SINO-PLATONIC PAPERS

Number 88 December, 1998

Siddham in China and Japan

by
Saroj Kumar Chaudhuri

Victor H. Mair, Editor
Sino-Platonic Papers
Department of East Asian Languages and Civilizations
University of Pennsylvania
Philadelphia, PA 19104-6305 USA
vmair@sas.upenn.edu
www.sino-platonic.org

SINO-PLATONIC PAPERS

FOUNDED 1986

ISSN
2157-9679 (print) 2157-9687 (online)

SINO-PLATONIC PAPERS is an occasional series dedicated to making available to specialists and the interested public the results of research that, because of its unconventional or controversial nature, might otherwise go unpublished. The editor-in-chief actively encourages younger, not yet well established, scholars and independent authors to submit manuscripts for consideration. Contributions in any of the major scholarly languages of the world, including romanized modern standard Mandarin (MSM) and Japanese, are acceptable. In special circumstances, papers written in one of the Sinitic topolects (*fangyan*) may be considered for publication.

Although the chief focus of *Sino-Platonic Papers* is on the intercultural relations of China with other peoples, challenging and creative studies on a wide variety of philological subjects will be entertained. This series is **not** the place for safe, sober, and stodgy presentations. *Sino- Platonic Papers* prefers lively work that, while taking reasonable risks to advance the field, capitalizes on brilliant new insights into the development of civilization.

Submissions are regularly sent out to be refereed, and extensive editorial suggestions for revision may be offered.

Sino-Platonic Papers emphasizes substance over form. We do, however, strongly recommend that prospective authors consult our style guidelines at www.sino-platonic.org/stylesheet.doc. Manuscripts should be submitted as electronic files, preferably in Microsoft Word format. You may wish to use our sample document template, available here: www.sino-platonic.org/spp.dot.

Beginning with issue no. 171, *Sino-Platonic Papers* has been published electronically on the Web at www.sino-platonic.org. Issues 1–170, however, will continue to be sold as paper copies until our stock runs out, after which they too will be made available on the Web.

Please note: When the editor goes on an expedition or research trip, all operations (including filling orders) may temporarily cease for up to three months at a time. In such circumstances, those who wish to purchase various issues of *SPP* are requested to wait patiently until he returns. If issues are urgently needed while the editor is away, they may be requested through Interlibrary Loan. You should also check our Web site at www.sino-platonic.org, as back issues are regularly rereleased for free as PDF editions.

SIDDHAM IN CHINA AND JAPAN

Saroj Kumar Chaudhuri

Foreword

Acceptance of the linguistic concepts of Sanskrit by the Chinese scholarly world is a unique episode in China's academic history, which, perhaps, was not repeated until modern times. Translation of Buddhist scriptures coincided with a time when the Chinese were keenly feeling the shortcomings of their logographic script and desperately searching for some rational means to express the readings of the characters. The Chinese Buddhists were the first to realize the academic importance of the phonetic script that was used to write Sanskrit, which was called Siddham. The Indian monks incorporated a section on Siddham letters in a number of translated sutras, perhaps, at the insistence of Chinese monks. They undoubtedly added the letters, but at the same time gave them a religious aura by adding an esoteric interpretation to each letter. They did not add much linguistic information to the letters. It was the Chinese Buddhists who appended Sanskritic linguistic information to the letters, and tried hard to comprehend the meaning. In short, they discovered the Sanskritic linguistic concepts and disseminated them to the Chinese academic world, with the Indian and Central Asian monks virtually playing the role of informants. The new ideas made a profound contribution to the development of linguistic studies in China. From China, Siddham and its linguistic concepts travelled to Japan and initiated the scientific study of the Japanese language. Early Japanese linguistic studies were carried out almost exclusively by Japanese monks who were basically scholars of Siddham. Of special interest is the Japanese treatment of the pronunciation of mantras. They conventionalised the readings of mantras which deviated from the actual readings. They developed elaborate hypotheses to explain the deviation. The way the Chinese and the Japanese understood Sanskrit, as well as the new ideas that evolved in Chinese and Japanese linguistics under the impact of Sanskritic linguistic ideas, are the main topics of this study.

The author wishes to express his profound gratitude to Prof. Victor H. Mair of the University of Pennsylvania for reviewing the manuscript thoroughly and providing very valuable suggestions.

Certain preliminary information is assumed in this study. This has been given in the section entitled "Introductory Information" that follows. Readers are requested to go through it before entering the main text.

10 December 1998 Saroj Kumar Chaudhuri

Dedicated to Mr. Sanat Kumar Chatterjee

Contents

Introductory Information

1. Varṇamālā

The Varṇamālā is the traditional way of arranging the Sanskrit letters according to phonetic principles. This arrangement was standardised early and has remained in use ever since. The Siddham Varṇamālā as it was known in China and Japan is given below.

a) Vowels

a ā i ī u ū ṛ ṝ ḷ ḹ e ai o au aṃ aḥ

• : ***anusvāra*** ◡ : ***chandravindu*** : : ***visarga***

b) Consonants

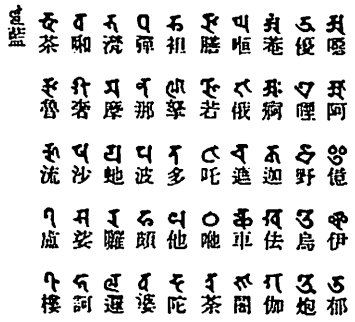
i) Plosives

Orals				Nasals	
Unvoiced		Voiced			
Unaspirated	Aspirated	Unaspirated	Aspirated		
ka	**kha**	**ga**	**gha**	**ṅa**	Velars
ca	**cha**	**ja**	**jha**	**ña**	Palatals
ṭa	**ṭha**	**ḍa**	**ḍha**	**ṇa**	Retroflexes
ta	**tha**	**da**	**dha**	**na**	Dentals
pa	**pha**	**ba**	**bha**	**ma**	Labials

ii) Non-plosives

ya ra la va śa ṣa sa ha kṣa llaṃ

iii) Siddham Varṇamālā



llaṃ	kṣa	va	bha	dha	ḍha	jha	gha	aṃ	ū	a
	ṛ	śa	ma	na	ṇa	ña	ṅa	aḥ	e	ā
	ṝ	ṣa	ya	pa	ta	ṭa	ca	ka	ai	i
	ḷ	sa	ra	pha	tha	ṭha	cha	kha	o	ī
	ḹ	ha	la	ba	da	ḍa	ja	ga	au	u

Source: TSDK, Vol. 84, p. 407, 408

2. ***Anusvāra***, ***chandravindu*** and ***visarga***

Anusvāra: Written in the form of a dot above a letter, it imparts a nasal element to the letter. It is used in Sanskrit and many modern Indian languages. Its form differs with the language in question. It is transcribed as ṃ.

Chandravindu: Written in the form of a crescent moon-and-a dot above a letter, it also imparts a nasal element to the letter. It is not used in Sanskrit and in some modern Indian languages like Hindi. However, it is used in some languages like Bengali. It was also used in Siddham. In the case of Siddham, it is transcribed as m̐.

Visarga: It is written in the form of two dots on the right hand side of a letter. In China and Japan, it was considered to add an oral stop element to the letter. It is transcribed as ḥ.

3. Dual Character of Siddham letters

Siddham consonant letters have a dual property, behaving sometimes like syllables and sometimes like alphabets. Unless mentioned otherwise, the word "consonant" in the context of Siddham letters will mean syllabic consonant letters.

4. Composition of Chinese Syllables

The Classical Chinese language is basically monosyllabic which means that each word (actually morpheme) usually consists of a syllable. The syllable can be represented by S = IMVE/T, where: S = syllable, I = initial consonant, M = medial vowel (which is a glide), V = main vowel, E = end consonant, and T = tone. The group MVE is called the final or rime, and as against this, I is called the initial. A syllable may or may not have I, M and E, but must have V. The medial vowel is a glide that is present between the initial and the main vowel in certain syllables. Two examples of syllables are given below.

	S =	I	M	V	E
良 (good)	*liang*	*l*	*i*	*a*	*ng*
官 (official)	*kuan*	*k*	*u*	*a*	*n*

In the above examples, /l-/ and /k-/ are the initials, and /-iang/ and /-uan/ are the finals. In these finals, /-a-/ is the main vowel in both the cases, /-i-/ and /-u-/ are the medial vowels or glides, and /-ng/ and /-n/ are the end consonants.

Since a character represents a syllable, it is not possible to break it up further into its constituent phonetic elements. For instance, the reading *to* of the character 多 (many) cannot be resolved further into /t/ and /o/.

5. Sanskrit and Chinese Linguistic Terms

The correspondences between the Sanskrit and Chinese linguistic terms used in this book are given below. The Japanese pronunciations of the Chinese terms and their English equivalents are also given.

Sanskrit	Chinese	Japanese	English equivalent
Velar	*ya-sheng*	*gasei*	Velar
Palatal ┐			
Retroflex ├	*she-sheng*	*zessei*	Lingual
Dental ┘			
Labial	*ch'un-sheng*	*shinsei*	Labial

6. Japanese Syllables

The traditional Japanese syllabic pattern is CV, where C denotes a consonant, and V denotes a vowel. A syllable may or may not contain a consonant C, but must contain a vowel V. In other words, a single vowel may constitute a syllable in Japanese. Since all the syllables have to end in a vowel, in the early stages the Japanese vocalised a consonant ending syllable by adding a vowel. Later on the addition was restricted to the vowels /i/ and /u/. Finally only vowel /u/ was added, a practice that became standardised.

7. Gojūonzu

The Gojūonzu ("Chart of Fifty Sounds") is the traditional way of arranging the Japanese *kana* syllables.

ア	イ	ウ	エ	オ	カ	キ	ク	ケ	コ
a	*i*	*u*	*e*	*o*	*ka*	*ki*	*ku*	*ke*	*ko*
サ	シ	ス	セ	ソ	タ	チ	ツ	テ	ト
sa	*shi*	*su*	*se*	*so*	*ta*	*chi*	*tsu*	*te*	*to*
ナ	ニ	ヌ	ネ	ノ	ハ	ヒ	フ	ヘ	ホ
na	*ni*	*nu*	*ne*	*no*	*ha*	*hi*	*fu*	*he*	*ho*
マ	ミ	ム	メ	モ	ヤ	(イ)	ユ	(エ)	ヨ
ma	*mi*	*mu*	*me*	*mo*	*ya*	*(i)*	*yu*	*(e)*	*yo*
ラ	リ	ル	レ	ロ	ワ	ヰ	ウ	ヱ	ヲ	ン
ra	*ri*	*ru*	*re*	*ro*	*wa*	*i*	*u*	*e*	*o*	*n*

8. Japanese voiced consonant syllables

ガ	ギ	グ	ゲ	ゴ	ザ	ジ	ズ	ゼ	ゾ
ga	*gi*	*gu*	*ge*	*go*	*za*	*ji*	*zu*	*ze*	*zo*
ダ	ヂ	ヅ	デ	ド	バ	ビ	ブ	ベ	ボ
da	*ji*	*zu*	*de*	*do*	*ba*	*bi*	*bu*	*be*	*bo*
パ	ピ	プ	ペ	ポ					
pa	*pi*	*pu*	*pe*	*po*					

Note: The convention of writing the syllables *pa*, *pi*, *pu*, *pe*, *po* as independent sounds started with the Portuguese missionaries in the fifteenth century.

9. Pronunciation notes

In Sanskrit, there are three long vowels, **ā**, **ī**, and **ū**. The letters **ṛ**, **ṝ**, **ḷ**, and **ḹ** are semi-vowels, short and long. The letters **śa** and **ṣa** are palatal and retroflex respectively. The other sounds have been described above.

In Chinese, the aspirate sounds are expressed with an apostrophe sign. For instance, Chinese *k'a* is more or less the same as Sanskrit **kha**. The palatal sounds are expressed with the sign / ' /. For instance Chinese *t 'a* is by and large similar to Sanskrit **ca**. The Chinese retroflex sounds are expressed with a dot below the consonants as in the case of Sanskrit.

In Japanese, there are two long vowels, *ū* and *ō*.

10. Diacritical signs have not been used with Sanskrit words like sutra, nirvana, karma, etc., which have been accepted in English, except when used as proper nouns.

11. The linguistic terms have been read in the Chinese way in the section on China and in the Japanese way in the section on Japan.

12. The simplified Chinese characters given in the text are those used in Japan.

13. Chinese characters have been given repeatedly with some words in certain cases because of the homonym problem.

14. The following abbreviations for series have been used.

    a) TSDK: *Taishō Shinshū Daizōkyō*, 大正新修大蔵経, Taishō Shinshū Daizōkyō Kankōkai, Tokyo
    b) KIK-IS: *Kokuyaku Issaikyō Indo Senjutsubu*, 国訳一切経印度選述部, Daitō Shuppansha, Tokyo
    c) KIK-WKS: *Kokuyaku Issaikyō Wakan Senjutsubu*, 国訳一切経和漢選述部, Daitō Shuppansha, Tokyo

Some Japanese Historical Periods (Some dates are disputed.)

Nara	奈良	A.D. 710 - 784
Heian	平安	794 - 1185
Kamakura	鎌倉	1185 - 1333
Muromachi	室町	1336 - 1573
Momoyama	桃山	1573 - 1603
Edo	江戸	1603 - 1868
Modern		1868 -

Some relevant Chinese Historical Periods (Some are approximate dates.)

Western Chou	西周	B.C. 1122 - 770	
Eastern Chou	東周	770 - 256	
Yen	燕	869 - 226	
Ch'u	楚	740 - 330	
Ch'in	秦	221 - 206	
Former Han	前漢	206 - 8	A.D.
Later Han	後漢	A.D. 25 - 220	
Western Chin	西晉	265 - 316	
Eastern Chin	東晉	317 - 420	
Former Ch'in	前秦	351 - 394	
Later Ch'in	後秦	384 - 417	
Northern Wei	北魏	386 - 534	
Northern Liang	北凉	400 - 420	
Sung	宋	420 - 479	
Chi	齊	479 - 502	
Liang	梁	502 - 557	
Northern Ch'i	北齊	550 - 577	
Northern Chou	北周	557 - 581	
Ch'en	陳	557 - 589	
Sui	隋	581 - 618	
T'ang	唐	618 - 907	
Northern Sung	北宋	960 - 1126	
Southern Sung	南宋	1127 - 1279	
Yüan (Mongol)	元	1280 - 1368	
Ming	明	1368 - 1644	
Ching (Manchu)	清	1644 - 1912	

Chapter 1: Buddhism Comes to China

1. Intellectual Background

Buddhism came to China around the beginning of the Christian era. It was a period of great political and social turmoil with the Later Han Dynasty 後漢 slowly heading towards disintegration. Despite political upheavals, it was a period of great intellectual activity. Emperor Wu-ti 武帝 (B.C. 156-87) of the Former Han Dynasty 前漢 established a highly centralised bureaucratic state, dividing the country into administrative units of district, county, and so on. Centrally administered examinations were organized to recruit the best talents for the civil service. A national, central university was set up to train the future civil servants. Records say that there were thirty thousand students on its rolls at its peak. This became the leading centre of learning during the Later Han period (A.D. 25-220). The students thronged there to become higher civil servants. This intense intellectual activity gave birth to scholarly circles where anti-establishment ideas also brewed. As the regime weakened, the students became apprehensive of their future and started criticising the government. The government retaliated by issuing edicts in A.D. 166 and A.D. 169 proscribing the scholarly circles. Over one thousand students of the university were arrested in A.D. 172.(1)

Recruitment of civil servants through examination resulted in a mushrooming of private academies all over the country for the purpose of training the examinees. These private academies had a sense of rivalry with the central university. Many of these private academies were headed by scholars with strong personal convictions. Some of these scholars had even turned down the invitation to become professors at the central university. Whereas the curriculum in the central university was regulated by the regime, there were no such restricting factors in the case of private academies. In some academies, subjects not encouraged by the authorities were also taught. As the academic atmosphere in the centre deteriorated with the weakening of the regime, scholarship shifted to the provinces and took root there. The weakening of the central authority encouraged the local officials to make their posts hereditary, and an aristocratic form of society emerged. These newly risen aristocrats were known by the name *shih-ta-fu* 士大夫. The ambitious among them turned into warlords and contended with each other for supremacy. Since many of them were students of the central university, they welcomed the former professors and students of their alma mater to their domains and patronised scholarship. Students often travelled great distances to study under eminent professors. In those turbulent days scholars were constantly on the move seeking islands of peace. The contenders for supremacy during this period of instability were usually highly educated, and as such they gathered scholars around them whenever they could establish peace. In short, scholarship survived although many of its patrons perished. This state of instability continued until the country was unified again by the House of Sui 隋 in A.D. 581.

