijf
Gothic	threis	fidwor	fimf
French	trois	quatre	cinq
Spanish	tres	cuatro	cinco
Latin	tres	quattuor	quinque
Greek	treis	tetra	penta
Sanskrit	tri / trayas	catur	pañca
Chinese	san	si	wu

Table 1: Comparison of names for several numbers in different languages (after Baker and Hengeveld, 2012)

There are many changes that languages undergo over time but there is a fundamental genetic relation between English and Sanskrit that is apparent from core words in the languages, as the table above shows. Systematic phonetic transformations and splitting of language groups are studied by linguists to explain the evolution of languages and give interesting insights cultures and the exchange of ideas between cultures. Sanskrit is from an early branch that split off from a Proto-Indo-European language and English is based on a proto-Germanic language also derived from this Proto-Indo-European language (Baker and Hengeveld, 2012, chapter 17). Ancient Greek is a comparatively close relative of Sanskrit. This can be seen by comparing the

words for five: penta (Greek) and pañca (Sanskrit). Other examples are mother - mātár (Vedic Sanskrit), mētēr (Greek); and brother - bhrátar (Vedic Sanskrit), phrátēr (Greek). The lineage of English is Proto-Indo-European, Germanic, West Germanic, Old English, Middle English, and finally Modern English [Shay 2008].

Chinese is a member of a completely different language family, Sino-Tibetan. It can be seen from the table above that the Chinese words for three, four, and five are not related to the other entries in the table.

Some changes in over time can be explained by consonant shift and can help us predict some similarities between Sanskrit and English. Grimm's law describes a shift in consonants from Proto-Indo-European to Germanic, also known as Old German. The table below lists these [Shay 2008].

Proto-Indo-European	Germanic	Sanskrit example	English example
b ^h	b	bhratar	brother
d ^h	d	dhrajati	drag
g ^h /g ^{wh}	g/gw		
b	p		
d	t		
g/g ^w	k/k ^w		
p	f	pad	foot
t	th		

Table 2: Consonant shift from Proto-Indo-European to Germanic

Sanskrit can be divided into three periods: Old or Vedic, Middle or Classical, and Modern. Old Sanskrit dates back to about 1500 BCE. The earliest Sanskrit text is the Rigveda (Devanāgarī: ऋग्वेद ; IAST: ṛgveda ; Chinese: 梨俱吠陀), which contains a collection of hymns, dates to this time. The Vedas were transmitted orally and only written down in text much later. Classical Sanskrit diverges from Vedic Sanskrit when it diverged from spoken language evolving into a language for religious and scholarly purposes. Classical Sanskrit is defined by a text written by Panini (Devanāgarī: पाणिनि ; IAST: pāṇini ; Chinese: 波你尼) describing the grammar of the language in the 4th century BCE. Panini's text is called Ashtadhyayi (Devanāgarī: अष्टाध्यायी ; IAST: Aṣṭādhyāyī ; Chinese: 八篇書), literally meaning 'eight chapters.' In this respect, there are some parallels between Sanskrit and literary Chinese, in that literary Chinese continued use in literature long after it diverged from spoken Chinese and is still common today. Spoken Indian languages are often called Prakrit.

Buddhist sutras were originally recited in one or more Prakrit languages and then later written in Sanskrit and Pali. Pāli (Chinese: 巴利文) is a Prakrit language from the Middle Indo-Aryan language family and is the language that the Theravada Buddhist Canon is preserved in. It was only several hundred years after the time of the Buddha that the sutras and other Buddhist literature was written in Sanskrit. Asvaghosa (Devanāgarī: अश्वघोषः ; IAST: Aśvaghōṣa ; Chinese: 馬鳴) was one of the first Buddhist writers to use Sanskrit. He was very influential in Buddhism, especially in Mahayana Buddhism, and also in classical Sanskrit literature in general. The early origins of Mahayana Buddhist text and how they came to be written down in Sanskrit is still largely a mystery [Williams 2009] but they gave rise to a voluminous collection of Mahayana literature. The Korean Tripitaka is composed of over 50 million characters. By comparison, the total number of surviving texts written in Old English is only 400 manuscripts [Shay 2008], all written near the end of the First Millennium.

Modern Indo-Aryan languages include Hindi, Urdu, Bengali, Nepali, and Kashmiri. They are closely related to Sanskrit.

The Buddha was born as Siddhartha Gautama and lived circa 566 to 486 BCE. These dates estimated in relation to the Mayuran king Ashoka (Devanāgarī: अशोकः, IAST: aśoka, Chinese: 阿育王). The life of the Buddha is described in several sources, including the Mahāvastu, Lalitavistara, and Buddhacarita.

Sanskrit

Reading Sanskrit Buddhist requires an understanding of the language and familiarity with a number of Buddhist terms. Hopefully, this page can help as a starting resource. A more detailed guide is provided by Dhammajoti's book *Reading Buddhist Sanskrit Texts: An Elementary Grammatical Guide* (2016).

Translations of Buddhist classics to Chinese

There was cultural exchange between India and China in both directions: Chinese Buddhists travelled to India and Indian monks travelled to China. In addition, the Silk Road and many kingdoms along it were important in the transmission of Buddhism to China. Translators of the classic texts came from each of these areas and these translators are still used in modern times in Chinese Buddhism. Most texts begin with a statement about the identity of the translator. The first sutra to be translated to Chinese was the *Sutra of Forty-Two Sections* (Chinese: 佛說四十二章經) by the Monks Kasyapamatanga and Dharmaratna, who arrived in Luoyang, the capital of the Eastern Han in 63 CE. Some of the most prolific translators of Buddhist texts include Kumarajiva (Chinese: 鳩摩羅什) from India and Xuanzang (Chinese: 玄奘) from the Luoyang area in China. Some were from areas along the Silk Road, including An Shi Gao (Chinese: 安世高) from Parthia; Lokaksema (Chinese: 支婁迦讖), Zhi Yao (Chinese: 支曜), Zhi Qian (Chinese: 支謙), and Jnanagupta (Chinese: 闍那崛多) from Gandhara; Kang Seng Hui (Chinese: 康僧會) from Sogdia, and Dharmarakṣa (Chinese: 竺法護) from Dunhuang. Yi Jing

(Chinese: 義淨) from China, rather than travelling over the Silk Road, travelled to India by sea stopping in Srivijaya in present-day Indonesia, which was a major Buddhist center at the time, translating texts to Chinese.

Many ethnic groups along the Silk Road, such as the Yuezhi (Chinese: 月氏), located in areas in present-day Afghanistan and Xinjiang, China, and Sogdian (Chinese: 粟特), located in areas in present-day Iran, and the Xianbei (Chinese: 鮮卑) located in present-day Mongolia and the Chinese central plains, besides producing translators, were important for the transmission of Buddhism to China by means of their strong beliefs. These peoples used other languages in addition to Sanskrit. The wide geographic range of people and places involved in translating Buddhist texts indicates the extensive influence of Buddhism, Sanskrit, and Indian culture throughout Asia in the first millennium. Bodhidharma (Chinese: 菩提達摩), who travelled to China from India in the 6th century, is known as the patriarch of the Chan (also known as Zen) school in China, which is one of the largest schools of Buddhism today. We know of this cultural exchange between China, India, and other neighboring areas through the classic texts Fa Xian's *A Record of Buddhist Kingdoms* (4th century), *The Record of the Buddhist Monasteries of Luoyang* (6th century), Xuan Zang's *Record of the Western Regions* (7th century), others. The picture below shows a statue of Xuanzang returning to China from India with the scriptures from the city of Luoyang.

Statue of Xuanzang, Luoyang, China

The earliest Buddhist scriptures that were brought to China were written Sanskrit in the first century (Shen 2009). In the early stages of translation some scriptures were translated based on oral recitation by travelling monks. In addition, some scriptures were translated to Chinese from Prakrit languages or the languages of ethnic groups along the Silk Road. Given the circumstances and the difficulty of translating Sanskrit into Chinese the different Chinese translations are incredibly similar.

Sanskrit had a strong influence on the Chinese language after its introduction to China with Buddhist scriptures. It led to the use of *fanqie* rhyming style to indicate the pronunciation of Chinese characters. It influenced Chinese literary style, leading more use of metaphors, and a style more closely resembling everyday speech. The scriptures and related Buddhist stories also gave rise to Chinese folk literature, such as *Xiang Mo Bian Wen*. It is estimated that approximately 30,000 Sanskrit words were introduced into Chinese, all connected with Buddhism (Shen 2009). Many of the manuscripts providing us with this knowledge come from



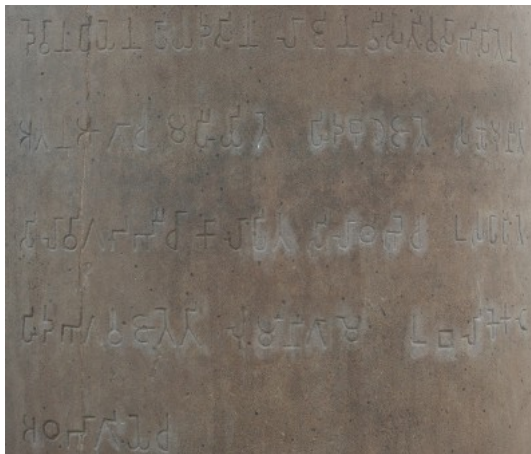
Dunhuang, an oasis town in the dessert and ancient cross-roads between East and West. The Library Cave at Mogao Caves (Chinese: 莫高窟) is a major archeological discovery of historic texts written in Chinese, Sanskrit, and other languages. Most of the texts relate to Buddhism.



Mogao Caves, Dunhuang, China

Written Sanskrit

Sanskrit has been written using different scripts at different times and places in history. Early text in India was written in Brahmi script (Devanāgarī: ब्राह्मीलिपि; IAST: Brāhmīlipi; Chinese: 婆羅米文). The earliest writing in Brahmi is in inscriptions from King Ashoka, who unified India circa 269 BCE. The picture below shows an Ashokan inscription from Lumbini, recording that it is the place of birth of the Buddha, that King Ashoka visited, and that the area is entitled to a reduction in tax. Note that the language is a prakrit, not Sanskrit.



Brahmi Inscription on the Ashoka Pillar at Lumbini, Nepal (circa 304–232 BCE)

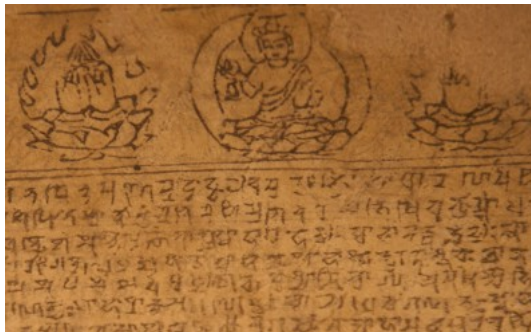
Brahmi script probably originated from Aramaic script. Most inscriptions in Brahmi script are for Prakrit, rather than Sanskrit. The Ashokan inscriptions were mostly written in Magadhi Prakrit in the eastern part of India and Kharoshthi script in the western part. Magadhi Prakrit is the language believed to be spoken by the Buddha. Kharosthi was another script used to write the Gandhari language, a kind of Prakrit, and Sanskrit. Kharosthi was derived from used in Aramaic in Gandhari at about the same time as Brahmi script. The Gandharan Buddhist Texts were written in Kharosthi have been discovered in Afghanistan. They date to the 1st century CE and are the oldest written Buddhist scripts known at present.