The account of Liu Piao 劉表 (A.D. 144-208) given in the Later Han dynasty history *Hou-han shu* 後漢書 compiled by Fan Yeh 范曄 (A.D. 398-445) and other contemporary

documents provide a typical case study of the academic atmosphere prevailing in China during the last days of the Han dynasty. Liu Piao studied at the central university and was sent to Ching-chou 荊州 as a regional inspector. Later, he became the governor and built up enough power to become one of the rival warlords. He founded an academy in his capital which became a leading seat of learning in the country. At his invitation, more than three hundred scholars came carrying books on their shoulders. He hunted for old books and after copying them returned the copied texts to their owners. He built a very good library with the original texts. Ching-chou remained calm when the empire was collapsing. Scholars came in thousands from the disturbed areas and stayed in his capital either temporarily or permanently. Thanks to his generosity, all of them could live satisfactorily. One such fugitive scholar, Wang Chung-hsüan 王仲宣, wrote several tens of volumes while residing in Ching-chou.[2]

The Han bureaucratic model established by Emperor Wu-ti was based on Confucian ideals. Maintenance of peace and harmony in society by the emperor through good governance was one of the basic tenets of Confucianism. A large number of loyal civil servants were needed for translating this ideal into practice. All philosophical schools other than Confucianism were ignored. Literature and the arts were encouraged to the extent that they helped in ensuring the subjects would do good things and refrain from doing anything bad. Religion was treated as a pastime of the weak-minded. The status of writers was no better than that of actors and actresses employed in the court, and the artists were treated no better than the artisans. Four centuries of Han rule failed to produce any new philosophical school. Critics often say that it was a period of intellectual sterility.

The Wei 魏 and Chin 晋 periods (A.D. 220-420) that followed the Han collapse freed the Chinese intellectual world from the fetters of Confucianism. The following famous saying of Emperor Wen-ti 文帝 (A.D. 187-226), the founder of the Wei Dynasty, gives an idea of the fresh air that was blowing into the intellectual world: "Letters are important achievements in a country's administration. They are masterpieces of immortal value. One's life comes to an end with the passing of time, and his glory ends with him. Both are destined to have a limited time span. Till now nothing has excelled the immortality of letters."[3] A hundred flowers bloomed in the intellectual arena of this period. One of the flowers that bloomed during this period was Buddhism. Many intellectuals were attracted to the philosophical ideas embodied in the new religion from the west. Needless to say, the new creed met with considerable opposition from the local Confucianists and Taoists. In North China, the rulers adopted a policy of persecution. In contrast, the opposition came in the form of debate in South China. The adherents wrote treatises in defence of the new faith. They sinified the new religion and promoted it as a national creed.

As the administrative posts became hereditary under the aristocratic *shih-ta-fu* rule, talented Chinese outside powerful families came to have no future in government, the primary channel for attaining social recognition in those days. Buddhism became very popular among the *shih-ta-fu* aristocrats, and under their patronage the Buddhist monastic order developed

into a huge institution. For talented people outside the ruling families, the monastic order provided an alternative avenue for gaining social recognition. In addition, to a great extent it offered personal safety in those troubled days. The monk Tao-an 道安 (A.D. 312-385) provides a good example of the fame and status attained by some of the monks. After capturing Hsiang-yang 襄陽, an important city, with a force of one hundred thousand, the Former Ch'in 前秦 ruler Fu Chien 苻堅 said that all he got was a man and a half. When someone asked him who they were, the ruler replied that the full man was Tao-an and the half man was Hsi Tso-ch'ih 習鑿齒, a famous literary figure.(4)

2. Introduction of Buddhism - Legends and Records

Buddhism was introduced into China in this socio-political milieu. The matter was too insignificant to attract any attention. Many legends, however, cropped up as the religion assumed national importance. Some of these legends and other documentary evidence will be set forth here.

2.1. Non-Buddhist Legends

According to a legend, Confucius once said that there was a holy man in the West. This is cited as a proof that Confucius knew about the Buddha. Another account says that Buddhism was already known in B.C. 317, and that a foreign monk created a three-foot-high pagoda on his finger tips in the court of Prince Chao 昭 of Yen 燕. There is a legend that Buddhist pagodas were erected all over China during the Chou 周 period. These pagodas were burnt down by the Ch'in 秦 Emperor Shih-huang-ti 始皇帝 (B.C. 221-210). During his reign eighteen foreign monks headed by Shih Li-fang 室利房 arrived in China with sutras. The emperor imprisoned them.(5)

2.2. Buddhist Legends

The Chinese Buddhist literature attributes the introduction of Buddhism into China to Emperor Ming-ti 明帝 (A.D. 58-75) of the Later Han Dynasty. One of the earliest works to record the legend is "Li-huo lun" 理惑論 believed to have been written in the third century by a Buddhist convert Mou-tzu 牟子 in defence of the newly introduced religion. It says that Emperor Ming-ti saw a luminous divine being flying in front of his palace and smiling at it in his dream. In the morning he called his ministers and inquired about the divinity. One of his ministers told him that he had heard about a man called Buddha who had attained salvation. He flew about in the sky and he had a luminous body. Perhaps he was the divinity of the dream. The emperor sent a mission of eighteen persons including a military officer, an official, and a scholar. They went to the Scythian kingdom and copied the *Sūtra in Forty-two Sections*. It was deposited in the royal library. A temple was constructed in the western outskirts of Lo-yang 洛陽 beyond the city gate. Pictures of numerous vehicles and horsemen going round pagodas were drawn on the walls of the temple. Statues of Buddha were erected

in the Southern palace and above a city gate. Emperor Ming-ti built his own mausoleum. He installed Buddhist statues on it also.(6)

Monk Seng-yu 僧祐 (c. A.D. 445-518) has recorded two other versions of the legend in his *Ch'u san-tsang chi-chi* 出三藏記集. One version says that Emperor Ming-ti saw a golden man in his dream, and sent his envoy together with an official to the West. They met an Indian monk named Kaśyapa Mātaṅga in the Scythian kingdom, had the *Sūtra in Forty-Two Sections* translated, and brought it back to Lo-yang. The other version says that one night the emperor dreamt of a golden deity with a halo behind his head flying in front of his palace. Next morning one of his ministers told him that the deity was Buddha. The emperor sent a twelve-person mission including an envoy, an official, and a scholar to the west in search of the deity. They went to Scythia and had a Buddhist scripture, the *Sūtra in Forty-Two Sections*, copied. The text was placed in fourteen stone boxes. The emperor erected a pagoda and a temple for worshipping Buddha. With this, Buddhism spread in the country and Buddhist temples were erected in many places.(7)

2.3. Historical Evidence

It is clear that the accounts of the Buddhists contain many fictional elements. Moreover, these accounts were written a few centuries after the introduction of Buddhism. There is at least one piece of concrete evidence to suggest that Buddhist monks were already active around the time Emperor Ming-ti allegedly had his dream. A Chinese poet named Chang Heng 張衡 (A.D. 78-130) wrote a poem called "Hsi-ching fu" 西京賦 ("Ode to the Western Capital") around A.D. 100 in Lo-yang. Describing the seductive beauty of the women of Ch'ang-an 長安 he says that even the virtuous **śramaṇa** will be captivated by them.(8) The word **śramaṇa** means Buddhist monk, and this poem suggests that they were already a visible presence in the society during Chang Heng's time.

The official Chinese histories are considered to be relatively more reliable. One of the earliest authentic accounts on Chinese contacts with Buddhism appears in the Wei dynasty history *Wei-lüeh* 魏略 compiled during A.D. 239-265. After giving an account of the birth of Buddha, it says that an official received an oral transmission of Buddhist scriptures from the ambassador of the King of Scythia during the reign of Emperor Ai-ti 哀帝 in the year B.C. 2. Another account of Buddhist activities appears in the biography of Prince Ying 英 of Ch'u 楚, a half brother of Emperor Ming-ti, in *Hou-han shu*. It says that Prince Ying venerated Buddha and treated Buddhist monks and lay believers living in his territory to a sumptuous vegetarian feast in A.D. 65. Prince Ying committed suicide in A.D. 71, and following his death some of the Buddhist converts went to Lo-yang, where an influential family established a temple, Hsü-ch'ang-ssu 許昌寺, to shelter them.(9) The *Hou-han shu* also mentions that one Chai Jung 笮融, an official with the duty of transporting grain in the Lower Yangtze river, rebelled in the last decade of the second century and appropriated the grain for his own use. He erected Fu-t'u-ssu 浮屠寺, a large Buddhist temple, with a Buddha image in it around

A.D. 193. Buddhist sutras were recited in the temple and discourses were given on Buddhism. More than five thousand people gathered in these assemblies.[10] Chai Jung was a contemporary of Mou-tzu mentioned above. Mou-tzu has given his own life sketch in the preface of "Li-huo lun", and in it he mentions Chai Jung. It says that Chai Jung killed a high official, who happened to be the younger brother of another high official of the locality where Mou-tzu lived. Mou-tzu was requested by this high official to accompany the force sent to avenge the death. Mou-tzu did not comply with the request.[11]

References

(1) Yoshikawa, Tadao, "Scholarship in Ching-chou at the End of the Later Han Dynasty", *Acta Asiatica*, V. 60, Tōhō Gakkai, Tokyo, 1991, pp. 1-3.
This article gives a very good account of the academic activities going on during this period.
(2) Ibid., pp. 6-18.
(3) Liu I-ch'ing, *Shih-shuo hsin-yü*; Mori, Mikisaburō (Tr), *Sesetsu Shingo*, Chūgoku Koten Bungaku Taikei 9, Heibonsha, Tokyo, 1977, pp. 607-609, 劉義慶著 森三樹三郎訳 世説新語 中国古典文学大系 9.
(4) Seng-yu, *Ch'u san-tsang chi-chi*; Hayashiya, Yūjirō (Tr), *Shutsu Sanzō Kishū*, KIK- WKS, Shidenbu 1, 1979, p. 415; 僧祐著 林屋友次郎訳 出三蔵記集.
(5) Ch'en, Kenneth K.S., *Buddhism in China, A Historical Survey*, Princeton University Press, Princeton, 1973, p. 28.
Nakamura, Hajime, *Ajia Bukkyōshi, Chūgokuhen* 1, Kosei Shuppansha, Tokyo, 1975, pp. 20-21, 中村元 編 アジア仏教史 中国編 1.
Kamata, Shigeo, *Chūgoku Bukkyōshi* 1, Tokyo Daigaku Shuppankai, 1982, pp. 83-106, 鎌田茂雄著 中国仏教史.
(6) Mou-tzu, "Li-huo lun", Seng-yu (Ed), *Hung-ming chi*; Ōta, Teizō (Tr), *Gumyōshū*, KIK-WKS, Gokyōbu 1, pp.23-24, 牟子著 理惑論, 僧祐編 太田悌蔵訳 弘明集.
(7) Seng-yu, pp. 25-26, 181.
This is, perhaps, the earliest reference to a translated sutra in the Chinese sources.
(8) Ch'en, Kenneth K.S.: p. 42.
(9) Ibid., pp. 31-33, p. 42.
(10) Ibid., pp. 40-41.
The characters for Chai Jung can also be read as Tse Jung or Tso Jung.
(11) Mou-tzu, pp. 10-11.

Chapter 2: Chinese Meets Sanskrit

1. Early Attempts at Expressing the Sounds of Chinese Characters

For writing their language, the Chinese invented logographic characters which did not evolve into a phonetic script. The characters basically conveyed the meaning and not the reading. Their number proliferated with the passing of time, because a character was invented for every object and idea. This created a demand for a dictionary to keep track of the characters. More than nine thousand characters are listed in *Shuo-wen chieh-tzu* 説文解字, the oldest extant dictionary of Chinese characters. It was compiled around A.D. 100 by Hsü Shen 許慎. It is not possible to commit the readings of such a large number of characters to memory. Consequently, there was a pressing need for recording the readings of the characters by some means.

A careful study of *Shuo-wen chieh-tzu* reveals the efforts the Chinese made to write down the readings of the characters. For instance, the reading of the character 日 (sun) has been given here with the character 実 (fruit). The readings of the two characters were the same at that time although the meanings were totally different. The present day readings of the two characters are *jih* and *shih* respectively. This form of giving the reading of a character with another character was known as *tu-jo* 読若. In *Shuo-wen chieh-tzu* the meanings of certain characters are given with two characters which can also be interpreted to represent the sounds of the characters. The meaning of *ling* 鈴 (bell) is given by two characters 令 *ling* and 丁 *ting*. A bell was undoubtedly called something like *lingting* during the Han period, but the initial /l-/ of the first character and the final /-ing/ of the second character, when joined together, also give the reading *ling* of the character.[1]

The Shuo-wen chieh-tzu records another way of expressing the reading of a character with two other characters in some cases. For example, the reading *pi* (modern reading) of writing brush 聿 is given with two characters 不 and 律 whose ancient readings have been reconstructed as **p'u* and **liwet*. The initial /p'-/ of the first character and the final /-iwet/ of the second character give the then-current reading **p'iwet* for writing brush. Here, the first character means "not", and the second character means "law". Both the characters have nothing to do with the meaning of the character whose reading they denote. They have been used in a purely phonetic sense to give the sound of the character.[2] A latter day scholar named Shen Kua 沈括 (A.D. 1030-1094) writes in his famous work *Meng-hsi pi-t'an* 夢渓筆談 that this way of recording the reading of a character is akin to the practice of *erh-ho* 二合 in the Western regions.[3] The term *erh-ho* was used by Chinese scholars of Sanskrit to denote compounds formed by two Sanskrit consonant letters, for instance, **sa** + **ka** = **ska**. It may be mentioned here that compound consonantal sounds like this are absent in Chinese.

2. Translation and Transcription

Sanskrit came to China at this critical juncture when the Chinese were seriously trying

out various ways and means to record the readings of their characters. Two factors may be assumed to have contributed to rousing Chinese interest in the phonetic Sanskrit script. One was the translation of sutras and the other was the transcription of Buddhist concepts that could not be translated.

The word Sanskrit does not feature anywhere in Chinese Buddhist literature. The Brāhmī script used for writing Sanskrit had regional variations, and the Chinese called the script form that was introduced to them *hsi-t'an* 悉曇, a corruption of Siddham. They commonly used this word to mean the language also. Two other words *fan-yü* 梵語 and *fan-tzu* 梵字, derived from Brāhmī, were also used, albeit to a lesser extent, to mean the language and the script respectively. In this study, the word Siddham will mean both the language and the script.

2.1. Translation of Scriptures

The Buddhist missionaries in China attached great importance to translation of scriptures from the very beginning. Many scholarly Chinese collaborated with foreign monks in this venture. *Ch'u san-tsang chi-chi* of the monk Seng-yu is one of the oldest sources of information on early monastic activities in China. Chapter Two of this work gives a list of translations made by different translators from around A.D. 147 to A.D. 495. The list carries the names of about sixty-six translators and three hundred and twenty-five translations, including multiple translations of same texts.

Table 1: Early translation activities in China

Dynasty	No. of temples	No. of monks and nuns	No. of translators	No. of translations
Western Chin	180	3,700	13	73
Eastern Chin	1,768	24,000	27	263
Sung	1,913	36,000	23	210
Chi	2,015	32,500	16	72
Liang	2,846	82,700	42	238
Ch'en	1,232	32,000	3	11
Northern Wei	30,000	2,000,000	19	49
Sui	3,985	236,200	26	82

Pien-cheng lun 辯正論, by the monk Fa-lin 法琳 (A.D. 572-640), also contains a record of translations made since the Western Chin period along with a list containing the number of temples and clerics. These are shown in Table 1. The data for the Northern Ch'i 北齊 (A.D. 550-577) and Northern Chou 北周 (A.D. 557-581) dynasties are also given, but they are fragmentary. During the former, there were 43 imperial temples, six translators, and fourteen

translations. During the latter, there were 931 temples, four translators, and sixteen translations. *Pien-cheng lun* gives only partial information, since translations were also made in areas beyond the boundaries of these kingdoms.(4)

A study of Ch'u san-tsang chi-chi gives a rough idea of Chinese exposure to Sanskrit. A brief review of a few early translators and their Chinese collaborators up to around A.D. 425 given in this work will be made here. This date has been selected because *Māhaparinirvāṇa Sūtra*, the first Chinese work to carry the Siddham Varṇamālā was translated around this time. The linguistic information embodied in the Varṇamālā played a vital role in rousing Chinese interest in Siddham. It may be mentioned here that about two hundred and seventy-two translations were made by A.D. 425.

Two Indian monks Kaśyapa Mātaṅga and his colleague Chu Fa-lan 竺法蘭 are commonly believed to be the first missionaries to preach Buddhism in China. It is unlikely that they made any translations. The language from which the first translations were made is not known, but it is certain that Sanskrit became the main source with the passing of time.

The first biography given in *Ch'u san-tsang chi-chi* is that of the monk An Shih-kao 安世高, a crown prince of Parthia. He came to Lo-yang during the reign of Emperor Huan-ti 桓帝 (A.D. 147-167). He studied Chinese and translated thirty-five texts into Chinese.(5) The available records suggest that he was the first monk to translate Buddhist texts into Chinese.

Chu Fo-shuo 竺仏朔 was a native of India. He came to Lo-yang during the reign of Emperor Huan-ti. He translated the sutras *Tao-hsing ching* 道行経 and *Pan-chou san-mei ching* 般舟三昧経. Meng Fu 孟福 and Chang Lien 張蓮 acted as copyists. This is one of the earliest records of Chinese collaboration in translation.(6)

An Hsüan 安玄 was a native of Parthia. He came to Lo-yang towards the end of the reign of Emperor Ling-ti 靈帝 (A.D. 168-189) as a trader and became a military officer. After attaining proficiency in Chinese he decided to spread the religion. He translated the sutra *Fa-ching ching* 法鏡経 together with a Chinese believer Yen Fo-t'iao 嚴仏調. An Hsüan translated the Sanskrit text orally, and Yen Fo-t'iao copied the translation.(7)

Chih Ch'ien 支謙 was a Scythian monk. His grandfather came to China during the reign of Emperor Ling-ti along with a few hundred fellow countrymen and settled down. Chi Ch'ien started studying western books at the age of thirteen. He translated the *Vimalakīrti Sūtra* and thirty-five other sutras between A.D. 222 and A.D. 253. This is a case of translation by a naturalised Chinese.(8)

Dharmarakṣa was a Scythian whose forefathers had settled in China. He entered the Buddhist order at the age of eight. His guru was an Indian monk Chu Kao-tsuo 竺高座. He went to the Western region with his guru and returned with a large number of scriptures. He translated one hundred and fifty-nine texts in all. He started translating during the reign of the founder of the Chin dynasty and continued till A.D. 308. One of his collaborators was Nieh Ch'eng-yüan 聶承遠, who corrected his translations. He translated the sutra *Ch'ao jih-ming ching* 超日明経, but it was very cumbersome. Nieh Ch'eng-yüan corrected its poetical form

and divided it into two volumes.[9]

The monk Fa-chü 法炬 translated the sutra *Lou-t'an ching* 楼炭経. Not much is known of him. He also translated two other sutras together with the monk Fa-li 法立. Fa-li made rough translations of other texts also. He died before correcting them. These translations were made during the reigns of Emperors Hui-ti 恵帝 (A.D. 291-307) and Huai-ti 懐帝 (A.D. 307-313) of the Chin dynasty.[10]

Chu Shu-lan 竺叔蘭 was of Indian origin. After his father was injured in civil disturbances, his mother went to the Chin kingdom in China along with her two brothers who were monks. Chu Shu-lan was born in China. He attained proficiency in both Sanskrit and Chinese. In A.D. 291 he translated two sutras including *Fang-kuang ching* 放光経. His translations were very good because he had a good command over both Sanskrit and Chinese.[11]

The monk Fa-tsu 法祖 lived around A.D. 300. He came from a family of Confucian scholars. Fa-tsu knew both Chinese and languages of the Western Regions, and translated three texts including *Ti-tzu pen* 弟子本 and *Wu-pu seng* 五部僧. He also wrote a commentary on the *Surangama Sūtra*. It is also said that he translated a number of lesser texts, but they were lost during disturbances.[12]

Kumārajīva was the son of a princess of Kucha who was married to a man from Kashmir. He came to Ch'ang-an 長安 in A.D. 401 and made a large number of translations. Both his Chinese and his transcriptions were good. The ruler assembled eight hundred monks to discuss the meanings worked out by Kumārajīva. A very talented monk, Hui-jui 恵叡, was a copyist in Kumārajīva's translation work. Kumārajīva discussed the similarities and dissimilarities of the Chinese and western languages with Hui-jui.[13]

Buddhabhadra (died A.D. 429) was an Indian monk and a contemporary of Kumārajīva. The monks Hui-yen 慧厳, Hui-i 慧義, and a hundred others assisted him in translating the sutras. He translated the *Mahāparinirvāṇa Sūtra* around A.D. 417 together with Fa-hsien.[14]

The monk Fa-hsien 法顕 (c. A.D. 339-422) was the first famous Chinese monk to visit India. He left China in A.D. 399 and made an overland trip to India. He returned to China alone in A.D. 412. He translated many sutras, including the *Mahāparinirvāṇa Sūtra*, together with Buddhabhadra.[15]

Wu-ch'en 無讖 was a native of India. Chü-ch'ü Meng-hsün 沮渠蒙遜, the ruler of the Hunnish Northern Liang 北凉 dynasty, invited him to his court and treated him with great respect. For three years he stayed in the king's capital studying the language. He then translated many sutras into Chinese. His most important translation was the *Mahāparinirvāṇa Sūtra* which he did between A.D. 414-426. Many people, including the monks Hui-sung 慧嵩 and Tao-lang 道朗, were involved in his translation of this sutra. Wu-ch'en translated the Sanskrit text and the monk Hui-sung was the main person responsible for writing it down.[16]

2.2. Transcription of Buddhist Words

Buddhism introduced many new concepts to the Chinese. Some of the concepts were so

alien that they could not be translated, and hence were transcribed. Transcription of Buddhist words was a big problem because Chinese lacked many sounds present in the words. The biographies in *Ch'u san-tsang chi-chi* refer to transcription quite often. For instance, the biography of the monk Pao-yün 宝雲 (died A.D. 449) says that he went to India where he studied Indian letters and their sounds. He transcribed the words correctly. Kumārajīva's transcriptions have also been mentioned as good.(17) Such references testify to the big problems monks faced in transcribing Buddhist terms with Chinese characters.

Mantras were also slowly gaining popularity among the Chinese Buddhists, because they were popularly believed to produce supernatural effects when pronounced correctly. So their correct transcription became important. The earliest ones date back to around A.D. 286. Kumārajīva and Buddhabhadra gave forty-two monosyllabic mantras in transcription in their translations. Each mantra carried a short religious interpretation. Buddhabhadra's mantras included many compound consonant sounds like **rtha**, **ska**, and so on. It was impossible to transcribe them correctly with Chinese characters. The only way out was to study the Siddham script. This created an incentive for studying the Siddham script. The mantras of Kumārajīva and Buddhabhadra are given in the next chapter.

The readings of characters have changed with the passing of time. The transcribed Buddhist words provide a valuable record of the phonetic values of the characters during the periods when the transcriptions were made.

It would not be incorrect to assume that the Chinese collaborators in translation discussed the novel Siddham script, whose phonetic value remained unchanged, with their fellow scholars. The word *t'i-yü* 体語 became a popular joke at the wine parties of scholars during the Six Dynasties period (A.D 222-589). This word meant the initial consonant of a character, and was taken from *t'i-wen* 体文, the Chinese translation for the consonants of Siddham. In the *Sui-shu* 隋書, the *History of the Sui Dynasty* (A.D. 636), it is stated that the writings of the Brahmans can express all the sounds with fourteen letters. The fourteen letters here refer to the Siddham vowels.(18)

References

(1) Konishi, Jinichi, *Bunkyō Hifuronkō*, V. 1, Daihachishi Shuppan Co., Ltd., Kyoto, 1948, pp. 180, 184, 小西甚一著 文鏡秘府論考.

(2) Ibid., pp. 183-84.

(3) Shen Kua, *Meng-hsi pi-t'an*; Umehara, Kaoru (Tr), *Mukei Hitsudan*, V. 2, Heibonsha, Tokyo, 1989, p. 107, 沈括著 梅原郁訳 夢渓筆談 2.

(4) Fa-lin, *Pien-cheng lun*, TSDK, V. 52, pp. 502-509, 法琳著 辯正論.

(5) Seng-yu, *Ch'u san-tsang chi-chi*; Hayashiya, Yūjirō (Tr), *Shutsu Sanzō Kishū*, KIK-WKS, Shidenbu 1, 1979, p. pp. 365-368; 僧祐著 林屋友次郎訳 出三蔵記集.

(6) Ibid., p. 369.

(7) Ibid., p. 369.

(8) Ibid., pp. 374-75, 30-31.

(9) Ibid., pp. 375-76, 32-41.
(10) Ibid., pp. 376.
(11) Ibid., pp. 377-78, 41.
(12) Ibid., p. 409-412.
(13) Ibid., pp. 383-390.
(14) Ibid., pp. 396-398, 429.
(15) Ibid., pp. 426-429.
(16) Ibid., pp. 393-396.
Mabuchi, Kazuo, *Nihon Ingakushi no Kenkyū*, Pt. 1, Rinsen Shoten, Kyoto, 1984, p. 36, 馬渕和夫著 日本韻学史の研究.
(17) Seng-yu, pp. 431, 388.
(18) Konishi, pp. 162, 188.

Chapter 3: Siddham Comes to China

Translation of Buddhist literature must have enlightened the scholarly Chinese monks concerning the advantages of a phonetic script. Perhaps they also saw it also as an academic tool in their intellectual debate with the native scholars. This created an environment for the introduction of Siddham script.

1. *Lalitavistara Sūtra*

P'u-yao ching 普曜経, the A.D. 308 translation of the *Lalitavistara Sūtra*, was perhaps the first translated text to carry some information on the scripts of India. It says that there are sixty-four types of scripts, and then enumerates them. The name Siddham is missing here. It may be mentioned here that the twenty-first script mentioned in the list is that of the Hunas, a people who probably had not appeared on the Indian scene yet.(1) About a century later, around the first quarter of the fifth century, suddenly a number of translated sutras appeared in which a section was devoted to the Siddham letters. A study of these letters shows that they were treated as mantras with esoteric religious meanings. They were introduced in two basically different ways. Two texts, *Mahāprajñāpāramitā Sūtra* and *Buddhāvataṃsaka-mahāvaipulya Sūtra*, gave only forty-two letters. As against this, the two translations of the *Mahāparinirvāṇa Sūtra* introduced the whole Varṇamālā along with some linguistic information.

2. Forty-Two Letters

The *Mo-ho-po-jo-po-lo-mi ching* 摩訶般若波羅蜜経, the Chinese translation of the *Mahāprajñāpāramitā Sūtra*, made by Kumārajīva in A.D. 403, carries a section on the Siddham letters. It introduces the letters by saying that the Bodhisattva Subhuti will explain the letters and the words in the passage following. Forty-two letters are given here in Chinese transcription along with their religious interpretations. The Siddham letters have not been given. The transcriptions have been shown in Table 2. As stated above, the transcriptions were not standardised. So, the readings given in the table are the probable ones, deduced from the transcriptions appearing with the Siddham letters in other texts. From the table it will be seen that except for the vowel **a**, all other vowels are missing. The letters are not arranged in the Varṇamālā order. As many as seven letters can perhaps be associated with the letters **pa**, **pha**, **ba**, **bha**, and **ma**. Some of the transcriptions have been used more than once. The transcriptions do not carry any linguistic information. The religious interpretations of the first two letters are given as follows: "The letter **a** means that all the dharmas were not present at the beginning. The letter **ra** means that all the dharmas are free of impurities." The religious meanings of the forty-two letters appear in the text in this manner.(2)

Ta-fang-kuang-fo hua-yen ching 大方広仏華厳経, Buddhabhadra's translation of the *Buddhāvataṃsaka-mahāvaipulya Sūtra*, appeared in A.D. 420. It also carries a list of forty-two

Table 2: Forty-two letters of Kumārajīva

阿 **a**	羅 **ra**	波 **pa**	遮 **ca**	那 **na**	邏 **la**	陀 **da**
婆 **ba**	茶 **ḍa**	沙 **ṣa**	和 **va**	多 **ta**	夜 **ya**	吒 **ṭha**
迦 **ka**	娑 **sa**	磨 **ma**	伽 **ga**	他 **tha**	闍 **ja**	簸 **pa**
馱 **dha**	賒 **sa**	呿 **kha**	叉 **kṣa**	哆 **ta**	若 **ña**	拕 **da**
婆 **bha**	車 **cha**	摩 **ba**	火 **ha(?)**	嗟 **cha**	伽 **gha**	他 **tha**
拏 **ḍa**	頗 **bha**	歌 **ka(?)**	醝 **jha**	遮 **ca**	吒 **ṭ ha**	荼 **ḍa**

Notes (1): The readings of Kumārajīva's transcriptions have been reconstructed on the basis of transcriptions in other Varṇamālās.

(2): (?) indicates doubtful reading. These transcriptions could not be found in other Varṇamālās.

Table 3: Forty-two letters of Buddhabhadra as given by Annen

a	**ra**	**pa**	**ca**	**na**	**la**	**da**
ba	**ḍa**	**ṣa**	**va**	**ta**	**ya**	**ṣṭa**
ka	**sa**	**ma**	**ga**	**tha**	**ja**	**sva**
dha	**śa**	**kha**	**kṣa**	**sta**	**jña**	**rtha**
bha	**cha**	**sma**	**hva**	**tsa**	**gha**	**ṭha**
ṇa	**pha**	**ska**	**ysa**	**śca**	**ṭa**	**ḍha**

letters in Chinese transcription, but the letters are different here. There are nine compound letters like **ska** and so on. *Shittanzō* 悉曇蔵, written by a Japanese monk named Annen 安然 around A.D. 880, is considered to be an authoritative work on Siddham as it was known in China and Japan up to his time. It carries a copy of Buddhabhadra's letters, but for some unknown reason they are slightly different. The interesting aspect of the version of Annen is that it also includes the Siddham letters. Table 3 shows the letters of Buddhabhadra as given by Annen. The letters here carry pronunciation notes which were not given by Buddhabhadra. The letters **ca** and **ma** carry the note *ch'ing-hu* 軽呼, a term whose meaning is difficult to establish. The letters **bha** and **ḍha** carry the note *yin* 引 or long sound. There are as many as

twelve compound letters, including the letter **kṣa**. All of them are compounds made up of two consonant letters. The note *erh-ho* 二合 or "combine two" has been appended to the compounds. The tone signs are also given. There is a very controversial letter given by Annen. It is the compound **jña**, but its Chinese transcription gives the reading as **ña**. It carries the note *ch'ing-hu* and not *erh-ho* that was used with the compound letters.(3) It is likely that these pronunciation notes are latter-day additions.

A second translation of this sutra was made around A.D. 695 by Jisyānanda. He has given another set of forty-two letters in Chinese transcription only. He has added pronunciation notes only to the two letters **da** and **ga** to indicate that they are *ch'ing-hu*. The compound letters do not carry the note *erh-ho*. He has given the spelling of some letters in *fan-ch'ieh*.(4) He has transcribed the controversial letter **jña** mentioned above as **ña**. He has given reading notes and tone signs with many characters. The religious meanings of the letters are more elaborate here. For instance, the letter **ra** means "the state of infinite and non-discriminating knowledge. All the dharmas are free of impurities." It seems that the forty-two letters acquired a mantra-like status among the Buddhists.

It must be mentioned here that the *Prajñāpāramitā Sūtra* was translated twice earlier towards the end of the third century. They also presented Siddham letters in a similar manner, but the letters did not evoke any Chinese interest in phonetic script. These two translations will be discussed later in Chapter 6.

3. The *Mahāparinirvāṇa Sūtra* Introduces the Varṇamālā

An important landmark in the history of Siddham in China is the two translations of *Mahāparinirvāṇa Sūtra* made around the first quarter of the fifth century. Judging from the currently available literature, these translations introduced the Varṇamālā to the Chinese for the first time. One was made by Fa-hsien in collaboration with Buddhabhadra in A.D. 417 under the title *Ta-pan-ni-yüan ching* 大般泥洹経. The other was made by Wu-ch'en under the title *Ta-pan-nieh-p'an ching* 大般涅槃経 between A.D. 414-426. It is difficult to say whether the original version of the *Mahāparinirvāṇa Sūtra* actually listed the Varṇamālā or not. This is because the Pali version available at present does not contain it, and the Sanskrit version has yet to be found. The possibility of deliberate interpolation of the letters in the text in view of rising academic interest in them cannot be ruled out.

Fa-hsien and Buddhabhadra allotted a separate chapter to the letters, whereas Wu-ch'en incorporated them as a part of a chapter. The Siddham letters have been introduced in the form of Bodhisattva Kaśyapa's request to Buddha to explain the letters. The main focus of Buddha is on the religious interpretation, and hence very little linguistic information on the letters is given here. Of the two versions, that of Fa-hsien and Buddhabhadra carries more linguistic information than that of Wu-ch'en. But for some unknown reason, Fa-hsien and Buddhabhadra's version was ignored persistently in Japan, where the tradition of Siddham studies continued more or less uninterrupted even after it faded out in China from around the

tenth century. Hence, the version of Wu-ch'en will be taken up first.

Buddha, in reply to the Bodhisattva Kaśyapa's request to explain the basic concept of letters, says that he will explain the *pan-tzu* 半字 or half letters as they constitute the basic concept. They hold together various written things, sorcery, sentences, all elements and realities. Common people learn the basis of the letters, and only after that they know what is dharma and what is not. Next, the Buddha says that there are fourteen sounds. They are called the meanings of letters. The letters have another name, which is nirvana. They are static. So they do not flow. The things that do not flow do not get exhausted. The things that do not get exhausted constitute the adamantine body of the Tathāgata. These fourteen letters are the source of the letters.