Buddhist texts were also written in Brahmi. An example from a fragment of a Sanskrit manuscript from Dunhuang is shown below.



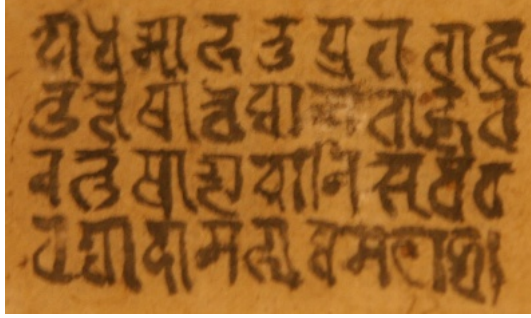
Fragment of a Sanskrit Manuscript written in Brahmi script, Dunhuang, Yuan (1271–1368 BCE)

Some Buddhist text were written in Sanskrit with Gupta script (Chinese: 笈多文). Gupta script evolved from Brahmi. A version of the Medicine Buddha Sutra written in Gupta Script was discovered in Gilgit, Pakistan. The picture below shows Sanskrit text from a dharani unearthed in Chengdu, China.



Sanskrit text, Tang (618—907), National Museum of China, Beijing

Gupta Script gave rise to a number of other scripts, including Siddham (Devanāgarī: सिद्ध; IAST: siddham, Chinese: 悉曇文字), used circa 600 to 1200. Siddham then gave rise to Devanāgarī. Devanāgarī (Devanāgarī: देवनागरी; IAST: devanāgarī; Chinese: 天城文) has emerged in the last several hundred years as the standard way of writing Sanskrit. Ranjana script (Chinese: 蘭札文), which is similar to Devanāgarī, was used to write some sutras in historic times. (Everson 2009, p2) Ranjana script was the official script in Nepal and was transmitted to China via Tibet. The text of the Dvadasanga Ppratityasamutpada Dhraṇi writtin in Ranjana script from Dunhuang is shown below.

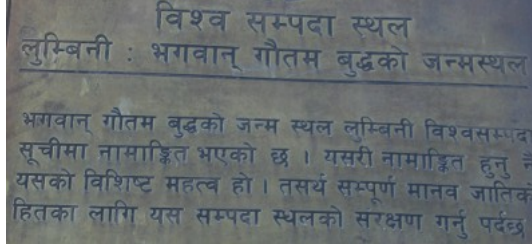


Ranjana script, Yuan (1271—1368), Dunhuang Institute, Dunhuang

Prachalit (Newar) is another script for writing Sanskrit that has been used for writing Buddhist sūtras in Newari Buddhist tradition in Nepal. (Pandey 2012, p2) Some of the manuscripts, such as Advayaparamārthā nāmasaṅgītiḥ, in the University of the West Digital Sanskrit Buddhist Canon (DSBC) were written in Newar. See for example, the University of the West DSBC manuscript entry on Advayaparamārthā nāmasaṅgītiḥ. Prachalit script has been in use since the 10th century. It is descended from northern Gupta script (Pandey 2012, p2). The University of the West Rare Sanskrit Buddhist Manuals project website has image scans of many manuscripts written with these texts.

Many texts in the Taishō Tripitaka contain Siddham script, which is a historic script no longer used in India. These are currently not displayed properly with the NTI Reader. To view the images with Siddham characters, please use CBETA or SAT. Examples of text that contain Siddham script include T 854 胎藏梵字真言 *Womb Matrix Sanskrit Mantra*. The CBETA version shows the text with IAST letters. SAT shows the Siddham script and also includes image scans of the canon, which enable you to see exactly how the print version looks.

Devanāgarī is now the standard script used to Hindi and Nepali. The picture below shows an inscription for the place of birth of the Buddha at Lumbini, Nepal.



Nepali text written in Devanāgarī (Modern)

This document will use Devanāgarī. The Sanskrit Alphabet section below will introduce it. There are several schemes for transliterating Sanskrit into a representation that English speakers can read. The standard for academic publications is the International Alphabet of Sanskrit Transliteration (IAST). That is the system that I have used in this article. It uses many diacritics that are easy to read but difficult to type with a standard US keyboard. For example, Saṃskṛtam for Sanskrit and Aṣṭādhyāyī for Panini's text on Sanskrit grammar. To turn this into Latin just remove the diacritics. This may be the best course to follow for articles targeted for general readers because it will be a considerable detour for readers to learn IAST. However, be aware that you cannot reconstruct Devanāgarī if you remove the diacritics from IAST. Harvard-Kyoto and ITRANS are transliteration schemes that use only ASCII. They are easy to input but difficult to read because of their use of capitals in the middle of words and extra letters to take the place of diacritics. My suggestion for casual typing of Sanskrit is to work in Devanāgarī using online conversion tools (see below for tools) to convert into IAST. Use Harvard-Kyoto for input because it requires only ASCII.

There is no capitalization in Devanāgarī, so I write all proper nouns beginning with a lower case letter in IAST in this document.

The Sanskrit alphabet and pronunciation

The Brahmic family of scripts, including Devanāgarī, are actually abugidas rather than alphabets proper. An abugida, also called a alphasyllabary, is a writing system that writes each consonant–vowel sequences as a unit. Each consonant forms the basis of the unit with the vowel following indicated with notation, usually a diacritic. This will probably be your first surprise and barrier to learning Devanāgarī.

There are thirteen vowels in Sanskrit. If not otherwise written each consonant is understood to be followed by schwa 'a' (pronounced like 'u' in but). The virāma diacritic suppresses this inherent vowel (schwa a) when it should be omitted. Various other diacritics are added above, below, and besides consonants in Devanāgarī to indicate other vowels. Table 4, shown below, lists the vowels as they decorate the consonant त t.

Devanāgarī (decorating त)	Devanāgarī (used independently)	Diacritic	IAST	Harvard- Kyoto	IPA	Pronunciation	Chinese (Pinyin)	Example
Virāma								
त्			t	t	[]			
Simple Vowels								
त	अ		ta	t	[ə]	tough	達 (dá)	पण्डित p 班智達
ता	आ	ा	tā	tA	[ɑ:]	tardy	多 (duō)	प्रज्ञापारमि prajñāp 般若波
ति	इ	ि	ti	ti	[i]	tin	提 (tí)	सुभूति s 須菩提
ती	ई	ी	tī	tI	[i:]	teeth	提 (tí)	श्रावस्ती śrāvastī
तु	उ	ु	tu	tu	[u]	took	兜 (dōu)	तुषित t 率 (Tus Heaven
तू	ऊ	ू	tū	tU	[u:]	two	堵 (dǔ)	स्तूप st 牽堵波
Syllabic Liquids								
वृ	ऋ	ृ	ṛ	tR	[ɹ]	butter		तृष्णा t (desire)
वृ	ऋ	ॠ	ṝ	tRR	[ɹ:]	trill (rolling)		
लृ	लृ	ॡ	l̥	l̥R	[l̥]	table		
लृ	लृ	ॡ	l̥̄	l̥RR	[l̥:]			
Long vowels								
ते	ए	े	te	te	[e:]	tame		अवलोकित avalokī 觀音

तै	ऐ	ै	tai	tai	[əi]	time		
तो	ओ	ो	to	to	[o:]	tote		
तौ	औ	ौ	tau	tau	[əu]	town		तौ tau

Table 4: Vowels accompanying consonants

The sounds that are not present in English are described using phonetic terms and using International Phonetic Alphabet (IPA) symbols. These terms are explained in the Basics of phonetics section below. Mouse over or click on the IPA symbols to find out more about the individual symbols.

The vowels are mostly commonly seen decorating a consonant, as in the first column. Vowels are sometimes seen as initial letters, as in the second column. This are listed in Table 2 below. The vowel 'a' does not need a diacritic to decorate the consonant that it follows. So, if a consonant does not have a diacritic then 'a' is assumed to follow. For example प is 'pa'. The last column in the table above gives the approximate pronunciation using an English example. The 'a' sound in IAST is like a 'u' in **but**. For example, pundit in Sanskrit is पण्डित, IAST paṇḍita, and Harvard-Kyoto paNDita.

Om has the special symbol ॐ in Devanāgarī. Om uses the chandrabindu diacritic ँ is sometimes used instead for nazalization. It is usually omitted from Devagari charts. The chandrabindu is used in the context of Vedic Sanskrit, for example पँ.

An apostrophe represents a missing **a**. It is written in Devanāgarī as ऽ (avagraha). This is used, for example, Jeta Grove, in Anāthapiṇḍada's park (IAST: jetavane'nāthapiṇḍadasyārāme, Devanāgarī: जेतवनेऽनाथपिण्डदस्यारामे, Chinese: 祇樹給孤獨園), which is mentioned in Chapter 1 of the Diamond Sutra. The **A** in Anāthapiṇḍada is left out and replaced with an apostrophe in the IAST and ऽ in the Devanāgarī.

The Devanāgarī letters for initial vowels are written differently. The table above lists the initial vowels as they match the equivalent forms that accompany consonants. Table 5 lists them as they would be written as the first letter in a sentence or entry in the dictionary.

Devanāgarī (letter)	IAST	Harvard-Kyoto	IPA	Pronunciation	Chinese (Pinyin)	Example
Simple Vowels						
अ	a	a	[ə]	under	鵝 (é)、阿 (ē)	असुर asura 阿修羅 (a kind of spirit)

आ	ā	A	[ɑ:]	aunt (RP / British English)	啊 (ā)	आत्मन् ātman 自我 (self)
इ	i	i	[i]	ink	衣 (yī)	इष् iṣṭa 尊 (to revere)
ई	ī	I	[i:]	eat	衣 (yī)	ईश्वर īśvara (Isvara)
उ	u	u	[u]	foot	烏 (wū)、奧 (ào)	उपनिषद् upaniṣad 奧義書
ऊ	ū	U	[u:]	cool	烏 (wū)	
Syllabic Liquids						
ऋ	ṛ	R	[ɹ]	butter	日 (rì)	ऋग्वेद ṛgveda 梨俱吠陀 (Rigveda)
ॠ	ṝ	RR	[ɹ̄]			
लृ	ḷ	IR	[l̥]	turtle	利 (lì)	पाल्ही pālī 巴利文
लृ̄	ḹ	IRR	[l̥̄]			
Diphthongs						
ए	e	e	[e:]	aim	誼 (ēi)	एक eka (one)
ऐ	ai	ai	[əi]	eye	哀 (āi)	
ओ	o	o	[o:]	row (General American)	歐 (ōu)、噀 (wēng)	ओं मणिपद्मे हूं Oṃ maṇi padme hūṃ 噀嘛呢叭咩吽
औ	au	au	[əu]	house	熬 (áo)	

Table 5: Initial Vowels

Anusvāra uses the diacritic ◌̣ (decimal Unicode 2306) to indicate nasalization with a final n or m. This is represented with an ṃ in IAST or M in Harvard-Kyoto. For example, तं taṃ (he in English) and तं taṃ (her in English).