Following this, the letters are given along with their religious interpretations. First, the twelve vowels, **a**, **ā**, **i**, **ī**, **u**, **ū**, **e**, **ai**, **o**, **au**, **aṃ**, and **aḥ** are given, followed by the consonants **ka**, **kha**, **ga**, **gha**, **ṅa**, **ca**, **cha**, **ja**, **jha**, **ña**, **ṭa**, **ṭha**, **ḍa**, **ḍha**, **ṇa**, **ta**, **tha**, **da**, **dha**, **na**, **pa**, **pha**, **ba**, **bha**, **ma**, **ya**, **ra**, **la**, **va**, **śa**, **ṣa**, **sa**, **ha**, and **llaṃ**. Finally, the four vowels **ṛ**, **ṝ**, **ḷ**, and **ḹ** are given.

Some of the religious interpretations given with the letters are long and some are short. For instance, the first letter **a** has a long interpretation as follows: "The letter **a** is indestructible. So an indestructible thing is called the Three Treasures, for instance a diamond. Again, it is so named because it does not flow away. The thing that does not flow away is the Tathāgata. ..." The letter **ja**, on the other hand, has a short interpretation. "The letter **ja** means true salvation. So there is no senility. Hence it has been named **ja**." Even shorter is the interpretation of the letter **ba**. "The letter **ba** is named after the ten powers of Buddha. So it is called **ba**."

The letters are followed by some linguistic information. "The inhaling breath turns into sound when the root of the tongue is assisted by the nose. There are long sounds, short sounds, and superseding sounds, and we understand the meaning from these sounds. All differ from each other through the interference of the tongue or the teeth." There are also references to half-letter and full-letter *man-tzu* 滿字. They carry only religious interpretations and no linguistic information. For instance, "the half-letters constitute the basis of the scriptures, discussions, and other writings. The meanings of the half-letters are at the root of all sufferings. Hence they are called half-letters. The full letters are the root of all good dharmas and speech."[6]

4. Fa-hsien and Buddhabhadra's Information

Fa-hsien and Buddhabhadra have given more linguistic information than Wu-ch'en. They have used different characters for transcribing the letters **a**, **i**, **u**, **aṃ**, **kha**, **ga**, **gha**, **jha**, **ña**, **ṭha**, **ḍha**, **ṇa**, **dha**, **bha**, **ya**, **ra**, **śa**, **llaṃ**, **ṛ**, **ṝ**, and **ḷ**. They have also provided some linguistic information on the letters.

The short vowels **a**, **i**, and **u** carry the pronunciation note *tuan* 短 meaning "short", and the long vowels **ā**, **ī**, and **ū** carry the note *ch'ang* 長 meaning "long". The same characters

have been used for transcribing the short and long vowel pairs. The character used for transcribing short **a** and long **ā** has also been used for the vowel **aḥ**. The vowels **e** and **ai** have been transcribed by the same character without any explanatory remark. The consonant letters **ka** and **ga** have been transcribed with the same character, as is the case with the letters **ṭa** and **ṭha**. The voiced letter pair, **ja** and **jha**, has also been transcribed with the same character. This practice has also been followed for the pairs **ḍa** and **ḍha**, **da** and **dha**, and **ba** and **bha**. The voiced aspirated letters **gha**, **jha**, **ḍha**, **dha**, and **bha**, however, are accompanied by the pronunciation note *chung-yin* 重音 to indicate that they are aspirated sounds. The letters **ra** and **la** have also been transcribed with the same character, with the phonetic note *ch'ing-yin* 軽音 or light sound appended to the character for the letter **la**. This character has also been used to transcribe the letter **llaṃ** without any phonetic note, but with the phonetic reading given in *fan-ch'ieh*.(7) This may be an addition of a later date. Wu-ch'en did not add any such linguistic information to his letters.

Of special interest are the transcriptions of the voiced aspirated letters **gha**, **jha**, **ḍha**, **dha**, and **bha**. The characters used by Wu-ch'en had, in all likelihood, nasal endings. For instance, Wu-ch'en transcribed the letter **dha** with the character 弾 which is read at present as *tan* or *t'an* in Chinese and *dan* in Japanese. This is not the case with Fa-hsien's transcriptions. Fa-hsien and Buddhabhadra transcribed **dha** with 陀 which is read as *t'uo* in Chinese and *da* in Japanese. There may be two explanations for this. One is that although the characters of Wu-ch'en had nasal endings in the southern dialectal area located in the region surrounding Nanking 南京, the native area of Fa-hsien, they were non-nasal in Liang-chou 涼州 in the far northwest, far beyond Ch'ang-an 長安 where Wu-ch'en carried out his translation. The other is that Wu-ch'en chose the characters with nasal endings deliberately in order to caution the readers that they were aspirated sounds.

5. Problems Posed by Transcription

The arrangement of the Siddham letters, as shown in the Varṇamālā, was standardised fairly early in India. The transcriptions of the letters, on the other hand, were not standardised in China. In most cases the authors transcribed the letters in their own way. Sometimes the same author used different transcriptions for the same letter in different works. One of the reasons for this may be that the readings of Chinese characters were not standardised. The readings varied from region to region, and also with the passing of time. The authors tried to reproduce the sounds of the letters as best they could. Another factor that aggravated the problem was that the pronunciations of letters varied from region to region, even in India. The Chinese works persistently mention Central Indian, North Indian, and South Indian ways of pronunciation. Non-standardisation of transcriptions produced some peculiar problems for modern readers. That is to say, if the transcription of a letter creates a problem, the pronunciation can be guessed if the Siddham letter is also given. But when a letter appears only in transcription along with, say, its religious interpretation, it becomes difficult to identify it with certainty

when doubt arises.

6. Possibility of Interpolation of the Varṇamālā in the *Mahāparinirvāṇa Sūtra*

The likelihood of interpolation of the Varṇamālā in the *Mahāparinirvāṇa Sūtra* has been mentioned earlier. The suspicion arises from the dropping of the letter **kṣa** in the Varṇamālā. Historically, **kṣa** is one of the constituent members of the Varṇamālā. The Devanagari Varṇamālā has it even today, while the Bengali Varṇamālā dropped it only recently. In China also, most of the Varṇamālās appearing in subsequent translations contain this letter. It seems that **kṣa** represented an independent consonant of some Indian dialectal area when it was first conceived. However, with the passing of time, either the importance of the dialect diminished, or the consonant died out in its native area due to alien conquest, or migration, or some other reason. The sound was forgotten as time passed. The Indians, being basically conservative by nature, did not discard the letter. As the letter was there, a convention was evolved to read it as **kṣa**, a compound of the two letters **ka** and **ṣa**, which, perhaps, was close to the original sound.

It was quite natural that the Varṇamālā was first incorporated in the sutra in the Nanking area, because it was the centre of Chinese intellectual activities in those days. The Chinese Buddhist intellectuals were, in all probability, curious to have a full picture of the Indian phonetic script. Fa-hsien was right there. Moreover, the Buddhist intellectuals must have sensed that an ability to write down the sound of any Chinese character with a phonetic script, and to reproduce the sound correctly at any later date from the script meant that it was indeed a convenient tool in their intellectual debates with their rivals. This may have been the main consideration in incorporating the Siddham letters in the sutra. The Buddhist establishment had a very good communication network, and as the news spread, a more detailed translation of the sutra was made in the far northwest, as a matter of rivalry. Following the precedence of Nanking, the Varṇamālā was also incorporated. In both the cases, the Indian translators were dealing with highly educated Chinese. The Chinese interest in the script was basically academic. The Indians could not convince their Chinese collaborators that the behavior of **kṣa** was the same as that of the other consonants. Even Fa-hsien, with his first-hand experience of India, perhaps, was not convinced. Moreover, inclusion of **kṣa** would surely have drawn attacks from their rivals. So the letter was dropped. Had the Varṇamālā been present in the sutra from the very beginning, it is unlikely that anybody would have raised any objection to its total incorporation.

The same argument can be advanced for the three letters **aḥ**, **aṃ**, and **llaṃ**. The association of **aḥ** with the Chinese entering tone endings /-k/, /-t/, and /-p/, and of **aṃ** with the nasal endings /-ng/, /-n/, and /-m/ is likely to have saved these three letters.

It may be mentioned here that Annen has quoted the Varṇamālā of Wu-ch'en in his *Shittanzō*. Here the letters are given both in Siddham script and in their Chinese transcriptions. The letter given here in Siddham is **kṣa**, and not **llaṃ**. This may appear to settle any doubt.

However, a look at the Chinese transcription shows that Wu-ch'en's transcription has also been changed.[8]

References

(1) Mabuchi, Kazuo, *Nihon Ingakushi no Kenkyū*, Pt. 1, Rinsen Shoten, Kyoto, 1984, p. 24, 馬渕和夫著 日本韻学史の研究.

(2) Kumārajīva, *Mo-ho-po-jo-po-lo-mi ching*, TSDK, V. 8, p. 256T-M, 摩訶般若波羅蜜経.
Mabuchi, pp. 28-30.

(3) Buddhabhadra, *Ta-fang-kuang-fo hua-yen ching*, TSDK, V. 9, pp. 765B-766T, 大方広仏華厳経.
Annen, *Shittanzō*, TSDK, V. 84, pp. 424T-425T, 安然著 悉曇蔵.
Mabuchi, pp. 31-34.

(4) The *fan-ch'ieh* spelling of a character is given by two characters, the first one giving the initial and the second one giving the final. The pronunciation of the character is obtained by joining the two. For further information see Chapter 6.

(5) Jisyānanda, *Ta-fang-kuang-fo hua-yen ching*, TSDK, V. 10, p. 418T-B, 大方広仏華厳経.
Mabuchi, pp. 31-34.

(6) Wu-ch'en, *Ta-pan-nieh-p'an ching*, TSDK, V. 12, pp. 413T-414M, 大般涅槃経.
T'an Wu-ch'en, *Ta-pan-nieh-p'an ching*; Tokiwa, Daijō (Tr), *Daihatsu Nehangyō*, Pt. 1, KIK-IS, Nehanbu 1, pp. 179-185, 曇無讖, 常盤大定訳 大般涅槃経.

(7) Fa Hsien, *Ta-pan-ni-yüan ching*, TSDK, V.12, pp. 887B-888B, 大般泥洹経.
Mabuchi, pp. 37-40.

(8) Wu-ch'en, p. 414T; Annen, *Shittanzō*, p. 407M.
Wu-ch'en gives the transcription 嗏, which represented **llaṃ**. The *fan-ch'ieh* reading is 同都切. The rime tables suggest that the initial consonant of the character was /d-/, which, with a slight retroflex twist, turned into a sound close to /l/. The modern reading works out to be *t'u* or *t'ou*.
Annen gives the Siddham letter **kṣa** and transcription 茶. The *fan-ch'ieh* spelling 直加切 of this character gives the reading *ja*, a sound close to **kṣa**, according to *Yün-ching* 韻鏡. The modern reading is *ch'a*.

Chapter 4: Hsieh Ling-yün Discovers Siddham

1. Fa-hsien and Hsieh Ling-yün

Two persons appear to have played a crucial role in the Chinese discovery of the Siddham script. One is Fa-hsien, the famous Chinese monk who travelled to India and had a first-hand view of a society whose language was based solely on a phonetic script. The other is Hsieh Ling-yün 謝靈運, a famous poet and, in all probability, the first Chinese to write on the Siddham letters.

Fa-hsien became a member of the monastic order at the age of twenty. In the year A.D. 399 he set out for India from Ch'ang-an at the age of sixty, along with a number of fellow monks. In A.D. 412, he returned alone at the age of seventy-two, via Ceylon and Java, and settled down in the Tao-ch'ang-ssu Temple in Ch'ang-an. Along with the Indian monk Buddhabhadra he translated many texts, including the *Mahāparinirvāṇa Sūtra*, which introduced the Siddham letters. He died at the age of eighty-two.

Hsieh Ling-yün (A.D. 385-433) was a scion of the powerful Hsieh family who were strong adherents of Buddhism. In A.D. 383, one of his great granduncles, Hsieh An 謝安, led the Eastern Chin 東晋 forces to victory in war against the Former Ch'in 前秦 ruler Fu Chien 苻堅. His own grandfather, Hsieh Hsüan 謝玄, was a deputy commander in this war. Hsieh An erected the Tao-ch'ang-ssu Temple 道場寺 in Ch'ang-an where Fa-hsien settled down after his return from India. This temple developed into a haven for Buddhist monks and an important translation centre.[1]

Hsieh Ling-yün was a leading poet of his time. He entered government service in the year A.D. 405. With a weak ruler on the throne, rivalry broke out between two contenders. Hsieh Ling-yün was serving under the contender who lost in the power struggle and committed suicide. The victor spared Hsieh Ling-yün, but relegated him to a minor position. Hsieh Ling-yün resigned his job because the new ruler did not recognise his talent, and plunged into literary activities. Presently Emperor Wen-ti 文帝 (A.D. 424-454), an admirer of his poems, ascended the throne and appointed him as a private secretary. The emperor admired his literary genius but not his political acumen. He resigned again out of frustration and withdrew into literary activities once more. He was put to death on the charge of treason in A.D. 433.[2]

> The flower garden of the Deer Park, I yearn for
> The famous mountain of Vulture Peak, I adore
> The virgin forest of śāla trees, I long for
> And I pine for the fragrant trees of the mango grove.
> Beautiful, yet beyond reach, are they,
> Where pervades the compassionate voice of the Buddha.[3]

This poem of Hsieh Ling-yün, quoted in his biography in the *Sung-shu* 宋書, the *History of the Sung Dynasty* (A.D. 420-479), gives a fair idea of his strong commitment to

Buddhism. Hsieh Ling-yün wrote a eulogy after the death of the monk Hui-yüan 慧遠 around A.D. 417. Hsieh Ling-yün states in it that he wanted to become the monk's disciple at the age of fifteen, but his wish was not fulfilled. However, he remained an ardent admirer of the monk who is regarded as the founder of the Pure Land School. Around the year A.D. 386 Hui-yüan founded a monastery in Lu-shan 廬山 mountain which became an important centre of Buddhist activities. Coming to know from Fa-hsien that there was a sculptured manifestation of the Buddha, called "Shadow of Buddha" in Northern India, Hui-yüan wanted to have one in Lu-shan. Around A.D. 413, he commissioned carvers for the purpose, and requested Hsieh Ling-yün to write the legend for the manifestation.(4)

2. Tao-sheng's Controversy

There were two challenges that tormented the missionaries from the very beginning. One was the translation of Buddhist texts, and the other was the transcription of Buddhist terms which conveyed totally new concepts to the Chinese. Mistakes in translation roused a lot of controversy in the scholarly monastic community. Transcription highlighted the problem of reproducing the sounds of an alien language correctly. The problems posed by these two areas are likely to have roused Hsieh Ling-yün's curiosity about Siddham.

The monk Tao-sheng 道生, a contemporary of Fa-hsien and Hsieh Ling-yün, raised a major controversy over mistaken translations. He was thoroughly dissatisfied with the quality of translations and regretted that after the scriptures came to the East, the translators often deviated from the real meaning of the texts. He disputed the interpretation Fa-hsien and Buddhabhadra made on attainment of Buddhahood in their translation of the *Mahāparinirvāṇa Sūtra*.

The translation said that those committed to evil lacked Buddha nature and hence were not eligible for attaining Buddhahood. Tao-sheng contended that even these villains possessed Buddha nature and hence could attain Buddhahood. He was ostracised by the monastic community for his view. He went and settled down in Lu-shan. An Indian monk named Wu-ch'en made another translation of the same sutra a few years later, and it was clearly stated there that even the utmost villains possessed Buddha nature and consequently could attain Buddhahood. The contention of Tao-sheng was vindicated.(5)

3. Revision of the *Mahāparinirvāṇa Sūtra*

Hsieh Ling-yün was a great admirer of Tao-sheng, who advocated the doctrine of sudden enlightenment. Hsieh Ling-yün wrote *Pien-tsung lun* 辯宗論 where he discussed the important points of this doctrine. It is difficult to imagine Hsieh Ling-yün remaining unaware of Tao-sheng's controversy that challenged such a paramount personality like Fa-hsien. Wu-ch'en's translation must have attracted much attention in the Lu-shan community after it vindicated Tao-sheng's stand. *Kao-seng chuan* 高僧伝 (*Biographies of Eminent Monks*), the second biography of Buddhist monks written by Hui-chiao 慧皎 (A.D. 479-554) after *Ch'u*

san-tsang chi-chi, says that the language of Wu-ch'en's translation was good but the chapter divisions were crude. So it was difficult for a beginner to commit the sutra to memory. Hui-yen 慧嚴 along with Hui-kuan 慧觀 and Hsieh Ling-yün revised the translation. They changed the language in many places. They substituted Wu-ch'en's chapter divisions for those of Fa-hsien and Buddhabhadra.(6)

The translation of Fa-hsien and Buddhabhadra contains eighteen chapters divided into six volumes. The Siddham letters comprise the fourteenth chapter. Wu-ch'en translated a more detailed version of the sutra. This translation consists of thirteen chapters divided into 40 volumes, with the Siddham letters forming a part of the fourth chapter. The first five chapters of Wu-ch'en's work contain the entire translation of Fa-hsien and Buddhabhadra. While revising, Hsieh Ling-yün and his friends combined the sections corresponding to Fa-hsien and Buddhabhadra's preface and the first chapter into one, and made it the preface of the revised text. What remained of the five chapters was rearranged into sixteen chapters to agree with Fa-hsien and Buddhabhadra's chapter divisions. Thus, the Siddham letters constitute the thirteenth chapter in the revised version. Both translations give the letters along with their religious interpretations. The interpretations in the two texts differ mutually. It may be mentioned here once again that Fa-hsien and Buddhabhadra's translation is the oldest extant Chinese work to carry the complete list of Siddham letters.

Hsieh Ling-yün and his friends made some changes in the transcriptions of Siddham letters while revising. A comparison of their transcriptions with those of Wu-ch'en shows that they used different transcriptions for the letters **a**, **i**, **u**, **ū**, **ai**, **aḥ**, **kha**, **gha**, **jha**, **ña**, **ḍha**, **ṇa**, **dha**, **bha**, **ya**, **śa**, and **llaṃ**. Again, a comparison of their transcriptions with those of Fa-hsien and Buddhabhadra shows that they used different transcriptions for the letters **e**, **ai**, **aṃ**, **aḥ**, **ga**, **ṭha**, **ya**, **ra**, **ṛ**, **ṝ**, and **ḷ**. A study of these changes in transcriptions reveals that Hsieh Ling-yün and his friends replaced those for the voiced aspirated letters **gha**, **jha**, **ḍha**, **dha**, and **bha**, whose modern readings have nasal endings, with the non-nasal transcriptions of Fa-hsien and Buddhabhadra. Wu-ch'en never used the same character twice for transcription. Hsieh Ling-yün and his friends used the same characters for transcribing the long-short vowel pairs as in the case of Fa-hsien and Buddhabhadra. What is more important is that they incorporated Fa-hsien and Buddhabhadra's linguistic information for the letters in their revised text. The Chinese probably had some pronunciation problems with the two letters **ra** and **la**. Hsieh Ling-yün and his friends not only used two different characters to transcribe these two letters, but also added the note *ch'ing* 軽 or "light" for the letter **la**. They adopted this means to tell the readers that the two sounds were different. They also gave the *fan-ch'ieh* reading of the letter **tha**, and not of **llaṃ** given by Fa-hsien and Buddhabhadra. There is a likelihood that these reading notes are later additions.(7)

4. Hsieh Ling-yün on Siddham

A fairly large number of highly educated Chinese were exposed to Sanskrit by the time

of Hsieh Ling-yün. Fa-hsien returned home after spending twelve years in a Sanskrit-language environment. Lu-shan, in the days of Hsieh Ling-yün, had a large community of native monks, some of whom had visited Central Asia and India. Buddhayaśas, Buddhabhadra, Saṃghadeva and other foreign monks also resided here from time to time. The situation was favourable for the inquisitive to collect information on Siddham.

Hsieh Ling-yün must have been highly impressed by the phonetic Siddham letters while revising his translation of the *Mahāparinirvāṇa Sūtra*. Luckily, both Chinese and foreign monks were readily available at Lu-shan to help him. One monk he consulted was Hui-jui 慧叡, a returnee from India who was a resident there. Hui-jui's biography in *Kao-seng chuan* says that he (Hui-jui) was well versed in transcription of Sanskrit words and local variations in the meanings of words. It also says that Hsieh Ling-yün of Ch'en-chün 陳郡 county loved Buddhist theology very much. He was well versed in the phonology of the languages of different peoples. He asked Hui-jui about the different meanings expressed by the letters in the scriptures. He also discussed the poems appearing in the scriptures. He wrote *Shih-ssu yin hsün-hsü* 十四音訓叙 where he gave the rules for converting Siddham into Chinese, thus making it easier to understand.[8]

4.1. Siddham Varṇamālā

Hsieh Ling-yün's *Shih-ssu yin hsün-hsü* is lost, but passages from it have been preserved in the *Shittanzō* of Annen. The *Hsüan-i chi* 玄義記 of the monk Hui-chün 恵均 is one of the sources Annen consulted for Hsieh Ling-yün's views on Siddham letters. The monk Hui-chün writes as follows:

> Hsieh Ling-yün of the Sung Kingdom says that there are fifty letters in the *Mahāparinirvāṇa Sūtra*. They are the sources of all the letters. They combine with each other and constitute the letters for spelling. Twelve of these letters have pairs whose sounds are close to each other. Although close, they have different significances. Within the first six letters, the earlier ones have short sounds and the latter ones have long. In the next six letters, there is no difference between short and long sounds. The last two letters of the latter group are the echoes of two letters of the first group. Again, four letters are not used commonly. So they form a separate group and are placed after all the letters. In the thirty-four letters, there are twenty-five in which sound comes from inside and rolls out through the lips. In nine letters, the sound comes from outside and goes inside. In the five letters, the fourth letter and the third letter are the same, but with slight differences of lightness and heaviness. The small letters are called *pan-tzu* 半字 or half-letters. These twelve letters, for instance, are like our words. The thirty-four letters, for instance, are like our sounds. They attach to words to form various types of characters. It is like two letters combining together to form *man-tzu* 満字 or full-letters. Sound borrows the body of a letter to express itself in the West. I will write the letters of the West separately.

Following this, there is a note saying that the Siddham letters have been added and their pronunciations have been given. This note suggests that Hsieh Ling-yün gave just the Varṇamālā in Chinese transcription, and the Siddham letters and their pronunciations were added later.

Linguistic remarks like short sound, long sound, and voiced sound were also added to the letters. These additions made later will be skipped here as they do not fall within the scope of this study. The letters and the notes on them given by him are shown below.

(i) **a, ā, i, ī, u, ū, e, ai, o, au**: In these ten letters there are pairs with sounds close to each other.
(ii) **aṃ, aḥ**: These two letters are the echoes of the letters **a** and **ā**. Without them, the rhythm of the letters would not be complete. So the letters end with these two letters. By adding these two letters to the earlier ten, we get twelve letters.
(iii) **ka, kha, ga, gha, ṅa**: These five letters are tongue-root sounds.
(iv) **ca, cha, ja, jha, ña**: These five letters are within-the-tongue sounds. They are also called molar teeth vicinity sounds.
(v) **ṭa, ṭha, ḍa, ḍha, ṇa**: These five letters are sounds produced close to the tip of the tongue.
(vi) **ta, tha, da, dha, na**: These five letters are called tongue-tip sounds. They are also called tongue-top sounds.
(vii) **pa, pha, ba, bha, ma**: These five letters are called within-the-lips sounds. They are also called sounds transmitted from the lips.
(viii) **ya, ra, la, va, śa, ṣa, sa, ha, llaṃ**: These nine letters are behind-the-lips sounds which reach up to the tip of the tongue.

These make thirty-four letters. The four letters ṛ, ṝ, ḷ, and ḹ do not belong to the thirty-four letters given above. They are rarely used. They are given separately in the end. Thus there are fifty letters in all.(9)

4.2. Fourteen Letters

The Buddha's remark in the beginning of his discourse that there are fourteen sounds appears to have produced a lot of controversy among the Chinese. This is because, there should be sixteen sounds if the four vowels ṛ, ṝ, ḷ, and ḹ given in the end are added to the twelve appearing in the beginning. Annen gives Hsieh Ling-yün's interpretation as follows:

Hsieh Ling-yün explains that the last four letters ṛ, ṝ, ḷ, and ḹ are added to these (twelve letters). Thus they make sixteen letters. To the question "Why does it say fourteen letters?", Hsieh Ling-yün says that it is because the letters **aṃ** and **aḥ** of the former are not true sounds. They are just the spillover of sound. So they should not be taken into account. Thus, there are only ten letters in the former group, and to these the latter four are added. Therefore, they make fourteen in all. To another question "If the latter four letters are added to these, then why were they not explained together? Why were the four letters explained separately later on?", Hsieh Ling-yün says that the four letters coming in the end are used rarely. So they were explained separately. (10)

Hsieh Ling-yün knew that the letters were divided into two basic groups, vowels and consonants. The first six vowels were constituted by three short and three long vowels. One reason for putting the four vowels ṛ, ṝ, ḷ, and ḹ at the end may be that Fa-hsien, Buddhabhadra and Wu-ch'en had a problem in convincing the Chinese that these letters were vowels. Hsieh Ling-yün must have inquired about them and the Indian monks apparently came out with an

explanation that they were used rarely, and hence lumped together in the end. It seems the Indians also suggested that the letters **aṃ** and **aḥ** were echoes of the letters **a** and **ā**, and as such special additions, in order to justify the fourteen sounds mentioned in the Buddha's discourse. The letters **aṃ** and **aḥ** indeed have close physical resemblance with **a** and **ā**. These explanations seem to have convinced him, since he says that the four vowels **ṛ**, **ṝ**, **ḷ**, and **ḹ** plus the first ten vowels, excluding **aṃ** and **aḥ**, constitute the fourteen sounds.

It will be seen from the Varṇamālā that the letter **aṃ** is written by adding the ***anusvāra*** sign to the letter **a**, and the letter **aḥ** is written by adding the ***visarga*** sign to it. The ***anusvāra*** sign adds a nasal element, rather a nasal stop element to be precise, to the letter **a**. In China, the ***visarga*** sign was considered to add an oral stop element to a letter. Seen from this angle, **aṃ** and **aḥ** are not pure vowels, but a combination of the vowel **a** with a nasal stop element or an oral stop element. Again, in Siddham the vowels combine with the consonant letters to form syllables. The normal mechanism is that only one vowel combines with one or more consonant letters at a time, like **ka** + **e** → **ke** or **ka** + **ra** + **e** → **kre**. However, there is an exception for **aṃ** and **aḥ**. They can individually combine with a consonant letter following the conventional rule, for instance, **ka** + **aṃ** → **kaṃ** and **ka** + **aḥ** → **kaḥ**. At the same time they can also combine with a syllable formed by a vowel and a consonant letter, like **ka** + **e** + **aṃ** → **keṃ** and **ka** + **e** + **aḥ** → **keḥ**. Other vowels are not permitted to behave in this way. So the behavior of **aṃ** and **aḥ** is somewhat different from that of the other vowels. The peculiar behavior of the letters **aṃ** and **aḥ** discussed above may have led to their elimination and setting the number of vowels at fourteen.

4.3 Half-Letters and Full-Letters

Hsieh Ling-yün wrote briefly about half-letters and full-letters. He received the information from the monk Hui-kuan, who was one of his colleagues in revising the *Mahāparinirvāṇa Sūtra*. He writes as follows:

> In sounds, there are half-sounds. When the sounds of letters are joined together, they are called full. The sounds are half-letters. When half-sound letters are joined together they form full-letters. For sounds, half-sounds form the basis. For letters, half-letters naturally form the basis. Unlike the usual practice, letters are derived from sound. Sound is the basis here. Sounds are not derived from letters. Therefore, letters do not constitute the basis here.(11)

By half-letters Hsieh Ling-yün may have meant the vocalic signs and consonantal ligatures, and by full-letters he may have meant the compound consonants and the combination of vocalic signs with the consonants. It is difficult to come to any conclusion from the meagre information that is available. He knew that the letters carried phonetic values and that a number of them joined together to form a word. Religious meanings attached to the letters could have inhibited him from assuming that the letters possessed only phonetic properties and nothing else.

Hsieh Ling-yün knew that the consonants came in two groups, the plosive group made up of twenty-five letters and the non-plosive group consisting of nine letters. The "five letters" mentioned by him refer to the twenty-five plosive consonants which come in five groups of velars, etc., each group consisting of five letters. His definition of the groups differs somewhat from that used in traditional Indian grammar. In Sanskrit, both the unvoiced and voiced letters have unaspirated and aspirated forms. Hsieh Ling-yün used the terms *ch'ing* 軽 meaning "light" and *chung* 重 meaning "heavy", which stand for unaspirated and aspirated forms respectively in Chinese phonetics, only with the fourth and the third letters, i.e., the voiced letters. This suggests that Chinese of his time had an unaspirated-aspirated distinction in unvoiced sounds but not in voiced sounds. The Chinese, therefore, had no problem with the unvoiced letters. The problem was with the voiced letters. So, while revising Wu-ch'en, Hsieh Ling-yün added the note to caution the reader about the unaspirated-aspirated distinction in the voiced letters. He also touched upon the mechanism involved in the production of plosive and non-plosive sounds, exhaling in the case of plosive sounds and inhaling in the case of non-plosive sounds.

4.4. Other Information

Hsieh Ling-yün has also written on problems involved in translation as follows:

> In the scriptures, the contextual explanation of the western letters could not be done correctly. Wherever they ran into trouble, they remained incomprehensible for a long time. Now, if one knows the western language and does not know our language, he won't be able to explain. So, even if one knows the meanings of the western words, if he does not know our language, he won't be able to explain properly. If one knows the languages of two countries, and knows the meanings of the languages of two countries, then he will be able to translate the meaning and understand the scriptures well. So, when the monk Hui-jui formerly studied the meanings of the scriptures, he went to South India, stayed there for many years and picked up the language of the West very well. Now, I am assisting Hui-jui to correct the sounds and meanings of the two countries and interpreting the western letters in the scriptures. Those who want to study will not be held up any more. ... In western letters, one sound cannot produce a word. It does not produce a word. It cannot produce the name of a thing. It is necessary to add letters, and only then the names of things are obtained. Without adding other letters, a word will not be formed. Different words are formed by joining together the letters. In our country, the words may have the same name, but the characters used for them are different. Even if different characters use the same name, we can get their meanings. We get the meanings because it is like asking for *fu* 斧 ("axe") of *fu-chü* 斧鋸 ("axe and saw") while doing some carpentry work. There is no mistake because the meaning is understood from the word. In the case of characters, each has a different shape. The western letters do not have such meanings. In all the letters, there are no two letters with the same sound.[12]

Hsieh Ling-yün has also touched upon the Kharoṣṭhī script, which was used widely in Northwest India and Central Asia. He says that there is a western script called Kharoṣṭhī, and

that it was made by a holy man named Kharoṣṭha from the Brāhmī letters.[13]

References

(1) Seng-yu, *Ch'u san-tsang chi-chi*; Hayashiya, Yūjirō (Tr), *Shutsu Sanzō Kishū*, KIK-WKS, Shidenbu 1, 1979, p. pp. 416, 241; 僧祐著 林屋友次郎訳 出三蔵記集.

(2) Morino, Shigeo, "Sha Rei-un ni tsuite", *Chūgokugaku Ronshū*, Yasuda Joshi Daigaku Chugoku Bungaku Kenkyukai, Hiroshima, 1993, pp. 1-14, 森野茂夫著 謝霊運について.

(3) Morino, Shigeo, *Sha Kō-raku Shishū*, V. 2, Hakuteisha, Tokyo, 1994, pp. 347-348, 森野茂夫著 謝康楽詩集巻下.

A translation of the biography of Hsieh Ling-yün in *Sung-shu*, the official history of the Sung Dynasty, is given here along with the Chinese original. The biographer has quoted this poem of Hsieh Ling-yün in the biography. Hsieh Ling-yün has referred to the following Buddhist sites in his poem.

Deer Park: The Mṛgadāva Park
Vulture Peak: Gṛdhrakūṭa
Forest of śāla trees: The place of the Buddha's nirvana
Mango grove: The garden of the courtesan Āmrapālī

Translated with the kind permission of Prof. Morino.

(4) Tao-hsüan, *Kuang-hung-ming chi* 3; Ōta, Teizō (Tr), *Kōgumyoshū*, KIK-WKS, Gokyōbu 3, 1979, pp. 160-162, 道宣著 太田悌蔵訳 広弘明集 下 (Tao-hsüan: A.D. 596-657).

Seng-yu, p. 419.

(5) Seng-yu, pp. 423-425.

Kenneth Ch'en, *Buddhism in China: A Historical Survey*, Princeton University Press, New Jersey, 1973, pp. 115-16.

(6) Hui-chiao, *Kao-seng chuan*; Tokiwa, Daijō (Tr), *Ryōkosōden*, KIK-WKS, Shidenbu 7, pp. 157-158, 慧皎著 常盤大定訳 梁高僧伝.

(7) The Varṇamālā in the *Mahāparinirvāna Sūtra* of Wu-ch'en and of Fa-hsien and Buddhabhadra and in the revised version of Hsieh Ling-yün and his friends is given on pp. 413-414, pp. 887-889, and pp. 653-655 respectively of TSDK, V. 12.

A Japanese translation of Wu-ch'en's version by Tokiwa Daijō titled *Daihatsu Nehangyō* forms a part of the series KIK-IS, Nehanbu. The Varṇamālā appears on pp. 179-85 of Pt. I; 無讖,常盤大定訳 大般涅槃経 1.

An English translation of the revised version of Hsieh Ling-yün and his friends by Kosho Yamamoto titled The *Mahāparinirvāna Sūtra*, published by Karin Bunko, Ube, Japan, 1973-75, exists. The Varṇamālā is given on pp. 201-207.

(8) Liang kao-seng chuan, p. 155.

(9) Annen, *Shittanzō*, TSDK, V. 84, p. 409M-410T, 安然著 悉曇蔵.

(10) Annen, p. 377M-B.

(11) Annen, p. 432M.

(12) Annen, p. 371B.