Visarga is the diacritic ः (decimal Unicode 2307) that looks like two dots in the shape of a colon after a syllable to represent aspiration. It is written in IAST as ḥ and H in Harvard-Kyoto. For example, तः, which is taḥ in IAST and taH in Harvard-Kyoto. The symbols for anusvara and visarga are listed in Table 6.

Devanāgarī	IAST	Harvard-Kyoto	IPA	Pronunciation	Chinese (Pinyin)	Examples	Notes
ं	ṁ	M	[ŋ]			तां tāṁ 她 (her)	Nasal
ः	ḥ	H	[hə]			नमः namaḥ 南無 (to take refuge)	Glottal

Table 6: Anusvara and Visarga

There are many more consonants in Sanskrit than English. One reason is the large number of plosive consonants (stops). These are listed in Table 7 in traditional order.

Devanāgarī	IAST	Harvard-Kyoto	IPA	Pronunciation	Chinese (Pinyin)	Examples	Notes
क	ka	ka	[kə]	skunk	哥 (gē)、鳩 (jiū)	कुमारजीव kumārajīva 鳩摩羅什	Velar unaspirated
ख	kha	kha	[kʰə]	come	科 (kē)	दुःख duḥkha 苦 (suffering)	Velar aspirated
ग	ga	ga	[gə]	game	迦 (jiā)	गरुड garuḍa 迦樓羅	Velar unaspirated
घ	gha	gha	[gʰə]	loghouse	伽 (jiā)	संघ saṃgha 僧伽 (Sangha / the monastic community)	Velar aspirated
ङ	ṅa	Ga	[ŋə]		昂 (áng)	गङ्गा gaṅgā 恆河 (Ganges River)	Velar

च	ca	ca	[čə]	exchange	基 (jī)	चुन्दी cundī 準提 (Maha Cundi Bodhisattva)	Palatal unaspirated
छ	cha	cha	[čhə]	chuck	欺 (qī)	छत्ररत्न chatraratna 傘 (parasol)	Palatal aspirated
ज	ja	ja	[ǰə]	junk		जातक jātaka 本生 經 (The Jataka Tales)	Palatal unaspirated
झ	jha	jha	[ǰhə]			झटिति jhaṭiti 馬上 (at once)	Palatal aspirated
ञ	ña	Ja	[nə]	bunk		प्रज्ञा prajñā 般若	Palatal
ट	ṭa	Ta	[ťə]	stun		टृणं ṭṛṇam 草 (grass)	Retroflex unaspirated
ठ	ṭha	Tha	[ťhə]	tuck			Retroflex aspirated
ड	ḍa	Da	[ďə]	done	達 (dá)	गरुड garuḍa 迦 樓羅 (a mythical bird)	Retroflex unaspirated
ढ	ḍha	Dha	[ďhə]	adhere		जड jaḍa 種子	Retroflex unaspirated
ण	ṇa	Na	[ṇə]	number	拿 (ná)	निर्वाण nirvāṇa 涅槃 वरुण varuṇa 伐樓 拿	Retroflex

त	ta	ta	[tə]	stub	得 (de)	तथागत tathāgata 如來 (a name for the Buddha)	Dental unaspirated
थ	tha	tha	[tʰə]	thunder	多 (duō)	सिद्धार्थ siddhārtha 悉達多	Dental aspirated
द	da	da	[də]		大 (dà)	सिकन्दर sikandara 亞歷山大 (Alexander)	Dental unaspirated
ध	dha	dha	[dʰə]		達 (dá)	स्कन्ध skandha 蘊 (aggregate)	Dental aspirated
न	na	na	[nə]		那 (nà)	नम nama 南無 (dragon)	Dental
प	pa	pa	[pə]	spun	班 (bān)	पण्डित paṇḍita 班 智達 (pundit)	Labial unaspirated
फ	pha	pha	[pʰə]	pun		फल phala (fruit)	Labial aspirated
ब	ba	ba	[bə]		菩 (pú)	बुद्ध buddha 佛, बोधिसत्त्व bodhisattva 菩提薩埵	Labial unaspirated
भ	bha	bha	[bʰə]	bun	薄 (báo)	भगवान् bhagavān 薄伽梵 (Blessed One)	Labial aspirated
म	ma	ma	[mə]	monk	曼 (màn)	मण्डल maṇḍala 曼荼羅	Labial

य	ya	ya	[jə]	yonder	夜 (yè)	यम yama 夜摩	Palatal
र	ra	ra	[rə]		羅 (luó)	असुर asura 阿修羅 (a kind of spirit)	Retroflex approximant
ल	la	la	[lə]		爛 (làn)	नालंदा nālandā 那 爛陀 (a place name)	Dental approximant
व	va	va	[və]	van	婆 (pó)	देवदत्त devadatta 提婆達多	Labiodental
श	śa	za	[ʃə]	shut	峽 (xiá)、 思 (sī)	अतिश atiśa 阿底峽	Palatal
ष	ṣa	Sa	[ʂə]		詩 (shī)	उपनिषद् upaniṣad 奧 義書	Retroflex
स	sa	sa	[sə]	sunk	三 (sān)	समाधि samādhi 三 昧	Dental
ह	ha	ha	[hə]	ahoy	訶 (hē)、喝 (hē)	महासत्त्व mahāsattva 摩訶薩埵	Glottal
ः	ḥ	H	[hə]			नमः namaḥ 南無 (to take refuge)	Glottal

Table 7: Consonants

Tones are used in Vedic Sanskrit. There are three tones: उदात्त udātta (raised), अनुदात्त anudātta (not raised), and स्वरित svarita (sounded). The udātta is marked with an acute accent (e.g. í, ó) and the other tones are not marked. However, sometimes svarita may be marked with a grave accent (e.g. à) in situations where independent svarita is caused by sandhi of adjacent vowels. See the discussion below on sandhi.

See Egenes (2011, pp. 1-44) and Goldman and Sutherland Goldman (2011, pp. 1-20) for more on pronunciation and the Devanagari alphabet. To listen to Sanskrit, check the Bodhisvara website.

Sandhi

Sandhi is a set of phonological rules used to combine sounds into words and to combine words into sentences. An example in English is the use of the word *the*. If *the* precedes a word beginning with a consonant then it is pronounced [ðə], as in *the bus* (General American and British English). If it precedes a word beginning in a vowel it is pronounced [ði], as in *the end*. In English these phonetic differences are spelled the same. However, in Sanskrit these differences are spelled out and prescribed by sandhi. The term *sandhi* is also used today by phoneticians to refer to similar phonetic changes in languages other than Sanskrit.

There are two kinds of sandhi: internal and external. Internal sandhi is sound changes within a word. External sandhi is sound changes when connecting two words.

External Sandhi

External sandhi between two words depends on whether the final sound in the first word is a vowel or a consonant and whether the initial sound in the second word is a vowel or a consonant. Table 8a, adapted from Egenes (2011, p. 59), below lists Sandhi for combinations where the first word ends in a vowel and the second word begins in a vowel. An example from the Diamond Sūtra is the compound paramapāramiteti, which formed from the three parts parama (foremost) + pāramitā + iti (said), meaning **said to be the foremost pāramitā**. Find the column *a / ā* and the row *i / ī* and see that the table cell contains an *e*. So the word result is paramapāramiteti.

a / ā	Final vowel of preceding word							Initial vowel of following word
	i / ī	u / ū	ṛ	e	ai	o	au	
ā	ya	va	ra	e	ā a	o	āva	a
ā	yā	vā	rā	a ā	ā ā	a ā	āvā	ā
e	ī	vi / vī	ri / rī	a i / ī	ā i / ī	a i / ī	āvi/ī	i / ī
o	yu / yū	ū	ru / rū	a ṛ	ā u / ū	a u / ū	āvu/ ū	u / ū
ar	yṛ	vṛ	ṛ	a u / ū	ā ṛ	a ṛ	āvṛ	ṛ
ai	ye	ve	re	a e	ā e	a e	āve	e
ai	yai	vai	rai	a ai	ā ai	a ai	āvai	ai

au	yo	vo	ro	a o	ā o	a o	āv o	o
au	yau	vau	rau	a au	ā au	a au	āvau	au

Table 8a: External Sandhi for Final Vowels

Table 8b, adapted from Egenese (2011, p. 108, 126), lists sandhi for combinations where the first word ends in a consonant.

Final consonant of preceding word										
k	ṭ	t	p	ṇ	n ⁶	m	ḥ/r (except āḥ,aḥ)	āḥ	aḥ	Initial consonant of following word
k	ṭ	t	p	ṇ	n	ṃ	ḥ	āḥ	aḥ	k / kh
g	ḍ	d	b	ṇ	n	ṃ	r	ā	o	g / gh
k	ṭ	c	p	ṇ	ṃś	ṃ	ś	ās	aś	c / ch
g	ḍ	j	b	ṇ	ñ	ṃ	r	ā	o	j / jh
k	ṭ	ṭ	p	ṇ	ṃṣ	ṃ	ṣ	āṣ	aṣ	ṭ / ṭh
g	ḍ	ḍ	b	ṇ	ṇ	ṃ	r	ā	o	ḍ / ḍh
k	ṭ	t	p	ṇ	ṃs	ṃ	s	ās	as	t / th
g	ḍ	d	b	ṇ	n	ṃ	r	ā	o	d / dh
k	ṭ	t	p	ṇ	n	ṃ	ḥ	āḥ	aḥ	p / ph
g	ḍ	d	b	ṇ	n	ṃ	r	ā	o	b / bh
ṇ	ṇ	n	m	ṇ	n	ṃ	r	ā	o	n / m
g	ḍ	d	b	ṇ	n	ṃ	r	ā	o	y / v
g	ḍ	d	b	ṇ	n	ṃ	omit ¹	ā	o	r
g	ḍ	l	b	ṇ	i ^ö 2	ṃ	r	ā	o	l
k	ṭ	ḡ(ch)	p	ṇ	ḡ(ś/ch)	ṃ	ḥ	āḥ	aḥ	ś
k	ṭ	t	p	ṇ	n	ṃ	ḥ	āḥ	aḥ	ṣ / s
g(gh)	ḍ(ḍh)	ḍ(ḍh)	b(bh)	ṇ	n	ṃ	r	ā	o	h
g	ḍ	d	b	ṇ/ ṇṇ ³	n/nm ³	m	r	ā	a ⁴	vowel
k	ṭ	t	p	ṇ	n	m	ḥ	āḥ	aḥ	end ⁵

Table 8b: External Sandhi for Final Consonants ḥ/r, āḥ, aḥ

Table notes:

1. Omit ḥ or r. If this is preceded by a, i, or u then they become lengthened to ā, ī, or ū
2. An n followed by l becomes ṃl
3. Doubling occurs when the preceding vowel is short
4. Exception: aḥ + a becomes o' (Devanāgarī: ओऽ)
5. End of a sentence
6. If the vowel before n is short then it becomes nn.
7. When d is followed by h the h becomes dh.
8. When d is followed by ś the ś becomes ch.
9. When n is followed by ś the ś may become ch.