During Hsieh Ling-yün's days the four tones were not yet established. So Chinese had a large number of homonyms. The example given by Hsieh Ling-yün can be understood easily from the English homonyms 'right' and 'write'. For instance, an instructor in a military school orders his cadets standing at attention: "Right". Some cadets turn 'right' and others start taking out pencils and notebooks from bags to 'write'. The instructor yells: "Hey, 'right' of 'left-right' and not 'read and write'. Be careful!" Just as the spellings

'right' and 'write' differ, the appearances of the characters used for Chinese homonyms also differ from each other.

(13) Annen, p. 369T.

Chapter 5: Siddham after Hsieh Ling-yün

Hsieh Ling-yün's writings on Siddham script opened up a totally new academic vista to the Chinese scholarly world. It attracted the attention of a section of Chinese scholars, who were basically adherents of Buddhism. Their work contributed to the introduction of Sanskritic linguistic concepts into Chinese linguistic studies.

1. Emperor Wu-ti

Emperor Wu-ti 武帝 (A.D. 464-549), the founder of the Liang 梁 dynasty, was the next important scholar to write on Siddham after Hsieh Ling-yün. The Emperor, a devout Buddhist, wrote a commentary on the *Mahāparinirvāna Sūtra* in which he has given the Varṇamālā. Annen has quoted it in his *Shittanzō* along with the following passage:

> All the fourteen sounds are the half-letters. In the scripture, only ten letters are taken up, while four letters are not taken up. This is because they are not used normally. The four letters are traditionally placed at the end.

After this, the emperor gives the Varṇamālā in both Siddham letters and Chinese transcription. The emperor, by and large, gives the transcriptions of Wu-ch'en. The last letter given here is **kṣa**, but the transcription is that of the letter **la**. There is no transcription for the letters **u**, **e**, **aḥ**, **ṅa**, and **ya**. Different transcriptions have been used for **ai**, **kha**, **ña**, **ṭha**, **ḍha**, and **wa**. The following linguistic information appears with the letters. The vowels **a**, **i**, and **u** are short sounds and the vowels **ā**, **ī**, and **ū** are long sounds. Of the consonants, **gha**, **jha**, **ḍha**, **dha**, and **bha** are the aspirated sounds. The letters **ka**, **kha**, **ga**, **gha**, and **ṅa** are the tongue-root sounds, **ca**, **cha**, **ja**, **jha**, and **ña** are the mid-tongue sounds, **ṭa**, **ṭha**, **ḍa**, **ḍha**, and **ṇa** are near-tongue-tip sounds, **ta**, **tha**, **da**, **dha**, and **na** are tongue-tip sounds, and **pa**, **pha**, **ba**, **bha**, and **ma** are within-the-lips sounds. The letters **ya**, **ra**, **la**, **va**, **śa**, **ṣa**, **sa**, **ha**, and **kṣa** [are the sounds that] stretch from back of the lips to the throat. As stated above, the transcription of **kṣa** reads as **la**. After this, the emperor continues as follows:

> The letters ṛ, ṝ, ḷ, and ḹ are not taken while reading the letters. They are taken for the sake of rounding off the number. Of the thirty-four consonant letters, the last nine are pronounced by inhaling. The first five letters are tongue-root sounds. As for the nasal sounds, the first twenty letters enter into the nose. Of the fourteen sounds, the first six have long and short forms. The super sounds are the two vowels that come at the end of the twelve sounds. They belong to the category of the first two sounds.(1)

The description given above suggests that the fourteen sounds are the fourteen vowels minus **aṃ** and **aḥ**, which he describes as super sounds. Wu-ti associates the fourteen sounds with the half-letters. It seems that the classification of Siddham consonant letters into velars, palatals, retroflexes, dentals, and labials on the basis of their origin was common by this

time. The emperor has used terms like tongue-root sounds and so on which are different from those used by Hsieh Ling-yün.

2. Saṃghapāla

It appears that the works of Hsieh Ling-yün, Emperor Wu-ti and others roused Chinese academic interest in Siddham. The Varṇamālā appears again in another translated sutra, *Wen-shu-shih-li wen ching* 文殊師利問経, a translation of the *Mañjuśrī-paripṛccha Sūtra* made by Saṃghapāla, who worked in China between A.D. 502 and 556. This is supposed to be a work of the early sixth century. Here the letters are given in their Chinese transcriptions only. The important point here is that all the sixteen vowels have been grouped together and placed in the very beginning following the conventional pattern. The last consonant letter is **llaṃ**. The letter **kṣa** is missing. The same characters have been used for the long and the short vowels. The pronunciation note *ch'ang* 長 meaning "long sound" is appended to the long vowels **ā, ī, ū, ṝ**, and **ḹ**. The characters used for transcribing the letters **ṭa, ṭha, ḍa, ḍha**, and **ṇa** have also been used for transcribing the letters **ta, tha, da, dha**, and **na** respectively. A pronunciation note *ch'ing* 軽 or "light sound" has been added to the latter for differentiating them from the former. The voiced aspirate letters **gha, jha, ḍha, dha**, and **bha** are transcribed with characters with probable nasal endings, similar to those of Wu-ch'en[2]

3. Hsüan-tsang

Hsüan-tsang 玄奘 (A.D. 602-664), the most famous Chinese pilgrim, who left for India in A.D. 629 and returned in A.D. 645, did not write much about Sanskrit in his travelogue. However, his biographers, Hui-li 慧立 and Yen-ts'ung 彦悰, have given some information on Sanskrit grammar in *Ta-tz'u-en-ssu san-tsang fa-shih chuan* 大慈恩寺三蔵法師伝, their biography of Hsüan-tsang. The information given here can be summed up as follows on the basis of the examples cited.[3] The examples are given in their Chinese transcriptions. The information on verbs is rather vague. The nouns have been presented in a clearer way.

The *chuan* 囀 (inflection) can be divided into two groups, ***tiṅanta*** and ***subanta***. The ***tiṅanta*** group (verb) is divided into ***parasmai(pada)*** and ***ātmane(pada)***, and each has nine inflections, making eighteen in all. The nine inflections are made up of three forms of "a thing", three forms of "others", and three forms of "self". The three forms are singular, dual, and plural. (Here, "a thing", "others", and "self" mean third person, second person, and first person respectively.) The nine inflections are made up of three persons and three numbers. In the case of ***parasmai(pada)***, they are **bhavati, bhavataḥ, bhavanti** for third person, **bhavasi, bhavathaḥ, bhavatha** for second person, and **bhavāmi, bhavāvaḥ, bhavāmaḥ** for first person. The three examples are for singular, dual, and plural respectively. The ***ātmane(pada)*** forms are obtained by adding **vi, ya**, and **te** to these nine forms. The ***subanta*** noun group has three genders, *nan-sheng* 男声 (masculine), *nü-sheng* 女声 (feminine), and *fei-nan-fei-nü-sheng* 非男非女声 (neuter). It has eight inflections, *t'i* 体 (nominative), *so-tso-yeh* 所作業

(accusative), *tso-chü* 作具 or *neng-tso* 能作 (instrumental), *so-wei* 所為 (dative), *so-yin* 所因 (ablative), *so-shu* 所属 (genitive), *so-i* 所依 (locative), and *hu-chao* 呼召 (vocative). Each inflection has three forms *shuo-i* 説一 (singular), *shuo-erh* 説二 (dual), and *shuo-to* 説多 (plural). So there are twenty-four inflected forms in all. Table 4 shows the inflected forms of **puruṣa** (man) given in the work .

Table 4: Twenty-four inflections of **puruṣa**

Nominative	**puruṣaḥ**	**puruṣau**	**puruṣāḥ**
Accusative	**puruṣam**	**puruṣau**	**puruṣān**
Instrumental	**puruṣeṇa**	**puruṣābhāym**	**puruṣaiḥ**
Dative	**puruṣāya**	**puruṣābhāym**	**puruṣebhyaḥ**
Ablative	**puruṣāt**	**puruṣābhāym**	**puruṣebhyaḥ**
Genitive	**puruṣasya**	**puruṣayoḥ**	**puruṣānām**
Locative	**puruṣe**	**puruṣayoḥ**	**puruṣeṣu**
Vocative	**he puruṣa**	**he puruṣau**	**he puruṣāḥ**

4. I-ching

I-ching 義浄 (A.D. 635-713) departed from China for India in A.D. 671 and returned in A.D. 695. He has left a brief account of Sanskrit in his travelogue *Nan-hai chi-kuei nei-fa chuan* 南海寄帰内法伝, written around A.D. 691-92. A famous Japanese scholar, J. Takakusu, has translated I-ching's account under the title *A Record of the Buddhist Religion as Practised in India and the Malay Archipelago*. In the chapter titled "The Method of Learning in the West", I-ching says that Sanskrit grammar was thoroughly neglected in China, although it held the key to understanding the language. There are forty-nine letters which combine with each other and which are arranged in eighteen sections. Every noun has seven cases, and each case has three numerical categories, i.e., singular, dual, and plural. One man is called **puruṣaḥ**, two men, **puruṣau**, and three men, **puruṣāḥ**. Besides the seven cases, the vocative case constitutes an eighth case. The nouns are called ***subanta***. There is a note saying that these have twenty-four forms. There are ten **la** sounds which indicate the three tenses. The verbs have three forms, first, second, and third persons. In all there are eighteen verb forms called ***tiṅanta***. I-ching has not explained these terms in detail.[4]

The extant version of I-ching's account does not carry any Varṇamālā. However, there is a Varṇamālā ascribed to I-ching in the list of Varṇamālās given in Annen's *Shittanzō*. It appears that there was another version of I-ching's work which included the Varṇamālā. I-ching first gives the vowels. There is a note with the letters **ṛ** and **ṝ** that they constitute one letter each. The transcriptions given with them suggest that they were pronounced something like /kiri/. He next gives the consonants. Again, there is a note with **llaṃ** and **kṣa** saying that they are not included among the consonants. He says that the letters have four tones, and that the sixteen letters starting with **a** constitute the vocalic signs of the consonants. So each

consonant has sixteen forms. He has given all the vocalic combinations of the letter **ka**.[5]

5. Fa-tsang

Fa-tsang 法蔵 (A.D. 643-712), a monk of Sogdian descent, has given some information on Sanskrit grammar in his *Hua-yen ching t'an-hsüan chi* 華厳経探玄記, a commentary on the *Buddhāvataṃsaka Sūtra*.[6] He has referred to the six ***samāsa***s and the eight declensions. The six ***samāsa***s are *i-chu-shih* 依主釈 (***tatpuruṣa***), *ch'i-yeh-shih* 持業釈 (***karmadhārāya***), *yu-ts'ai-shih* 有財釈 (***bahuvrīhi***), *hsiang-wei-shih* 相違釈 (***dvaṃdva***), *lin-chin-shih* 隣近釈 (***avyayībhava***), and *tai-shu-shih* 帯数釈 (***dvigu***).

About declension, he says that one must know the eight types of declensions in order to understand the books of the West. He gives the following example of **puruṣa** (man) in Chinese transcription to explain the eight declensions.

puruṣaḥ : The case of direct indication. (Nominative)
puruṣam : The case indicating something to which something has happened. (Accusative)
puruṣeṇa : The case indicating the instrument with which something is done. (Instrumental)
puruṣāya : The case indicating for whom something is done. (Dative)
puruṣāt : The case indicating a causal relation. (Ablative)
puruṣasya : The case indicating possession. (Genitive)
puruṣe : The case indicating staying with. (Locative)
he puruṣa : The case for calling somebody.

Fa-tsang also says that there are masculine, feminine, and neuter genders. The examples cited above are those of the masculine. Each of the cases mentioned above has three forms, *sheng* 声 (singular), *sheng-shen* 声身 (dual), and *to-sheng-shen* 多声身 (plural). Thus there are twenty-four declensions. There are twenty-four declensions each for the feminine and neuter genders also. In all, there are seventy-two declensions.

6. Śubhakarasiṃha and I-hsing

The Varṇamālā was presented in a different light in *Ta-p'i-lu-che-na ch'eng-fo shen-pien chia-ch'ih ching* 大毘盧遮那成仏神変加持経, a translation of the *Mahāvairocanābhisaṃbodhi Sūtra* made jointly by Śubhakarasiṃha (A.D. 637-735) and I-hsing 一行 (A.D. 683-727). Here, the letters constitute a separate chapter and are given in their Chinese transcriptions only. The letters are divided into six groups. The first four groups, as will be explained below, deal with the four **a**-vocalic forms of the non-nasal consonant letters. The four **a**-vocalic forms represent the following categories. The first is the short **a**-vocalic forms which are represented by the non-nasal consonantal letters themselves. Next is the long **ā**-vocalic combinations of these letters. This is followed by the **aṃ**-vocalic combinations and the **aḥ**-vocalic combinations of the letters. In short, all these four types have been treated as the **a**-vocalic family in this work. The fifth group consists of the remaining twelve vowels.

Finally, the sixth group consists of the nasal letters and their four **a**-vocalic forms.

The first group gives the short **a**-vocalic forms, in other words, the letters themselves. There is a mantra in three lines in the very beginning: **namo samanta buddhānāṃ a, namo samanta buddhānāṃ sa, namo samanta vajrānāṃ va**. Then, the twenty-nine non-nasal consonant letters are given.

ka, kha, ga, gha ca, cha, ja, jha ṭa, ṭha, ḍa, ḍha ta, tha, da, dha
pa, pha, ba, bha ya, ra, la, va, śa, ṣa, sa, ha, kṣa

There is a note in the end saying that they are the short sounds. This note indicates that they are the letters themselves. The last letters in the three-line mantra are **a, sa, va**. The letters **a-sa-va** have Tantric meanings. The letter **a** represents the Tathāgata or Buddha, the letter **sa** represents lotus, and the letter **va** represents **vajra**, a weapon that destroys delusion. The three together represent the **garbhadhātu**, a Tantric concept.

The second group consists of the long **ā**-vocalic forms of the twenty-nine letters. It starts with the same three-line mantra. The last three letters **a, sa, va** in the three-line mantra are replaced by their long **ā**-vocalic forms, viz., **ā, sā, vā**. The transcriptions of the first group have been repeated here for the twenty-nine letters, but with a note in the end saying that they are the long sounds. Thus they represent the long **ā**-vocalic forms of the twenty-nine letters, i.e., **kā, khā, ..., hā, kṣā**.

The third group consists of the **aṃ**-vocalic forms of the twenty-nine letters. It also starts with the three-line mantra. The last letters here are **aṃ, saṃ**, and **vaṃ**. The transcriptions given here for the twenty-nine letters are read as **kaṃ, khaṃ, ..., haṃ, kṣaṃ**. There is also a pronunciation note *pen-yin* 本音 at the end. This tells the reader that the letters here are of the **aṃ**-vocalic forms.

The fourth group consists of the **aḥ**-vocalic forms of the letters. The same three-line mantra comes in the very beginning. The last three letters here are **aḥ, saḥ**, and **vaḥ**. The transcriptions of the twenty-nine letters are read here as **kaḥ, khaḥ, ..., haḥ, kṣaḥ**. Here also, the pronunciation note *ju-sheng* 入声 or entering tone has been given at the end. This note was normally used for the **aḥ**-vocalic forms of the Siddham letters in China.[7]

The four vowels **a, ā, aṃ**, and **aḥ** and their combinations with non-nasal letters have been given above. Next, the fifth group consisting of the twelve remaining vowels, viz., **i, ī, u, ū, ṛ, ṝ, ḷ, ḹ, e, ai, o**, and **au** has been given. This is followed by the sixth group of five nasal letters, given in the same format as of the consonant letters stated above.

ṅa, ña, ṇa, na, ma ṅā, ñā, ṇā, nā, mā
ṅaṃ, ñaṃ, ṇaṃ, naṃ, maṃ ṅaḥ, ñaḥ, ṇaḥ, naḥ, maḥ

As stated in the beginning, all the letters are given here in their Chinese transcriptions.[8]

7. I-hsing

I-hsing, who collaborated with Śubhakarasiṃha in translating the *Mahāvairocanābhi-saṃbodhi Sūtra*, also wrote its commentary *Ta-p'i-lu-che-na ch'eng-fo ching shu* 大毘盧遮那成仏経疏. This commentary gives some information on Siddham letters while discussing the Tantric interpretations of the three letters **a, sa, va.** He says that the letter **a** comes in five types. They are **a, ā, aṃ, aḥ**, and **aḥ**-long. The letter **a** produces four letters. The first one is the short **a.** It covers all the consonant letters except the nasal letters. The gender of all these letters is masculine. Next comes **ā** which also covers all the above letters. An angular sign is added to the letters which elongates their sounds. Next comes **aṃ**, which is written by putting a dot on the letter **a.** It also covers all the letters mentioned above. A dot is added above the letters. Next, there are **aḥ, saḥ**, and **vaḥ**, etc. All the letters from **ka** to **kṣa** are covered here. Two dots are added on their side. About the letter **aḥ**-long, I-hsing says that it is excluded here. He also gives the remaining vowels and the nasal letters, and further states that people learn the Siddham letters in their childhood. He gives the letters in Chinese transcription. The above explanation suggests that I-hsing took the letters **aṃ** and **aḥ** to be the modifications of the letter **a**, and not independent vowels. This fits in with Wu-ch'en's contention that the vowels number fourteen in all.[9]

8. Amoghavajra

The Varṇamālā constituted only a section in the translated texts mentioned above. As against these, the *Yü-ch'ieh chin-kang-ting ching shih tzu-mu p'in* 瑜伽金剛頂経釈字母品 of Amoghavajra (A.D. 705-774) is devoted exclusively to the Varṇamālā. It is a very small work of just fifty lines, each line devoted to a letter. The longest line consists of only fourteen characters. He starts each line with a Siddham letter followed by its Chinese transcription. A pronunciation note has been given in certain cases. Finally, the religious interpretation of the letter is given. For instance, the letter **ka** has been interpreted as detaching all dharmas from karma or one's earthly deeds. Amoghavajra first gives all the sixteen vowels, followed by thirty-four consonant letters. The last letter is **kṣa**, and the letter **llaṃ** is missing. The pronunciation note *yin* 引, meaning "long sound", has been appended to the long vowels **ā, ī, ū**, and **ṝ**. No pronunciation note has been added to other vowels. The note *yin* for elongated pronunciation has been added to the consonant letter **gha.** The note *pi-hu* 鼻呼, meaning "nasal sound", has been added to the letters **ṅa** and **ṇa.** This note has not been attached to the other nasal letters **ña, na**, and **ma.** The note *chung* 重, meaning "aspirated sound", has been added to the letter **bha.** No other aspirated letter carries this note. Some letters carry tone signs. For instance, the tone sign *ch'ü-sheng* 去声 or departing tone has been appended to the long vowels **ā, ī**, and all the voiced aspirated consonants **gha, jha, ḍha, dha**, and **bha.** The tone sign *shang-sheng* 上声 has been added to the short vowels **a, i** and some consonants like **ka, kha, ga, ña**, and so on. Each Siddham letter has been transcribed with one character, with one exception. The letter **kṣa** has been transcribed with two characters,

with a pronunciation note *erh-ho* 二合, meaning "combine two". This told the reader that it was a compound letter. The two characters he used are not those normally used for transcribing the letters **ka** and **ṣa**. Annen and other latter-day scholars have also interpreted this letter as a compound of the letters **ka** and **ṣa**.[10]

9. *Hsi-t'an tzu chi*, the Siddham Primer of Chih-kuang

Finally, a Chinese monk Chih-kuang 智広 (A.D. ? - 806) wrote a text book of Siddham, *Hsi-t'an tzu chi* 悉曇字記, around 800 A.D. under the guidance of a South Indian monk named Prajñābodhi. It became the standard text book of Siddham in China and the Far East. Numbered 2132 in the fifty-fourth volume of *Taishō Shinshū Daizōkyō*, it is a work of just four pages. The title can be translated as "An Account of Siddham Letters". As the title shows, it deals only with the Siddham script and says nothing about grammar. It divides the letters and their combinations into eighteen sections. First he gives the outline of the eighteen sections, and then treats each section in more detail. Fig. 1 shows some of the information like the vocalic signs, consonantal ligatures, and compound letters, etc., covered by him. He presents the Siddham letters in the following way.

> In Siddham there are six (types of) vowels. They come in short and long forms. So there are twelve in all. They constitute the first section below. They are called *yün* 韻 (vowel) as against *sheng* 声 (consonant). The consonants combine with vowels to form letters. These are short **a** and long **ā**, etc. In the middle there are **ṛ** and three other letters. They are there in Siddham, but they are not used to form letters. So they are omitted at present. Then there are thirty-five consonants. With this, the forty-seven Siddham letters become clear. The consonants are produced from the molars, teeth, tongue, throat, and lips. Each of these produces five letters. ... Then there are ten *pien-k'ou* 遍口 or non-plosive consonant letters. Many sections do not contain the letters formed with **ra**. The consonant letter **llaṃ** does not combine with other letters. ... In the first seventeen sections, the letters combine with each other according to some set rules. Each section consists of about four hundred letters. The combinations that do not conform to these rules are grouped together into the section of irregular letters.

Following this, Chih-kuang discusses the first seventeen sections briefly. The eighteenth section devoted to the irregular combinations, however, has been discussed in detail.

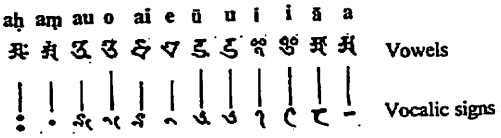
Section 1: This section consists of the thirty-four consonant letters and their combinations with the eleven vocalic signs. He gives the letters **ka** and **kā** as examples. Chih-kuang adds here that there will be no duplicate compound letter **lla** in Section 4, **vva** in Section 5, **mma** in Section 6, and **nna** in Section 7. These compound letters will also not be listed in Sections 11, 12, 13, and 14 respectively.

Section 2: This section consists of the compound letters which the consonant letters form with **ya** and their vocalic combinations. Here, **ya** comes as the second letter. For instance, **ka** + **ya** → **kya**, and **kya** + **ā** → **kyā**, etc. Three hundred and ninety-six compound letters are formed here.

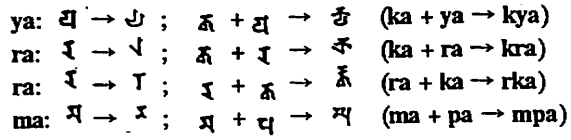
Section 3: This section consists of the compound letters which the consonant letters

Fig. 1: Vocalic signs, consonantal ligatures, and compound letters

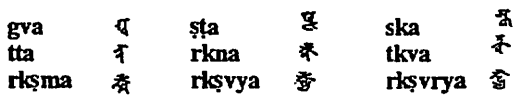
a) Vowels and vocalic signs



b) Some consonantal ligatures and compound letters formed by them



c) Some other compound letters



form with **ra** and their vocalic combinations. Here, **ra** comes as the second letter. For instance, **ka** + **ra** → **kra**, and **kra** + **ā** → **krā**, etc. Three hundred and ninety-six compound letters are formed here.

Section 4: This section consists of the compound letters which the consonant letters form with **la** and their vocalic combinations. Here, **la** comes as the second letter. For instance, **ka** + **la** → **kla**, and **kla** + **ā** → **klā**, etc. Three hundred and eighty-four compound letters are formed here.

Section 5: This section consists of the compound letters which the consonant letters form with **va** and their vocalic combinations. Here, **va** comes as the second letter. For instance, **ka** + **va** → **kva**, and **kva** + **ā** → **kvā**, etc. Three hundred and eighty-four compound letters are formed here.

Section 6: This section consists of the compound letters which the consonant letters form with **ma** and their vocalic combinations. Here, **ma** comes as the second letter. For instance, **ka** + **ma** → **kma**, and **kma** + **ā** → **kmā**, etc. Three hundred and eighty-four compound letters are formed here.

Section 7: This section consists of the compound letters which the consonant letters form with **na** and their vocalic combinations. Here, **na** comes as the second letter. For instance, **ka** + **na** → **kna**, and **kna** + **ā** → **knā**, etc. Three hundred and eighty-four compound letters are formed here.

Section 8: This section consists of the compound letters which **ra** forms with other

consonant letters and their vocalic combinations. Here **ra** comes as the first letter. For instance, **ra** + **ka** → **rka**, and **rka** + **ā** → **rkā**, etc. Three hundred and ninety-six compound letters are formed here.

Section 9: This section consists of the compound letters which **ra** forms with the compound letters of Section Two, i.e., **kya**, etc., and their vocalic combinations. Here **ra** comes as the first letter. For instance, **ra** + **kya** → **rkya**, and **rkya** + **ā** → **rkyā**, etc. Three hundred and eighty-four compound letters are formed here.

Section 10: This section consists of the compound letters which **ra** forms with the compound letters of Section Three, i.e., **kra**, etc., and their vocalic combinations. Here **ra** comes as the first letter. For instance, **ra** + **kra** → **rkra**, and **rkra** + **ā** → **rkrā**, etc. Three hundred and ninety-six compound letters are formed here.

Section 11: This section consists of the compound letters which **ra** forms with the compound letters of Section Four, i.e., **kla**, etc., and their vocalic combinations. Here **ra** comes as the first letter. For instance, **ra** + **kla** → **rkla**, and **rkla** + **ā** → **rklā**, etc. Three hundred and eighty-four compound letters are formed here.

Section 12: This section consists of the compound letters which **ra** forms with the compound letters of Section Five, i.e., **kva**, etc., and their vocalic combinations. Here **ra** comes as the first letter. For instance, **ra** + **kva** → **rkva**, and **rkva** + **ā** → **rkvā**, etc. Three hundred and eighty-four compound letters are formed here.

Section 13: This section consists of the compound letters which **ra** forms with the compound letters of Section Six, i.e., **kma**, etc., and their vocalic combinations. Here **ra** comes as the first letter. For instance, **ra** + **kma** → **rkma**, and **rkma** + **ā** → **rkmā**, etc. Three hundred and eighty-four letters compound are formed here.

Section 14: This section consists of the compound letters which **ra** forms with the compound letters of Section Seven, i.e., **kna**, etc., and their vocalic combinations. Here **ra** comes as the first letter. For instance, **ra** + **kna** → **rkna**, and **rkna** + **ā** → **rknā**, etc. Three hundred and eighty-four compound letters are formed here.

Section 15: This section consists of the compound letters formed by the nasal consonant letters. They are the compounds which (a) the nasal consonants form with their corresponding oral counterparts, (b) the letter **ṅa** forms with the nine non-plosive letters like **ya**, etc., and (c) the vocalic combination of the above compounds. For instance, **ṅa** + **ka** → **ṅka**, **ña** + **ca** → **ñca**, **ṇa** + **ṭa** → **ṇṭa**, **na** + **ta** → **nta**, **ma** + **pa** → **mpa**, and **ṅa** + **ya** → **ṅya**, etc. Duplicate compound letters are excluded. There are just twenty-nine compounds in this group. Each has its vocalic combinations. Three hundred and forty-eight compound letters are formed here.

Section 16: This section consists of the combination of the thirty-four consonant letters with the vowel **ṛ**, like **ka** + **ṛ** → **kṛ**. Thirty-four compound letters are formed here.

Section 17: This section consists of the compound letters which the consonant letters form by combining mutually and their vocalic combinations. There are thirty-three compound

letters like **sa** + **ka** → **ska** in this group. Three hundred and ninety-six compound letters are formed here.

Section 18: Chih-kuang says that all the letters not included in the seventeen sections given above, and whose combinations are whimsical belong to this section. He divides the compound letters of this section into fifteen groups. He does not give any examples in Siddham. For some groups he gives the Chinese transcriptions as examples. For others, even Chinese transcriptions are not given. The explanations given for some groups are very difficult to comprehend. Even Annen has given Siddham compounds for only ten groups, just a single compound letter in some cases, in his *Shittanzō*. Chih-kuang describes the fifteen groups as follows.[11]

Group 1: These are the compound letters of duplicate consonants, like **tta**, **jja**, **ṭṭa**, **ṇṇa**, and so on. Annen gives all the duplicate consonant letters, **kka** and others, and their vocalic combinations.

Group 2: These are the compounds of different consonant letters which are read in sandhi form, like **stra**. Annen gives **pta**, **ṭka**, **tsva**, and **ṭschra** in addition, together with their vocalic combinations.

Group 3: These are the compounds which do not undergo any vocalic combinations, like **ṣṭra**. However, they have **i** and **u** vocalic forms. Annen gives the three examples of **ṣṭra**, **ṣṭri**, and **ṣṭru**. Chih-kuang's contention can be explained if it is assumed that he meant here the compound **ṣṭr̥**, which is the **r̥** vocalic combination of the compound **ṣṭa**. In Orissa and Maharastra, the vowel **r̥** is usually pronounced something like **ru**, and not like **ri** as in other areas of India. Was this phenomenon true in those days also?

Group 4: It is difficult to comprehend what Chih-kuang wanted to say. Annen has skipped this group. May be, Chin-kuang wanted to say that the forms of these compounds do not conform to the ligatures from which they originate. He cites the compounds **stra**, etc., and says that they have the twelve vocalic combinations.

Group 5: Although different letters form compounds, they are not read according to the combination of the letters. These are like **mṅka**, etc., where the nasal letters **ṅa**, **ña**, **ṇa**, **na**, and **ma** are added in the beginning. They also belong to a preceding section. Annen has skipped this group also.

Group 6: In these compounds, the reading of two letters together form sandhi. The sound precedes the letter. For instance, the compound of the letters **ma**, **ṅa**, and **ka** is read as **mṅka**. Annen gives only one example, **mṅka**, here.[12]

Group 7: This is the case where one letter has two different pronunciations. For instance, there is the letter **sa** which is sometimes pronounced as **sa** and sometimes as **ha**. It is like borrowing sounds. Annen gives the letter **sa** here. It seems that the letter **sa** was pronounced as **ha** in many areas in India. Apparently, Chih-kuang is referring to some such phenomenon here.

Group 8: A vocalic sign is added to a letter which already has a vocalic sign. Both the

vocalic sounds are retained. The letter **bhruṃ** is an instance of this. It is made up of **bhru** and the eleventh vowel **aṃ**. Annen gives the compounds **bhruṃ**, **cchruṃ**, and **huṃ**. In other words, this group consists of a letter or a compound with two vocalic signs, one of which is **aṃ**.

Group 9: The shape is not a vocalic sign. It decorates the letters. A letter having the crescent sign above it is an instance of this. Annen gives just the crescent sign of the ***chandravindu*** here, minus the dot. It seems that sometimes this crescent sign was added to some letters as a decoration. Although it looked like a vocalic sign, it actually was not.

Group 10: The letters are there but they are read differently. When a number of letters form a compound, the last one is read correctly. But the middle and the upper letters are joined together and their reading is contracted. The reading is not necessarily correct. An example of this is when the upper letter **sa** and the lower letter **ka** are read as **aska**, and so on. Annen has skipped this group. It is difficult to say what Chih-kuang had in mind in making this group. This is because he has already cited this compound in Section 17.

Group 11: The sound is there but the form is not there. In compounds like **aska** of Section 17, there is no **a**. But when reading the compounds, this sound **a** is added. Annen has also skipped this group. It seems that a short /a/ sound was prefixed in pronouncing compounds like **ska** of Section 17. This probably prompted Chih-kuang to make a separate group out of these compounds.

Group 12: These are not formed from the letters. They themselves form *pan-t'i* 半体 or half-consonants. When the ***halanta*** sign or the ligature of **ya**, etc. are used, they are present, but the letters are not there. Annen gives here the ***halanta*** sign and the ligature of **ya** as examples. When the ***halanta*** sign is added to a consonant letter, it acquires the property of an alphabetic letter. For instance, the ***halanta*** sign added to the letter **ka** turns it into alphabetic /k/. It seems that Chih-kuang was aware of this change, and this prompted him to make a separate group for it. Again, the use of the term half-consonant probably prompted him to put the ligatures of **ya** and other consonants in this group as well.

Group 13: If a letter has something missing, then it is pronounced by pulling out the sound after adding the ***halanta*** sign. When the ***halanta*** sign is added to the letters **ka**, **kha**, etc., they are pronounced something like /kat/, /khat/, etc. Annen has kept silence over this group. It appears that it is identical with the above group. It is difficult to say why Chih-kuang made this group.

Group 14: There are letters of diverse shapes whose sources can be traced to a common letter. The letter **srī** which assumed the shape of **sra** is an instance of this. The mistake crept in while curving the letter, as in the case of a seal. Annen also gives the letter **srī** as an example. It appears that the compounds were also curved into seals and other objects in China. The shape of the compounds changed in the course of curving. Because of this, Chih-kuang made a special group for such compounds.

Group 15: When seen in the light of its origin, the shape differs. The shape of **ka** is

modified in the letters like **kṛ**, **kra**, **kru**, etc., and the shape of the vocalic sign differs in letters like **hu**, **ru**, etc. Annen gives only the letters **kṛ**, **kra**, **kru**, **hu**, and **ru**, without any explanation. In this case, the shape of the letter **ka** is modified in the first three letters. In short, a letter and its ligature have different shapes. The shape of the vocalic sign in **hu** and **ru** differs from the normal shape. This perhaps prompted Chih-kuang to assign a separate group to these modified forms.

Chih-kuang then goes on to the second part, although no distinct division as such has been made. Here he introduces the Varṇamālā. He first gives the twelve vowels **a**, **ā**, **i**, **ī**, **u**, **ū**, **e**, **ai**, **o**, **au**, **aṃ**, and **aḥ**. He appends a pronunciation note to the letters saying that the first, third, fifth, seventh, ninth and eleventh vowels are short, and the other vowels are long. Except for **aṃ** and **aḥ**, the same characters have been used for transcribing the short and long vowel pairs. The readings of **i**, **e**, **ai**, and **aṃ** have been given in *fan-ch'ieh*. After giving the vowels, he adds a note that according to I-ching, in the first three pairs of vowels, those coming first are short and those coming second are long. But in the next three pairs, those coming first are long and those coming second are short.