The cells of tables 8a and 8b represent the letter that the last letter of the first word should be changed to. After the sandhi rules have been applied to a pair of words, if the second word ends in a vowel or ḥ then there should be a break in the words when written in Devanāgarī. In IAST words are usually separated, except when Sandhi rules result in vowels joining together. For example gacchati iti becomes gacchatiti (he says that he is going).

For the final letter ḥ there are three cases: aḥ, āḥ, and any other vowel + ḥ. The (aḥ, āḥ, other vowel + ḥ) is replaced with the value in the cell, except for the exceptions listed in the table notes. An example for the aḥ ending is rāmaḥ gacchati -> rāmo gacchati (Rama is going). An example for the āḥ ending is vīrāḥ gacchati -> vīrā gacchati (the hero is going).

If a word ending in a vowel is followed by a word starting with a vowel then there is no change. There is an exception to this for short vowels followed by ch. The ch is changed to cch. If a long vowel is followed by ch then the ch may or may not change to cch.

After sandhi has been applied you can decide whether to insert a space between words. If the first word ends in a vowel, ḥ, or ṃ then the Devanagari will have a break. If the first word ends in a vowel and the second word begins in a vowel then the two words will be joined in both Devanagari and IAST. For example, gacchati + iti becomes gacchatiti (he says that he is going). This convention varies somewhat from text to text.

Internal Sandhi

There are some other rules in addition for internal sandhi:

1. An r or ṛ changes the following n to ṛ. For example, treatises śāstraṇi (IAST: śāstraṇi, Devanāgarī: शास्त्राणि, Chinese: 論), which is the nominative and accusative case, plural form of the stem śāstra. For example, in the word putrāṇām, which is the Genitive plural form of the stem putra (English: son), n is changed to ṛ. However, this does not happen when there is a t in between. For example, immortals (IAST: amṛtāni, Devanāgarī: अमृतानि), which is the nominative and accusative case, plural form of the stem amṛta. Besides t there are a number of other sounds that prevent n changing to ṛ.

2. The letter s changes to an ś if it is preceded by a vowel unless it is the final letter or it is followed by an r. However, if the following sound is t, th, or n then s changes to ṣ instead. For example, the s in the verb root √sthā (English: to stand) changes to an ś in the word tiṣṭhāti (English: he stands).

See Goldman and Sutherland Goldman (2011, pp. 23-34) for more on sandhi.

Numbers in Sanskrit

Table 9 below shows the Sanskrit cardinal numbers.

Devanāgarī	Name	IAST	Arabic
०	शून्य	śūnya	0
१	एक	eka	1
२	द्वि	dvi	2
३	त्रि	tri	3
४	चतुर	catur	4
५	पञ्च	pañca	5
६	षष्	ṣaṣ	6
७	सप्त	sapta	7
८	अष्ट	aṣṭa	8
९	नव	nava	9
१०	दश	daśa	10
११	एकादश	ekādaśa	11
१२	द्वादश	dvādaśa	12
१३	त्रयोदश	trayodaśa	13
१४	चतुर्दश	caturdaśa	14
१५	पञ्चदश	pañcadaśa	15
१६	षोडश	ṣoḍaśa	16

१७	सप्तदश	saptadaśa	17
१८	अष्टादश	aṣṭādaśa	18
१९	एकोनविंशति	ekonaviṃśati	19
२०	विंशति	viṃśati	20
२१	एकविंशति	ekaviṃśati	21
२२	द्वाविंशति	dvāviṃśati	22
२३	त्रयोविंशति	trayoviṃśati	23
२४	caturviṃśati	चतुर्विंशति	24
२५	पञ्चविंशति	pañcaviṃśati	25
२६	षट्विंशति	ṣaḍviṃśati	26
२७	सप्तविंशति	saptaviṃśati	27
२८	अष्टाविंशति	aṣṭāviṃśati	28
२९	नवविंशति, एकोनत्रिंशत्	navaviṃśati, ekonatrimśat	29
३०	त्रिंशत्, त्रिदश	trimśat, tridaśa	30
३१	एकत्रिंशत्	ekatrimśat	31
३२	द्वात्रिंशत्	dvātrimśat	32
३३	त्रयस्त्रिंशत्	trayastrimśat	33
४०	चत्वारिंशत्	catvārimśat	40
५०	pañcāśat	पञ्चाशत्	50
६०	ṣaṣṭi	षष्टि	60
७०	सप्तति	saptati	70
८०	अशीति	aśīti	80
९०	नवति	navati	90

१००	शत	śata	100
२००	द्विशत	dviśata	200

Table 9 Sanskrit cardinal numbers

The declensions of the cardinal numbers are complex. The ordinal numbers declensions are like adjectives in that they have two forms: (1) masculine and neuter and (2) feminine.

Table 10 shows the ordinal numbers.

English	Masculine		Feminine	
	IAST	Devanāgarī	IAST	Devanāgarī
1st	prathama	प्रथम	prathamā	प्रथमा
2nd	dvitīya	द्वितीय	dvitīyā	द्वितीया
3rd	tr̥tīya	तृतीय	tr̥tīyā	तृतीया
4th	caturtha	चतुर्थ	caturthī	चतुर्थी
5th	pañcama	पञ्चम	pañcamī	पञ्चमी
6th	ṣaṣṭha	षष्ठ	ṣaṣṭhī	षष्ठी
7th	saptama	सप्तम	saptamī	सप्तमी
8th	aṣṭama	अष्टम	aṣṭamī	अष्टमी
9th	navama	नवम	navamī	नवमी
10th	daśama	दशम	daśamī	दशमी

Table 10 Sanskrit ordinal numbers

Table 11 below lists the powers of ten for numbers in Sanskrit. Some of the very largest numbers are left out.

Devanāgarī	IAST	Arabic	English
दश	daśa	10	Ten
शत	śata	100	One hundred

सहस्र	sahasra	1000	One thousand
अयुत	ayuta	10,000	Ten thousand
लक्ष	lakṣa	100,000	One hundred thousand
कोटि	koṭi	10 ⁷	Ten million
शङ्कु	śaṅku	10 ¹²	one trillion
महाशङ्कु	mahāśaṅku	10 ¹⁷	one hundred quadrillion
वृन्द	vṛnda	10 ²²	ten sextillion
महावृन्द	mahāvṛnda	10 ²⁷	one octillion

Table 11 Powers of Ten

Sanskrit grammar

Sanskrit has a number of grammatical characteristics that are not found in English. Some of these are found in other European languages and even more of these characteristics are found in ancient European languages and is generally closer in form to the Proto-Indo-European parent. Sanskrit is an example of a **fusional language**, that is, a language where words are heavily inflected based on grammatical function. The characteristic of fusional languages is that there are many more morphemes than words. English retains some of original fusional nature of the common parent Proto-Indo-European but word order and use of prepositions are much more important in determining grammatical function. An **isolating language** has few words are inflected based on grammatical function. Chinese is the classic example of an isolating language because it has no inflection of words. English is regarded as largely an isolating language because there are far fewer inflections than fusional languages like Sanskrit.

A **morpheme** is the smallest meaningful unit in a language. It is not necessarily the same thing as a word, which may consist of several morphemes. For example, *sing*, *sang*, and *sang* are all morphemes for one word. In a good English dictionary you can find all the irregular inflections of words. However, in Sanskrit there are far too many inflections for the dictionary to list them all. This makes learning and analysing Sanskrit text a particular challenge. See *The History of English: a Linguistic Introduction* [Scott 2008] for a readable introduction to the kinds of inflections and grammatical structure of Proto-Indo-European examples in modern English.

This section will give a brief overview of Sanskrit grammar. The basic goal of this section is to gain an overall picture of Sanskrit grammar and be able to apply that to the task of looking up words you may encounter in a Sanskrit dictionary. For a more comprehensive information on Sanskrit grammar see the References section. For the grammar of Chinese in historic translation of Sanskrit texts see, Grammar of Buddhist Chinese

Nouns

Sanskrit nouns can be inflected with gender (male, female, and neuter), number (singular, dual, and plural), and case. Grammatical case (vibhakti विभक्ति, Chinese: 格) is inflection of a noun or pronoun to indicate its function within a sentence.

The two most fundamental cases are the **nominative case** and the **accusative case**. The nominative case (prathamā प्रथमा, Chinese: 主格) usually marks the subject of a sentence. The accusative case (dvitīyā द्वितीया, Chinese: 對格) marks the direct object of a transitive verb. In English there are no changes in case for nouns but there are some changes for pronouns. For example, in the English sentence, 'I saw him,' the word *I* is the nominative case and the word *him* is the accusative case. By contrast, in the English sentence, 'He saw me,' the word *me* is the accusative case and the word *he* is the nominative. This section will give a brief description of the ways that nouns are inflected.

There are eight grammatical cases in Sanskrit, which is the same as Proto-Indo-European. Old English nouns had four of these: nominative, genative, dative, and accusative [Shay 2008]. Table 12 below summarizes the different cases.

Case	Role	English	Example, bala (power, singular)	Example, vadhū (woman, singular)
Nominative	Subject	I: I drank the water.	balah	vadhūḥ
Accusative	Direct object	Me: The waiter saw me .	balam	vadhūm
Instrumental	The instrument of an action	With water: I washed the dirt away with water .	balena	vadvhā
Dative	Indirect object or indicate purpose	To me: The waiter gave some water to me .	balāya	vadvhai
Ablative	Away from	From the house: The water ran away from the house .	balāt	vadvhāḥ
Genitive	Possessive	My: That is my water.	balasya	vadvhāḥ
Locative	Indicates a position	In the fridge: The water is in the fridge .	bale	vadvhām
Vocative	Indicates the person addressed	Waiter: Waiter , please bring me some water.	bale	vadhu

Table 12 Summary of grammatical cases in Sanskrit

In the table above the last column gives the inflected forms for the singular form of power (bala बल, Chinese: 力), a masculine noun, and singular form of woman (vadhū वधू, Chinese: 女人). The changes to the endings for case vary with the final letter of the stem, grammatical gender, and number (singular, dual, plural). However, there are some common patterns.

The singular form of the nominative case is most often marked with a *h* ending that will often change to *o* on applying sandhi. The singular form of the accusative case is often marked with a *m* ending that will often change to *ṃ* on applying sandhi. For example, the stem form for teacher (ācārya आचार्य, Chinese: 阿闍黎), the nominative case is ācāryaḥ (आचार्यः), and the accusative case is ācāryam (आचार्यम्).

The instrumental case (tṛtīyā तृतीया, Chinese: 工具格) is used when a noun is the instrument of an action. It is the third case for Sanskrit nouns, hence the name tṛtīyā. For example, if water (jala जल, Chinese: 水) is the agent of an action then the instrumental case jalena (जलेन) should be used. More examples are the instrumental case are: suffering (duḥkha दुःख, Chinese: 苦) duḥkheṇa दुःखेन, and for yoga (yoga योग, Chinese: 瑜珈) yogena योगेन. Because of sandhi rules an **ena** is used for the instrumental singular form if there is no *r* or *ṛ* in the word. For example, aśvena (horse) and gajena (elephant) and the instrumental case, singular forms for the stems aśva and gaja. However, the instrumental case, singular forms for putra (son) is putreṇa पुत्रेण and for mṛga (deer) is mṛgeṇa मृगेण.

The dative case (catuṛthī चतुर्थी, Chinese: 與格) may be used to indicate a purpose. In the section Written Sanskrit we saw the example "namo buddhāya" from the Digital Sanskrit Buddhist Canon. The Sanskrit verb namo is transliterated to Chinese as 南無 because it is not easy to translate. It may be translated to English as **praise**. The Sanskrit buddhāya is the dative case of **buddha**, so we can translate this phrase as "praise for the Buddha."

The ablative case (pañcamī पञ्चमी, Chinese: 離格) is the fifth case in Sanskrit. It indicates motion away from an object or that the object is the source of an action.

The genitive case (ṣaṣṭhī षष्ठी, Chinese: 屬格) is the sixth case in Sanskrit. It indicates possession.

The locative case (saptamī सप्तमी, Chinese: 屬格) expresses location. It is the seventh case for Sanskrit nouns. Singular locative nouns often end with an **me**, such as grāme (village) and gaje (elephant).

The vocative case (saṃbodhana संबोधन, Chinese: 呼格) is used for addressing people. It is the eighth and final case for Sanskrit nouns. It is usually the same as the stem form. For example, rāma (the name Rama) or nara (man).

Nouns can be either masculine, neuter, or feminine. Grammatical gender affects the declension of nouns. An example of a masculine noun is dharma. An example of a neuter noun is phala (English: fruit). An example of a feminine noun is śūnyatā (emptiness).

Since there are eight cases and three forms for number (singular, dual, plural) there are twenty four possible forms for a noun. You can find the different forms using the Sanskrit Lexicon web page inflected forms. Table 13 gives word changes for changes in word form for case and number for the masculine noun **buddha**. See also Egenes (2011, p. 74, 298).

Case	Singular	Dual	Plural
Nominative (subject)	buddhaḥ	buddhau	buddhāḥ
Accusative (object)	buddham	buddhau	buddhān
Instrumental (with)	buddhena	buddhābhyām	buddhaiḥ
Dative (for)	buddhāya	buddhābhyām	buddhebhyaḥ
Ablative (from)	buddhāt	buddhābhyām	buddhebhyaḥ
Genitive	buddhasya	buddhayoḥ	buddhānām
Locative	buddhe	buddhayoḥ	buddheṣu
Vocative	buddha	buddhau	buddhāḥ

Table 13 Changes in word form for case and number for a masculine noun ending in a (buddha बुद्ध)

This points to an important skill when searching dictionaries for Sanskrit words encountered in literature in the different cases. For example, when searching for a word ending in *h* or *m* remove the final letter to give the most likely text for the reference form of the noun. Usually, dictionaries will only list a reference form, usually the stem form or singular nominative. We will see below in the section Sentence Types that adjectives describing nouns are often modified to match the case of the noun. So, this same convention applies to looking for adjectives in dictionaries.

This process takes practice. The web site Digital Corpus of Sanskrit decomposes text to the stem forms that can be used to look up words in dictionaries. It also has a basic dictionary built-in and shows the part of speech of the term. A screenshot is shown below from a passage in the *Lotus Sutra*.

Screenshot of Part of Speech Decomposition at Digital Corpus of Sanskrit

 Digital Corpus of Sanskrit screenshot

An example of the nominative case is found in this phrase from the *Lotus Sutra* (Braarvig 2020, ch. 7; Hurvitz 2009, p. 135; Kern 1884, ch. 7): śriyā daśo dikṣu jvalanti adya “all the points of the horizon are now blazing in splendour” (Chinese: 遍照於十方). Here dikṣu (direction, feminine plural) and the adjective daśaḥ (ten, daśo with sandhi applied) are in the nominative case.

An example of the instrumental case is found in this phrase, also from the *Lotus Sutra* (Braarvig 2020, ch. 6; Hurvitz 2009, p. 125; Kern 1884, ch. 6): *yojanasahasraṃ samucchrayeṇa* “[a stupa with] a thousand yoganās in height” (Chinese: 高千由旬). Here *samucchraya* (height, masculine singular) is in the instrumental case. The term *yojanasahasraṃ* (thousand yoganās) is accusative because it describes a stupa that is the object of a longer sentence.

An example of the genitive case is found in this phrase, also from the *Lotus Sutra* (Braarvig 2020, ch. 7; Hurvitz 2009, p. 135; Kern 1884, ch. 7): *bhagavataḥ pādaḥ* “Buddha’s feet.” Here *bhagavataḥ* is in the genitive case.

Dual form can often be recognized by the **au** ending. For example, the dual form for the Sanskrit word for foot (*pāda*) is *pādaḥ* (पादौ).

Other examples of masculine nouns are horse (*aśva* अश्व, Chinese: 馬), teacher (*ācārya* आचार्य, Chinese: 阿闍黎), and elephant (*gaja* गज, Chinese: 象). The morphology changes are different for neuter and feminine nouns. The morphology changes for the neuter word *jñāna* (knowledge) are given in Table 14. See also Egenes (2011, p. 92, 299).

Case	Singular	Dual	Plural
Nominative	jñānam	jñāne	jñānāni
Accusative	jñānam	jñāne	jñānāni
Instrumental	jñānena	jñānābhyām	jñānaiḥ
Dative	jñānāya	jñānābhyām	jñānebhyaḥ
Ablative	jñānāt	jñānābhyām	jñānebhyaḥ
Genitive	jñānasya	jñānayoḥ	jñānānām
Locative	jñāne	jñānayoḥ	jñāneṣu
Vocative	jñāna	jñāne	jñānāni

Table 14 Changes in word form for case and number for a neuter noun ending in a (*jñāna*, knowledge)

Other examples of neuter nouns are the nectar of immortality (*amṛta* अमृत, Chinese: 甘露), fruit (*phala* फल, Chinese: 智), book (*pustaka* पुस्तक, Chinese: 書), and action (*karma* कर्म, Chinese: 業).

Changes in word endings for the feminine word *bālā* (girl) are listed in Table 15. See also Egenes (2011, p. 145, 300).

Case	Singular	Dual	Plural
Nominative	bālā	bāle	bālāḥ

Accusative	bālām	bāle	bālāḥ
Instrumental	bālayā	bālābhyām	bālābhiḥ
Dative	bālāyai	bālābhyām	bālābhyaḥ
Ablative	bālāyāḥ	bālābhyām	bālābhyaḥ
Genitive	bālāyāḥ	bālayoḥ	bālānām
Locative	bālāyām	bālayoḥ	bālāsu
Vocative	bāle	bāle	bālāḥ

Table 15 Changes in word form for case and number for a feminine noun ending in ā (bālā, girl)

Other examples of feminine nouns ending in ā are kathā (story, Chinese: 故事), kanyā (girl, Chinese: 女孩), chāyā (shadow, Chinese: 影), and putrikā (daughter, Chinese: 女兒).

The changes in word form are different for words ending in i. The morphology changes for the masculine noun agni (English: fire) are given in Table 16. See also Egenes (2011, p. 163, 301).

Case	Singular	Dual	Plural
Nominative	agniḥ अग्निः	agnī अग्नी	agnayaḥ अग्नयः
Accusative	agnim अग्निम्	agnī अग्नी	agnīn अग्नीन्
Instrumental	agninā अग्निना	agnibhyām अग्निभ्याम्	agnibhiḥ अग्निभिः
Dative	agnaye अग्नये	agnibhyām अग्निभ्याम्	agnabhyaḥ अग्नभ्यः
Ablative	agneḥ अग्नेः	agnibhyām अग्निभ्याम्	agnabhyaḥ अग्नभ्यः
Genitive	agneḥ अग्नेः	agnyoḥ अग्न्योः	agnīnām अग्नीनाम्
Locative	agnau अग्नौ	agnyoḥ अग्न्योः	agniṣu अग्निषु
Vocative	agne अग्ने	agnī अग्नी	agnayaḥ अग्नयः

Table 16 Changes in word form for case and number for a masculine noun ending in i (agni, fire)

An example of a masculine i-stem word used in the Diamond Sūtra is ṛṣi (sage, Chinese: 仙人).

The morphology changes for the neuter noun vāri (English: water) are given in Table 17. See also Egenes (2011, p. 163, 301).

Case	Singular	Dual	Plural
Nominative	vāri वारि	vāriṇī वारिणी	vāriṇi वारिणि
Accusative	vāri वारि	vāriṇī वारिणी	vāriṇi वारिणि
Instrumental	vāriṇā वारिणा	vāribhyām वारिभ्याम्	vāribhis वारिभिस्
Dative	vāriṇe वारिणे	vāribhyām वारिभ्याम्	vāribhyas वारिभ्यस्
Ablative	vāriṇas वारिणस्	vāribhyām वारिभ्याम्	vāribhyas वारिभ्यस्
Genitive	vāriṇas वारिणस्	vāriṇos वारिणोस्	vāriṇām वारिणाम्
Locative	vāriṇi वारिणि	vāriṇos वारिणोस्	vāriṣu वारिषु
Vocative	vāri वारि vāre वारे	vāriṇī वारिणी	vāriṇi वारिणि

Table 17 Changes in word form for case and number for a neuter noun ending in i (IAST: vāri, English: water)

The morphology changes for the feminine noun kīrti (English: glory) are given in Table 18. See also Egenes (2011, p. 171, 301).

Case	Singular	Dual	Plural
Nominative	kīrtiḥ कीर्तिः	kīrtī कीर्ती	kīrtayaḥ कीर्तयः
Accusative	kīrtim कीर्तिम्	kīrtī कीर्ती	kīrtiḥ कीर्तिः
Instrumental	kīrtyā कीर्त्या	kīrtibhyām कीर्तिभ्याम्	kīrtibhiḥ कीर्तिभिः
Dative	kīrtyai कीर्त्यै	kīrtibhyām कीर्तिभ्याम्	kīrtibhyaḥ कीर्तिभ्यः
Ablative	kīrtyāḥ कीर्त्याः	kīrtibhyām कीर्तिभ्याम्	kīrtibhyaḥ कीर्तिभ्यः
Genitive	kīrtyāḥ कीर्त्याः	kīrtyoḥ कीर्त्योः	kīrtinām कीर्तिनाम्
Locative	kīrtyām कीर्त्याम्	kīrtyoḥ कीर्त्योः	kīrtiṣu कीर्तिषु
Vocative	kīrte कीर्ते	kīrtī कीर्ती	kīrtayaḥ कीर्तयः

Table 18 Changes in word form for case and number for a feminine noun ending in i (kīrti, English: glory)

An example of a feminine i-stem word used in the Diamond Sūtra is bodhi (English: enlightenment, Chinese: 菩提).

The feminine i-stem declinations are slightly different from the ī-stems. The morphology changes for the feminine noun nadī (English: river) are given in Table 19.

Case	Singular	Dual	Plural
Nominative	nadī नदी	nadyau नद्यौ	nadyaḥ नद्यः
Accusative	nadīm नदीम्	nadyau नद्यौ	nadīḥ नदीः
Instrumental	nadyā नद्या	nadībhyām नदीभ्याम्	nadibhiḥ नदिभिः
Dative	nadyai नद्यै	nadībhyām नदीभ्याम्	nadibhyaḥ नदिभ्यः
Ablative	nadyāḥ नद्याः	nadībhyām नदीभ्याम्	nadibhyaḥ नदिभ्यः
Genitive	nadyāḥ नद्याः	nadyoḥ नद्योः	nadīnām नदीनाम्
Locative	nadyām नद्याम्	nadyoḥ नद्योः	nadīṣu नदीषु
Vocative	nadi नदि	nadyau नद्यौ	nadyaḥ नद्यः

Table 19 Changes in word form for case and number for a feminine noun ending in ī (nadī, English: river)

An example of a feminine ī-stem word used in the Diamond Sūtra is nadī (English: river, Chinese: 河). Actually, nadī also has a masculine form nada, which means river as well. The feminine form is used when the Ganges is referred to. the Diamond Sūtra uses the compound gaṅgānadiṣu (English: in the Ganges River, compound from: gaṅgā + nadiṣu), which is the locative case, plural form. How can we talk about the Ganges River in plural? The Buddha describes the number of Buddha worlds as being comparable to the number of grains of sand in the a number of Ganges Rivers (gaṅgānadvālukāsamān), and each one of those grains representing a Ganges River, then the total number of grains of sand. That is, take the number of grains of sand in the Ganges, imagine a number of rivers with that number, and then imagine the total number of grains of sand. That is an enormous number.

Pronouns

Sanskrit has both personal and demonstrative pronouns and these take the same form. A demonstrative pronoun is a function word that refers to something, usually represented by a noun or pronoun elsewhere in the text. In English and Chinese the demonstrative and personal pronouns take different forms. Examples of demonstrative pronouns in English are **this** and **that**. Examples of personal pronouns in English are **I**, **you** and **it**. The Sanskrit word eṣaḥ

(Devanāgarī: एषः, Chinese: 这) is similar to the word *this* in English. Note that the genders are grammatical, not physical. So a masculine pronoun in Sanskrit could refer to an object with a masculine grammatical gender as well as a male person or animal.

Sanskrit pronouns are declined in the same way as nouns. Table 20 lists the different forms of the first person pronouns (English: I, me, us; Chinese: 我、我們). They apply to all genders.

Case	English	Singular	Dual	Plural
Nominative	I, we	aham अहम्	āvām आवाम्	vayam वयम्
Accusative	me, us	mām माम् (mā मा)	āvām आवाम् (nau नौ)	āsmān आस्मान् (naḥ नः)
Instrumental	with me, with us	mayā मया	āvābhyām आवाभ्याम्	asmābhiḥ अस्माभिः
Dative	for me, for us	mahyam मह्यम्	avābhyām अवाभ्याम्	asmabhyam अस्माभ्यम्
Ablative	from me, from us	mat मत्	avābhyām अवाभ्याम्	asmat अस्मत्
Genitive	my, our	mama मम	āvayoh आवयोः (nau नौ)	asmākam अस्माकम्
Locative	on me, on us	mayi मयि	āvayoh आवयोः	asmāsu अस्मासु

Table 20 Forms of first person pronouns, stems mad (singular), asmad (plural)

Most Buddhist sūtras begin with the words, evaṃ mayā śrutam (English: Thus have I heard, Chinese: 如是我聞). The word mayā (English: I, Chinese: 我) is a first person, singular pronoun in instrumental case.

Table 21 lists the different forms of the second person pronouns (English: you; Literary Chinese: 汝). They apply to all genders.

Case	English	Singular	Dual	Plural
Nominative	you	tvam त्वम्	yuvām युवाम्	yūyam यूयम्
Accusative	you	tvām त्वाम् (tvā त्वा)	yuvām युवाम् (vām वाम्)	yuṣman युष्मन् (vaḥ वः)
Instrumental	with you	tvayā त्वया	yuvābhyām युवाभ्याम्	yuṣmābhiḥ युष्माभिः

Dative	for you	tubhyam तुभ्यम् (te ते)	yuvābhyām युवाभ्याम् (vām वाम्)	yuṣmabhyam युष्मभ्यम् (vaḥ वः)
Ablative	from you	tvat त्वत्	yuvābhyām युवाभ्याम्	yuṣmat युष्मत्
Genitive	your	tava तव (te ते)	yuvayoḥ युवयोः (vām वाम्)	yuṣmākam युष्माकम् (vaḥ वः)
Locative	on you	tvayi त्वयि	yuvayoḥ युवयोः	yuṣmāsu युष्मासु

Table 21 Forms of second person pronouns, stems tvad (singular), yuṣmad (plural)

Third person pronouns have declensions for all three grammatical genders. The third person pronoun stem form for the masculine gender is tad (English: he, they; Chinese: 他, 他們). The declensions are listed in Table 22.

Case	English	Singular	Dual	Plural
Nominative	he, they	saḥ सः	tau तौ	te ते
Accusative	him, them	tam तम्	tau तौ	tān तान्
Instrumental	with him, them	tena तेन	tābhyām ताभ्याम्	taiḥ तैः
Dative	for him, them	tasmai तस्मै	tābhyām ताभ्याम्	tebhyaḥ तेभ्यः
Ablative	from him, them	tasmāt तस्मात्	tābhyām ताभ्याम्	tebhyaḥ तेभ्यः
Genitive	his, theirs	tasya तस्य	tayoḥ तेभ्यः	teṣāṃ तेषां
Locative	on him, them	tasmin तस्मिन्	tayoḥ तेभ्यः	teṣu तेषु

Table 22 Forms of third person pronouns, stem tad, masculine form

An example of use of a third person pronoun from the Diamond Sutra is:

teṣu lokadhātuṣu sattvāḥ (English: the beings on those worlds, Chinese: 國土中, 所有眾生)

Here teṣu is the locative case, plural form of the third person pronoun (English: those). Sanskrit third person pronouns can be used as either personal pronouns, such as the English word **it**, or demonstrative pronouns **that**. Here teṣu is used as a demonstrative pronoun equivalent to the English word **those**. A demonstrative pronouns go in front of the noun that it refers to. In this example teṣu comes before lokadhātuṣu. The locative case, plural form lokadhātuṣu (English:

worlds or lands, Chinese: 國土) is also used. The word sattvāḥ (English: beings, Chinese: 眾生) is in the nominative case, plural form because it is the subject of the sentence. The full sentence is longer.

The final ḥ in saḥ is removed for sandhi for all following consonants and all vowels, except a. For example, in the following phrase from the Diamond Sutra:

na sa bodhisattva (English: he is not a bodhisattva, Chinese: 即非菩薩)

The third person pronoun forms for the neuter gramatical gender (English: it; Chinese: 它, 它們) are listed in Table 23.

Case	English	Singular	Dual	Plural
Nominative	it, them	tat तत्	te ते	tāni तानि
Accusative	it, them	tat तत्	te ते	tāni तानि
Instrumental	with it	tena तेन	tābhyām ताभ्याम्	taiḥ तैः
Dative	for it	tasmai तस्मै	tābhyām ताभ्याम्	tebhyaḥ तेभ्यः
Ablative	from it	tasmāt तस्मात्	tābhyām ताभ्याम्	tebhyaḥ तेभ्यः
Genitive	its	tasya तस्य	tayoḥ तेभ्यः	teṣāṃ तेषां
Locative	on it	tasmin तस्मिन्	tayoḥ तेभ्यः	teṣu तेषु

Table 23 Forms of third person pronouns, stem tad, neuter form

The third person pronoun forms for the feminine gramatical gender (English: she; Chinese: 她, 她們) are listed in Table 24.

Case	English	Singular	Dual	Plural
Nominative	she, they	sā सा	te ते	tāḥ ताः
Accusative	her, them	tām ताम्	te ते	tāḥ ताः
Instrumental	with her	tayā तया	tābhyām ताभ्याम्	tābīḥ ताभिः
Dative	for her	tasyai तस्यै	tābhyām ताभ्याम्	tābhyahā ताभ्यः
Ablative	from her	tasyāḥ तस्याः	tābhyām ताभ्याम्	tābhyahā ताभ्यः
Genitive	hers	tasyāḥ तस्याः	tayoḥ तेभ्यः	tāsām तासाम्

Locative	on her	tasyām तस्याम्	tayoḥ तेभ्यः	tāṣu तासु
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Table 24 Forms of third person pronouns, stem tad, feminine form

Relative and correlative pronouns are found in pairs. An example from the Diamond Sūtra is shown below (Chapter 17).

nāsti **sa** kaściddharma **yo** bodhisattvo nāma (English: There is no such dharma called a bodhisattva.)

The Sanskrit word **sa** (English: he) is the correlative pronoun and the word **yo** (English: who) is the relative pronoun. Both **sa** and **yo** refer to kaściddharma (English: any dharma), is the **antecedent**. The antecedent goes directly before the relative pronoun. Relative and correlative pronouns must agree with each other in number and gender. The declension for the relative pronoun yad is shown in Table 25.

Case	English	Singular	Dual	Plural
Nominative	who	yah यः	yau यौ	ye ये
Accusative	whom	yen येन्	yau यौ	yām याम्
Instrumental	with whom	yena येन	yābhyām याभ्याम्	yaiḥ यैः
Dative	for whom	yaramai यरमै	yābhyām याभ्याम्	yebhyaḥ येभ्यः
Ablative	from whom	yaramāt यरमात्	yābhyām याभ्याम्	yebhyaḥ येभ्यः
Genitive	whose	yaraya यरय	yayoḥ ययोः	yaśam यषम्
Locative	on whom	yariman यरिमन्	yayoḥ ययोः	yeṣu येषु

Table 25 Forms of relative pronoun yad (masculine)

An example of the use of the pronoun yad ‘which’ from the *Lotus Sutra* is (Vaidya 1960, p. 117): yadidaṃ duḥkham ‘that which is suffering’ (Chinese: 謂是苦). The pronoun idam ‘that’

Other Function Words

A clitic is a function word that depends on a connected word for its pronunciation. For example, in English either the clitic *a* or the clitic *an* is chosen based on the word that follows it. For example, *a* banana or *an* orange. The English articles *a* and *an* are proclitics because they appear before their hosts. The English possessive marker ‘s is an enclitic because appears after its host. Clitics are often particles, which are uninflected function words. Sanskrit also has clitics but they are different in form compared to English.

The Sanskrit enclitic particle *eva* (Devanāgarī: एव) emphasizes the previous word. It may be translated into English or Chinese as *really* (Chinese: 真).

The enclitic particle *vā* (Devanāgarī: वा, Chinese: 或) is an enclitic particle used to form a disjunction (or), as in ... *vā* ... *vā* (either .. or ..). The enclitic particle *ca* (Devanāgarī: च, Chinese: 和) is similar for the English word *and*.

The words *kṛtam* (Devanāgarī: कृतम्, Chinese: 夠) and *alam* (Devanāgarī: अलम्, Chinese: 夠) mean *enough*. They are used to exhort somebody against doing something.

Sanskrit interrogative words usually begin with a *k*, like the *wh* words in English (what, where, etc). The Sanskrit word for where is *kutra*.

Relative adverbs are used in **relative-correlative clauses**. A relative clause is a kind of subordinate clause. It shares a referent with the main clause. An example of a relative clause in English is

*This is the man **that** I saw.*

The English word **that** is a relative pronoun or relative adverb, depending on the grammatical paradigm. The text in *italics* is the relative clause. In Sanskrit relative adverbs are paired with correlative adverbs. An example is

yadi gacchasi tadā gacchāmi (English: If you go, then I go.)

Relative-correlative adverb pairs are shown in Table 26.

Relative Adverb	English	correlative adverb	English
yataḥ	since / when	tataḥ	therefore
yatra	where	tatra	there
yathā	since	tathā	thus / so / therefore
yadā	when	tadā	then
yadi	if	tadā	then

Table 26 Relative and correlative adverbs

Adjectives

Adjectives are modified by the same set of rules as nouns, following the nouns that they modify. In particular, an adjective must match the case of the noun that it modifies. A example is the phrase *kuśalā dharmāḥ* (English: pure dharmas) from the Diamond Sūtra. The nominative, plural form *kuśalāḥ* of the adjective *kuśala* (English: pure or wholesome) is used to match the nominative, plural form of the noun *dharma* (*dharmāḥ*). Applying sandhi transforms the ending *āḥ* to *ā* when followed by the first letter *ḍ*, so the phrase becomes *kuśalā dharmāḥ*.

A second example is the phrase anāgataṃ cittaṃ (English: the future mind), also from the Diamond Sūtra. The Accusative form of the adjective anāgata (anāgataṃ) (English: future) is used to match the Accusative form of the noun citta (cittaṃ). Applying sandhi transforms the final m to ṃ so the phrase becomes anāgataṃ cittaṃ.

An adjective must also match the noun that it modifies in number and gender. Dictionaries, such as Monier Williams, give an abbreviation like **mfn** for entries that are adjectives. This means that the adjective is the masculine, feminine, and neuter form. If an entry has a **mfn** then the feminine form will usually end in ā. Examples of adjectives with the feminine form ending in ā are kupita (English: angry) and bhīta (English: afraid). Other adjectives have feminine forms ending in ī. These will have a dictionary entry like mf(ī)n or mf(ई)n. Examples of adjectives with feminine forms ending in ī are dhārmika (English: virtuous) and sundara (English: beautiful).

Verbs

Sanskrit verbs can be modified based on tense, aspect, mood, number, and person. This modification is known as **inflection**, which is the modification of words to fit with the grammatical structure of the text that they are part of. For example, in English the inflected forms of the stem *work* are work, works, working, and worked. There are also other forms with prefixes, for example *rework*. Inflection is a source of great difficulty for learners of English as a second language but Sanskrit is much richer in inflected forms of verbs. For more on the concepts behind inflection in languages in general see the book *Linguistics* [Baker and Hengeveld, 2012 chapter 12].

Some simple examples of verb inflection for first second and third person are shown in Table 27.

	English Pronoun	Sanskrit Verbs			
Root		√gam	√prach	√bhū	√vas
Stem		gaccha	pr̥ccha	bhava	vasa
English		go	ask	become	live
Third Person	He, she	gacchati	pr̥cchati	bhavati	vasati
Second Person	You	gacchasi	pr̥cchasi	bhavasi	vasasi
First Person	I	gacchāmi	pr̥cchāmi	bhavāmi	vasāmi

Table 27 Examples of verb Inflection for First, Second, and Third Person

Thematic vowels are inserted into words after the stem and before the ending. Thematic vowels are not used in English. In Sanskrit the theme vowel is अ (a). The presence or absence of thematic vowels divides verbs into thematic verbs and athematic verbs.

Grammatical Person and Number

Sanskrit has dual verbs, which is a concept that English does not. This combines with the first, second, and third person forms. For example, gaccha (go) becomes gacchataḥ (gaccha + tas) those two go. Dual forms are for the word gaccha are shown in Table 28.

Person	Dual	Stem + Suffix	English
Third person	gacchataḥ	gaccha + tas	those two go
Second person	gacchathaḥ	gaccha + thas	you two go
First person	gacchāvaḥ	gaccha + a + vas	we two go

Table 28 Dual Forms of the Verb gaccha

Word morphology changes for grammatical person (first, second, and third) combine with number (singular, dual, and plural) as shown in Table 29 below. These are the present indicative forms.

Person	Singular	Dual	Plural
Third person	gacchati गच्छति (he goes)	gacchataḥ गच्छतः (those two go)	gacchanti गच्छन्ति (they go)
Second person	gacchasi गच्छसि (you go)	gacchathaḥ गच्छथः (both of you go)	gacchatha गच्छथ (you all go)
First person	gacchāmi गच्छामि (I go)	gacchāvaḥ गच्छावः (we both go)	gacchāmaḥ गच्छामः (we all go)

Table 29 Present indicative forms for grammatical person and number for active verb with root √gam (to go)

The ending tas becomes taḥ when the word is a verb. Similarly, for the first and second person forms.

Verb endings in Sanskrit depend on voice, which can be active, middle, or passive. Some verbs can have both active and middle voice forms. With the active voice the result of an action goes to the object. Examples of active verbs are he goes (IAST: gacchati, Devanagari: गच्छति, Chinese: 去), he conquers (IAST: jayati, Devanagari: जयति, Chinese: 勝), he reads (IAST: paṭhati, Devanagari: पठति, Chinese: 讀), and he sees (IAST: paśyati, Devanagari: पश्यति, Chinese: 見). Sanskrit also has a middle voice where the result of the action goes to the agent (subject). Examples of middle voice verbs are he says (IAST: bhāṣate, Devanagari: भाषते, Chinese: 說), he thinks (IAST: manyate, Devanagari: मन्यते, Chinese: 意), he obtains (IAST: labhate, Devanagari: लभते).

लभते, Chinese: 拿), he serves (IAST: sevate, Devanagari: सेवते, Chinese: 服務), and he knows (IAST: bodhate, Devanagari: बोधते, Chinese: 覺). Verb conjugation for the middle verb with root √bhāṣ (to speak) are shown in Table 30.

Person	Singular	Dual	Plural
Third person	bhāṣate भाषते (he says)	bhāṣete भाषेते (they both say)	bhāṣante भाषन्ते (they say)
Second person	bhāṣase भाषसे (you say)	bhāṣethe भाषेथे (you both say)	bhāṣadhve भाषध्वे (you all say)
First person	bhāṣe भाषे (I say)	bhāṣāvahe भाषावहे (we both say)	bhāṣāmahe भाषामहे (we all say)

Table 30 Verb form changes for grammatical person and number for middle voice with √bhāṣ (to speak)

Some verbs can take both active and middle voice. For example, the verb with root √cint (to think) can take both the active voice cintayati and the middle voice cintayate.

The verb root √as means "to be" (Chinese: 有) and is used as a cupola. It is similar in meaning to verb root bhū but more common. The word endings are for √as are similar to active verbs. The different forms of this verb are listed in Table 31.

Person	Singular	Dual	Plural
Third person	asti अस्ति	stah स्तः	santi सन्ति
Second person	asi असि	sthaḥ स्थः	stha स्थ
First person	asmi अस्मि	svaḥ स्वः	smah स्मः

Table 31 Verb with root √as (to be)

The Sanskrit word nāsti (English: to not be, Chinese: 無有) is the antonym of asti (English: to be). It is actually formed from two parts: na + asti with sandhi applied. An example from the Diamond Sūtra is nāsti dharma (no such dharma).

Tenses

There are four tense systems in Sanskrit:

- Present
- Perfect
- Aorist
- Future

The examples so far have been present tense. An example of conjugation of the root √budh (English: know, Devanagari: बुध्, Chinese: 覺) are bodhati (present), buddhvā (gerund), and bhotsyati (future). Conjugation for other verb are shown in Appendix 2.

There are four forms in the present system: present tense, imperfect, operative mood, and imperative mood.

Gerunds

A gerund is formed from a verb but does not take verb endings and acts somewhat like a noun. Sanskrit gerunds are different from English gerunds. For example, the gerund uditvā is equivalent to the English **having spoken**. Some examples of gerunds used in the Diamond Sūtra are kṛtvā (English: having done, literary Chinese: 用), śrutvā (English: having heard, literary Chinese: 聞), and caritvā (English: having moved, literary Chinese: 行).

An accusative noun that goes with a gerund is placed before it. For example,

gajam dr̥ṣṭvā (English: having seen the elephant)

The gerund is not declined. It is usually formed by adding the suffix -tvā. For example, the root √dr̥ś becomes dr̥ṣṭvā and the root √gam becomes gatvā. When there is a prefix, then the suffix becomes -ya. For example, the root ā + √gam becomes āgamyā (English: having come).

The gerund is also called the absolutive.

The Imperfect

The imperfect designates a past action. It is formed by putting the augment **a** before the present stem and adding an ending. An **augment** is a syllable added before a word to indicate past tense. For example,

a + gaccha + t → agacchat (English: he went)

a + dadha + t → adadhat (English: he put)

The ending here is **t**.

The different forms of the imperfect are shown in Table 33.

Person	Singular	Dual	Plural
Third person	agacchat अगच्छत् (he went)	agacchatam अगच्छताम् (those two went)	agacchan अगच्छन् (they all went)
Second person	agacchah अगच्छः (you went)	agacchatham अगच्छतम् (both of you went)	agacchata अगच्छत (you all went)
First person	agaccham अगच्छम् (I went)	agacchāva अगच्छताव (we both went)	agacchāma अगच्छताम (we all went)

Table 33 Imperfect forms for grammatical person and number for active verb with root √gam (to go)

The augment goes after the prefix but before the stem. For example, pratyagacchat (English: he returned). Sandhi is applied here prati + a -> pratya.

Past Participle

A participle is the form of a verb used when it acts as a modifier. For example, in English the word *acting* is the present participle of the verb *act*, as in the phrase *acting director*. The word *attached* is the past participle of the verb *attach*, as in the phrase *attached files*. Another example in English is the past participle *sunken*, as used in the phrase *sunken treasure*. In Sanskrit the past participle is formed by appending one of *-ta*, *-ita*, or *-na* to the stem.

Examples of the first form with ending in *-ta* are *hata* (Devanāgarī: हत, IAST: hata, Chinese: 殺) meaning killed, which modifies the stem *han*, and *sthita* (Devanāgarī: स्थित, IAST: sthita, Chinese: 站) meaning standing or remaining standing, which modifies the stem *sthā*. In some cases there are modifications for internal sandhi.

An example of the second form with ending in *-ita* is *patita* (Devanāgarī: पतित, IAST: patita, Chinese: 落) meaning fallen.

Vowel Strengthening

There are ten classes of conjugation of Sanskrit verbs. These are referred to as classes I through X. Classes I, IV, VI, and X are thematic and the other classes are athematic. Conjugation is based on a stem, which may not be a verb in its own right. Conjugation of thematic verbs is by strengthening vowels. There are two successive grades of strengthening: *guṇa* and *vṛddhi*. The vowel strengthening is shown in the Table 34.

basic	a	ā	i, ī	u, ū	ṛ, ṝ	!
guṇa	a	ā	e	o	ar	al
vṛddhi	ā	ā	ai	au	ār	āl

Table 34 Vowel Strengthening

In many examples the third person singular ति ti (English: he) is added to the stem. For thematic classes an 'a' will inserted before this. For example, the class I form भृ bhṛ (English: bear) becomes भरति bharati (English: he bears). This is derived from the stem भृ bhr by the vowel degradation process above.

Compound Words

A compound word is one formed from multiple stems. This is also one of the major processes of forming new words in the world's languages. For example, *barefoot* in English. Sanskrit has both short and long compound words but long compound words is one of the particular characteristics of the language. An example of a short compound is हिमालय himālaya, formed from two words, literally meaning abode of snow. An example of a longer compound is the Sanskrit name for the Sutra of the Medicine Buddha भैषज्यगुरुवेदूर्यप्रभराजसूत्रम् (IAST: bhaiṣajyaguruvaidūryaprabharājasūtram). The lack of space between the words makes it very difficult for native English speakers to read. Also, unlike English and Chinese, the number of combinations is unlimited and cannot be listed in dictionaries.

If we do not recognise the parts of a compound word, how can we find out what they are? There are a number of characteristics of compound words that give clues. One clue is that, whereas most Sanskrit words are inflected in some way, the individual parts, except the last part, of Sanskrit compound words are all in stem form. Stem form is the form given in dictionaries and lacks an ending that indicates case. For example, *aśva* (horse) is a stem form.

A coordinative compound is compound that joins the parts together with the same meaning as the English conjunction *and*. For example, ācārya-śiṣya (Devanāgarī: आचार्यशिष्य) means teacher and pupil. The number of the compound is the sum of the number of each part. For example, the word for parents, literally mother and father, mātāpitarau (Devanāgarī: मातापितरौ; Chinese: 父母) is in dual form.

Sentences

One of the simplest types of sentence in Sanskrit is the nominal sentence. In this type of sentence an adjective is placed in front of a verb. The type and number of the adjective has to agree with the type and number of the noun. For example,

शीघ्रौअश्वौ | śīghrau aśvau | the two horses are swift

Here the dual form for horse *aśvau* is used so the adjective swift *śīghrau* must match it. Compare that to the reference forms for horse *aśva* and swift *śīghra*. This example can also act as a phrase meaning the two swift horses. This kind of adjective-noun agreement provides another example of word changes that need to be accounted for when searching for the reference forms in dictionaries.

In English and Chinese grammatical function within a sentence is usually determined by word order. Most often in English and Chinese the subject comes first followed by a verb followed by the object. For example, if we change the sentence *The batsman hit the ball* to *The ball hit the batsman*, the meaning is changed entirely. In contrast, grammatical function is most often marked by changes in word forms in Sanskrit than word order. The word order may be changed without changing the meaning.

Translation and transliteration conventions

When transliteration is used and when meaning is translated in translating from Sanskrit to Chinese. Transliteration was mostly used when for names of a people and places. In addition, according to ..., transliteration was used when (1) there was no equivalent word in Chinese, (2) when there was more than one meaning, and (3) when there was a secret meaning.

Basics of phonetics

Some of the vowels and consonants in Sanskrit can be difficult to describe without some technical phonetics terms. In addition, the are various resources on Sanskrit can be difficult to understand without a background in phonetics. This section is included to provide a simple explanation of some of the basic terms. Often the IPA symbols are written in between forward slashes //, used for a phonetic description of how the sounds should be understood. Usually, a *broad transcription*, which is a phonetic approximation, is given. Occasionally, square brackets [] are used, indicating what is actually spoken. In this case, a *narrow transcription*, which is a more accurate phonetic description, may be given.

A *voiced consonant* is articulated with the vocal chords vibrating producing sound. The English consonant [b] is an example of a voiced consonant. An *voiceless sound* is articulated without the vocal chords vibrating. For example, the English consonant [p] is the voiceless equivalent of the voiced consonant [b].

An oral stop, also known as a plosive consonant, blocks all of the airflow for a brief period as the sound is articulated. The air can be blocked with the blade of the tongue, the body of the tongue, or the lips. If the air is blocked with the blade of the tongue, as with the English consonants [t] and [d], it is called a *apical consonant*. If the air is blocked with the body of the tongue, as with the English consonants [k] and [g], then it is called a *velar consonant*. If the air is blocked with the lips, as with the English consonants [b] and [p] then it is called a *bilabial consonant*.

With a *nasal stop* sound is articulated through the nose, for example with English [m] and [n].

An *approximant consonant* is between a fricative and a vowel. An important class of approximant is the *liquid consonant* class. A liquid consonant is either a lateral consonant or a rhotic consonant. A *lateral consonant* is articulated with air flowing through the sides of the mouth and the center blocked. An example is the English consonant l. A *rhotic consonant* is an r-like sound.

An *aspirated* is one that is accompanied by a burst of air. For example, in English the b in bin is aspirated but the p in pin is not.

A *retroflex consonant* is articulated with a curled tongue as in the English sh in ship, ch in chip and s in vision, and also s in gip and z in zip.

A *fricative consonant* is produced by forcing air in the mouth through a narrow channel. English examples are s and z.

See the University College London *Educational Resources in Speech, Hearing and Phonetic Sciences* page listed in the References section for web tutorials on phonetics. For more comprehensive information see the book *Phonetics: Transcription, Production, Acoustics, and Perception* (2011) by Henning Reetz and Allard Jongman.

Working with Sanskrit in electronic form

Displaying Indic text

To display Sanskrit text you will need at least one font installed that can display Devanāgarī. You will most likely be reading Unicode encoded documents. It is wise to have a Unicode font installed with a wide range that includes the Devanāgarī Unicode range. It is likely that the basic Unicode font that you have installed will not cover the Devanāgarī Extended range. However, you may be able to do without that to display most documents. See Alan Wood's Unicode Resources listed in the References section for links to fonts that can display Devanāgarī text and instructions for installing the fonts on different platforms.

While Devanāgarī and Brahmi scripts are already part of the Unicode 6.3 standard (Unicode Consortium 2014, ch 9-10), Pracalita, Ranjana, and Siddham are not. For information on Pracalita script and fonts, see the SIL ScriptSource page on Newar and the *Proposal to Encode the Newar Script in ISO/IEC 10646* (Unicode). (Pandey 2012a). For information on Ranjana script and fonts, see the SIL ScriptSource page on Ranjana. For information on Siddham, see the *Proposal to Encode the Siddham Script in ISO/IEC 10646*. (Pandey 2012b).

Searching text

One initial difficulty with Devanāgarī for searching within single text documents are the diacritics for vowels after consonants in addition to anusvāra (nasalization). Commonly, you will see a letter in a word and search for it but not find it in a table of Devanāgarī letters. This is because the diacritics interfere with the search mechanism. If you are dealing with your own documents then the solution is to use a transliteration tool to find out how to pronounce the letter.

A similar problem occurs when search for terms on the web. This can be troublesome when searching for difficult terms, especially names or people and places in historic times, on the web. Again you can use transliteration tools if you are doing the searching. If you are creating web pages then it is a good practice to provide the Devanāgarī and also the IAST and Latin transliterations.

Entering and saving Sanskrit text

Store files in UTF-8 format. You should see this as an option when saving files. That way you will be able to work with Devanāgarī, IAST, and Chinese all in the same file.

To read Sanskrit you will need to have the correct fonts installed. You will know if you do not have the correct fonts installed if you see square boxes. A good Unicode font may provide all the support you need. If that is not sufficient then try installing fonts for Sanskrit, Devanāgarī, Indian languages, and Hindi. If you have trouble with IAST characters try installing extended Latin.

Input methods for Devanāgarī are readily available. They may be listed as either Sanskrit, Devanāgarī, or Hindi. Try Sanskrit as a first choice and Devanāgarī or Hindi as second choice. On my workstation, a Linux Ubuntu system, Sanskrit is supported directing as a system language.

You can use the Online Interface to Itrans to input IAST symbols. This also converts to Devanāgarī. Also, try the IAST-Devanāgarī-IAST Converter listed in the References section. If you are stuck on an input tool for Devanāgarī then you can use the Harvard-Kyoto scheme, which relies only on Latin characters. Then you can use a converter like Indian.language.unicode.converters (see References) to convert to Devanāgarī.

In addition to Unicode ranges for Devanāgarī and Devanāgarī Extended there are also Unicode ranges for Brahmi and also for Vedic Extensions. See Alan Wood's Unicode Resources listed in the References section for listings of these Unicode ranges with numeric codes. For displaying Prachalit and Ranjana see the links for the SIL ScriptSource entries on Newar and Ranjana, the www.jhinevah.org pages on Nepalese Scripts, and Manandar (2012).

Displaying and Working with International Phonetic Alphabet Symbols

You may have problems displaying International Phonetic Alphabet (IPA) Symbols if you do not have the correct fonts installed. See the page *The International Phonetic Alphabet in Unicode* by John Wells for links to fonts capable of displaying IPA Symbols and for their Unicode values. Diacritics can be specified by adding the Unicode symbol for the diacritic after the regular Latin letter. For example, to add a tilde ~ to the symbol /ɔ/ enter the HTML code below.

ɔ̃ /ɔ/

The web page Unicode Entity Codes for Phonetic Diacritics by Penn State University lists the codes for the diacritics and explains how to use them in HTML pages.

References

There are a number of useful software tools below. In preparing this page I constantly used the IAST-Devanāgarī-IAST Converter from ePandit Labs. The Sanskrit Heritage Site has a number of tools for analyzing Sanskrit grammar, including tools for declension of stems, conjugation of verbs, segmenting sentences, and sandhi conversion. The Spoken Sanskrit site has a dictionary that is easy to use and a Sandhi tool. This is the dictionary that I have had the best experience with.

There are many resources for learning more about Sanskrit below. The Sanskrit Voice and Sanskrit Studies web site has resources for contemporary use of Sanskrit and links to places to study Sanskrit in India. The American Sanskrit Institute web site has links for places to study in the United States. The ITT Madras Learn Sanskrit page has online resources for learning Sanskrit, including sound files. The book Fanyu Keben [Luo Shifang, 2012] is a good resource for Chinese to Sanskrit, although it is written in Chinese.

The National University of Taiwan Digital Library and Buddhist Studies page has resources for Buddhist texts written in Sanskrit and online Sanskrit lessons with based on Buddhist texts. The Buddhist Door Dictionary has IAST transliterations of many Buddhist terms. Many dictionaries and sources do not use standard transliterations, making it hard to determine the Devanāgarī text.

A number of references on Sanskrit used technical linguistics concepts. Understanding these concepts can be very useful in studying Sanskrit and you can find books explaining the subject in list below, including Baker and Hengeveld [2012], Culicover [2009], Henning Reetz and Allard Jongman, and Saeed [2011]. The book *The History of English: a Linguistic Introduction* by Shay [2008] gives a background on the history of Indo-European languages and the principles of the changes that took place over time.

For an introduction to Hindu concepts see the explanation in the book *Bhagavad Gita* [Schweig 2007].

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