Chih-kuang then continues by saying that these twelve vowels constitute the vocalic endings in the sections below. When these are added to the letter **ka**, twelve letters **kā**, **ki**, **ku**, etc., are produced. The shapes of the vowels are modified when they are added to the consonant letters. They are called the Siddham vocalic signs. The old translations say these are comprised of about fourteen sounds. There are four letters ṛ, ṝ, ḷ, and ḹ after the vowel ū of the twelve vowels. Of the twelve vowels, the last two are eliminated. They are the *hai-pan-tzu* 海畔字 or the "letters of the limits" and hence superfluous. This gives fourteen sounds. Nowadays, the four letters ṛ, ṝ, ḷ, and ḹ are excluded in making combinations. He has appended tone signs to some letters. For instance, the departing tone sign has been added to the letter **o**.

Next, Chih-kuang gives the consonant letters under the heading "Consonant Letters". He first gives **ka**, **kha**, **ga**, **gha**, **ṅa** with the pronunciation notes *ch'ing* 軽 added to **ga** and *chung* 重 added to **gha**. Then he says that these five letters are the "molar" or velar sounds. Next he gives **ca**, **cha**, **ja**, **jha**, **ña** with the pronunciation notes *ch'ing* and *chung* added to **ja** and **jha** respectively. These, he says, are the "tooth" or dental sounds. Then he gives **ṭa**, **ṭha**, **ḍa**, **ḍha**, **ṇa** with the pronunciation notes *ch'ing* and *chung* added to **ḍa** and **ḍha**. These, he says, are the "tongue" or lingual sounds. After this he gives **ta**, **tha**, **da**, **dha**, **na** with the pronunciation notes *ch'ing* and *chung* added to **da** and **dha** respectively. These, he says, are the "throat" or guttural sounds. Following this he gives **pa**, **pha**, **ba**, **bha**, **ma** with the pronunciation notes *ch'ing* and *chung* added to **ba** and **bha**. These, he says, are the "lip" or labial sounds. Finally, he gives the letters **ya**, **ra**, **la**, **va**, **śa**, **ṣa**, **sa**, **ha**, **llaṃ**, and **kṣa**. He adds a pronunciation note to the letter **ra** saying that it should be pronounced by rolling up the tongue. These are the *pien-k'ou* 遍口 or non-plosive sounds.

Chih-kuang gives the reading of each letter in *fan-ch'ieh*. The two examples given

below can be understood better through their Sino-Japanese readings, as these are closer to the readings of Chih-kuang's time. For instance, he gives the reading of the letters **ka** as 居下反 *ko-ka-han* (Chi. *chü-hsia-fan*). The pronunciation note *fan* tells the reader that the initial consonant /k-/ of the first character *ko* and the final vowel /-a/ of the second character *ka* when joined together give the reading /ka/ of the letter.[13] The reading of **ra** has somehow been shown as 曷力下反三合 *katsu-riki-ka-han san-go* (Chi. *ho-li-hsia-fan san-ho*) which suggests a reading something like /kra/ for the letter. After giving the letters, he says that, except for the letter **llaṃ**, the other thirty-four letters form different types of combinations. After this, he discusses the combinations in eighteen sections.

The contents of the first fourteen sections and the sixteenth section are more or less the same as those given in the first part. The only difference is that, except for the first section, more examples have been given here. For instance, in the second section, **kya** and all other of its eleven vocalic combinations from **kyā** to **kyaḥ** have been given. It has been stated in the first part that the fifteenth section consists of twenty-nine compounds of the nasal letters, and that they and their vocalic combinations make three hundred and forty-eight letters in all. The twenty-nine compounds are given here with a note appended to each stating that it has twelve forms. The letters are given below.

ṅka, ṅkha, ṅga, ṅgha ña, ñcha, ñja, ñjha
ṇṭa, ṇṭha, ṇḍa, ṇḍha nta, ntha, nda, ndha
mpa, mpha, mba, mbha
ṅya, ṅra, ṅla, ṅva, ṅśa, ṅṣa, ṅsa, ṅha, ṅkṣa

Chih-kuang next says that the compounds composed of combinations of the nasal letters themselves are excluded.[14]

In the first part Chih-kuang says that there are thirty-three letters in Section 17 and that they and their vocalic combinations make up three hundred and ninety-six letters. Chih-kuang gives all the thirty-three letters here. They are as follows.[15]

ska, skha, dga, dgha, ṅktra vca, vcha, vja, vjha, jña
ṣṭa, ṣṭha, ḍḍa, ḍḍha, sṇa sta, stha, vda, vdha, rtsna
spa, spha, dba, dbha, rkṣma
rkṣvya, rkṣvrya, lta, tkva, tśa, tṣa, ṣha, vkṣa

As stated earlier, Section 18 consists of the compounds, letters and others which are not included in the above sections. He has not specified the number of letters belonging to this group. He gives the following letters here.

pta, ṭka, dsva, ṭscra tta, jja, ṭṭa, ṇṇa, nna
mṅka, bhraṃ, chraṃ, huaṃ

Following this, he mentions the *pan-t'i*, which apparently meant alphabetic consoant and consonantal ligature, and gives two forms of the ***halanta*** sign. He then gives the ligature of **ya** with a note that it is the abbreviation of the letter **ya**. Next, he mentions the letters curved in different objects with the letter **srī** as the example. Here he says that such curved letters are very large in number and hence will be omitted.

Chih-kuang's work testifies that Sanskrit failed to attain the status of the language of sacred texts in China. Siddham studies centered around correct pronunciation of the mantras, and this contributed to the introduction of Sanskritic phonetic ideas. These ideas made an important contribution to the development of linguistic studies in China.

References

(1) Annen, *Shittanzō*, TSDK, V. 84, pp. 410B-411T.

(2) Saṃghapāla, *Wen-shu-shih-li wen ching*, TSDK, V. 18, p. 498T-B, 文殊師利問経.

(3) Hui Li and Yen Ts'ung, *Ta-tz'u-en-ssu san-tsang fa-shih chuan*; Takada, Shū (Tr), *Daijionji Sanzōhōshiden*, KIK-WKS, Shidenbu 11, pp. 90-96, 慧立, 彦悰著 高田修訳 大慈恩寺三蔵法師伝.
The Sanskrit forms of the examples are those worked out by Takada.
Beal, Samuel (Tr), *The Life of Hiuen Tsiang by the Shaman Hwui Li*, Hyperion Press Inc., Westport, Connecticut, 1973, pp. 122-124.

(4) I. Tsing; J. Takakusu (Tr), *A Record of the Buddhist Religion as Practised in India and the Malay Archipelago*, Munshi Manoharlal, Delhi, 1966, pp. 168, 173-174.
In a footnote on p. 173, Takakusu gives the ten **la** sounds as **laṭ, laṅ, liṭ, liṅ, luṭ, luṅ, lṛṭ, lṛṅ, leṭ,** and **loṭ**.

(5) Annen, p. 408B.

(6) Fa-tsang, *Hua-yen-ching t'an-hsüan chi*; Sakamoto, Sachio (Tr), *Kegongyō Tangenki*, V. 1, KIK-WKS, Kyōrokubu 6, pp. 273-277, 法蔵著 坂本幸男訳 華厳経探玄記.
Van Gulik, R.H., *Siddham*, Sarasvati Vihara Series, V. 36, International Academy of Indian Culture, Nagpur, pp. 19-20.

(7) The three letters **aḥ, saḥ,** and **vaḥ** have actually been transcribed with characters representing the sounds /ak/, /sak/, and /vak/, or in short with characters having the /-k/ ending. These are known as *ju-sheng* 入声 or entering tone sounds. When the vowel **aḥ** combines with a consonant letter, it is represented by the **visarga** sign. This sign was known as *nieh-p'an-tien* 涅槃点 in China, and was used to represent the Chinese characters like /kak/, /kat/, /kap/, etc., or those ending in the sound /-k/, /-t/, and /-p/. These characters were the entering tone characters in Chinese. So the reading note *ju-sheng* here denotes the **visarga** sound **aḥ**. The entering tone characters were conventionally used for transcribing the Sanskrit syllables with the **visarga** sign.

(8) Śubhakarasiṃha, I-hsing, *Ta-p'i-lu-che-na ch'eng-fo shen-pien chia-ch'ih ching*, TSDK, V. 18, p. 30M-B, 大毘盧遮那成仏神変加持経.

(9) I-hsing, *Ta-p'i-lu-che-na ch'eng-fo ching shu*, TSDK, V. 39, pp. 722B-723M, 大毘盧那成仏経疏.

(10) Amoghavajra, *Yü-ch'ieh chin-kang-ting ching shih tzu-mu p'in*, TSDK, V. 18, pp. 338M-339T, 瑜伽金剛頂経釈字母品.

(11) Chih-kuang, *Hsi-t'an tzu chi*, TSDK, V. 54, p. 1187M, 智広著 悉曇字記.
Annen, pp. 460-61.
Chih-kuang's examples are in Chinese transcriptions, Annen's examples are in Siddham script.

(12) Traditionally, this group is explained with the transcription 莽迦 used for **mṅka**. The transcription was read something like /maṅ-ka/. If the Siddham **mṅka** is broken into two parts, it becomes /ma-ṅka/. This is because there is no compound letter in Siddham like **mṅa**. Although the nasal /ṅ/ is attached to /ka/ in Siddham, in the transcription it attaches itself to /ma/. Since /ṅ/ gets attached to /ma/ in transcription, the Chinese read it as /maṅ/. This was interpreted by Chih-kuang as reading precedes the letter, and was identified as a form of sandhi. Incidentally, there is no way to transcribe the sound /ṅka/ with Chinese character.

(13) The Japanese pronunciation has been used here. This is because the pronunciation of characters, especially the initial consonants, has changed greatly in China with the passing of time. For instance, the character 居 is pronounced as /ju/ in modern Chinese, whereas the Japanese reading is *ko*. The original /k/ has been retained in Japanese. Thus, in Japan, the older Chinese pronunciations have been retained in many cases.

(14) There is a question about the compounds **ṅya**, **ṅra**, **ṅla**, and **ṅva**.
They should belong to Sections 2, 3, 4, and 5 respectively. Chih-kuang gives no explanation. At the end of *Shittanzō*, Annen gives almost all the letters proposed by Chih-kuang. In Sections 2, 3, 4, and 5 he says that the respective compounds **ṅya**, **ṅra**, **ṅla**, and **ṅva** belong to Section 15. Annen, pp. 450-52.

(15) Takubo, Shūyo has given the Romanised transcriptions of the compounds in his *Hihan Shittangaku* published from Shingonshu Tokyo Senshu Gakuin, Tokyo, 1944, p. 112, 田久保周誉著 批判悉曇学.

Chapter 6: Siddham and Chinese Phonetics

1. Background

As seen in Chapter 1, the activities of Buddhist monks from the Western Regions were already attracting the attention of Chinese intellectuals around A.D. 100. Communication with common people was very important in missionary work. The missionaries were not familiar with the Chinese writing system. They must have followed the universal convention of writing down foreign words with their own phonetic script. After the fall of the Han dynasty, an atmosphere where "hundred flowers bloomed" was created. A few adventurous Chinese intellectuals must have been curious to know about these missionaries. These intellectuals must have been amazed to find that once a Chinese word was written down in phonetic script, monks from any region pronounced the word in exactly the same way. Furthermore, the monks would have made clear that the reading would remain the same even after a thousand years. The Chinese intellectuals must have been amazed because the readings of Chinese characters varied from region to region and also with the passing of time.

Translation of sutras also exposed the Chinese to Sanskrit prosody. An idea of the situation prevailing around the early fifth century can be obtained from Hui-chiao's *Kao-seng chuan* (*Biographies of Eminent Monks*). He says that Kumārajīva discussed the literary genres of the Western Regions with Hui-jui, a highly talented monk, who assisted him in his translation. They discussed the similarities to and dissimilarities from Chinese forms, and the importance of modulations (宮商 *kung-shang*) and rhymes (体韻 *t'i-yün*) in Sanskrit verses. Elsewhere, Hui-chiao also says that songs in the Eastern countries are made up of a succession of rhyming finals (結韻 *chi-yün*), whereas in the Western Regions, the hymns are made up of harmonizing sounds (和声 *ho-sheng*). Sanskrit words are polysyllabic (重複 *ch'ung-fu*), while Chinese is monosyllabic (単奇 *tan-ch'i*). Chanting Chinese poems with a Sanskrit accent sounds cumbersome to Chinese ears. Finals get shortened and phrases get elongated when Chinese song forms are used to chant Sanskrit texts.[1] It has already been mentioned in Chapter 4 that Hui-jui spent several years in Southern India studying Sanskrit. These problems existed for the earlier translators as well. Despite the big communication gap, it may not be wrong to assume that the early Chinese collaborators got, at least, some insight into the phonetic differences existing between Chinese and Sanskrit prosodies while carrying out translation. These ideas along with the Sanskritic phonetic concepts introduced through the Siddham script provided a big stimulus to Chinese linguistic studies. Some of the ideas that emerged in Chinese linguistics out of this contact will be discussed here.

2. The *Fan-ch'ieh* Spelling System

The failure to evolve a phonetic script led to a proliferation of characters in China. As the number of characters crossed the threshold marking the limits of memory, a need arose for giving the readings of characters in addition to their meanings. The *fan-ch'ieh* 反切

phonetic spelling system evolved out of attempts to record the readings. In the *fan-ch'ieh* system, two characters are used to express the sound of a character. The first character represents the initial, and the second character represents the final. For example, the word *tung* 東 is expressed with the two characters *te* 德 and *hung* 紅 with the character *fan* 反 or *ch'ieh* 切 added below as a technical term to tell the reader that the initial /t-/ should be taken from *te* and the final /-ung/ should be taken from *hung*, and the character should be read as *tung*.

It will be seen from the above discussion that the concept of consonants constitutes a vital factor in the evolution of *fan-ch'ieh.* The Chinese had some vague idea of consonants as can be judged from the entries like *ling* and *ting* for *ling* (bell), and **p'u* and **liwet* for **p'iwet* (writing brush) in the *Shuo-wen chieh-tzu* dictionary mentioned in Chapter 2. The division of Siddham letters into vowels and consonants perhaps confirmed this suspicion. It may not be wrong to assume that Siddham was involved in some way in the innovation of the *fan-ch'ieh* system for expressing the readings of Chinese characters.

The oldest reference to the origin of the *fan-ch'ieh* system appears in *Yen-shih chia-hsün* 顏氏家訓 by Yen Chih-t'ui 顏之推 (A.D. 531-591), a collaborator in the compilation of the first rime dictionary, entitled *Ch'ieh-yün* 切韻, of A.D. 601. It says that Sun Yen 孫炎, who lived towards the end of the Han period (latter half of the second century), was the only man who knew the system. It was practised extensively during the Wei period (A.D. 220-265), but people could not understand its principle.[2] The *Ching-tien shih-wen* 経典釈文 (A.D. 583) of Lu Te-ming 陸德明 also says that Sun Yen devised the system, and it became very popular during the Wei and subsequent periods.[3] The Japanese monk Annen, however, writes in his *Shittanzō* that the system was first devised by Fu Ch'ien 服虔. *Yen-shih chia-hsün* also says in one place that although people before Cheng Hsüan 鄭玄 (A.D. 127-200) did not understand the *fan-ch'ieh* spellings, those given by Fu Ch'ien in his book *T'ung-su-wen* 通俗文 agree very well with the modern readings (of the words).[4] Cheng Hsüan 鄭玄 was a leading scholar of his time. Fu Ch'ien was also a famous scholar and a contemporary of Cheng Hsüan. Not much is known about Sun Yen except that he was a disciple of Cheng Hsüan 鄭玄. Discussing the origin of the system, a Sung period scholar named Shen Kua 沈括 writes in his *Meng-hsi pi-t'an* 夢溪筆談 that the science of *fan-ch'ieh* came from the Western Region.[5] In reading a character, people during the Han period used to cite another character with the same reading and say that the character was read like the character thus cited. They did not use the *fan-ch'ieh* system.[5] Other Sung period works like the *Chih-chai shu-lu chieh-t'i* 直斎書録解題 of Ch'en Chen-sun 陳振孫 and the *T'ung-chih* 通志 of Cheng Ch'iao 鄭樵 (A.D. 1104-1160) also ascribe a Western origin to *fan-ch'ieh.*

The *fan-ch'ieh* system of denoting the sound of a character was known at the time of Hsieh Ling-yün. It became very refined and well established by the sixth century. *Yü-p'ien* 玉篇, a dictionary compiled in A.D. 543 gives the *fan-ch'ieh* reading of all the characters recorded in the dictionary. There are very few mistakes in the entries. All the subsequent

dictionaries give the readings of characters by the *fan-ch'ieh* system. Even non-lexicographical works used it for giving the readings of characters. *Yen-shih chia-hsün*, mentioned above, also gives the readings of many characters in *fan-ch'ieh* spelling.

There is a big dispute over the origin of the *fan-ch'ieh* phonetic spelling system; whether it is a native innovation or an introduction from the Western Regions. The earliest work to refer to its origin is *Yen-shih chia-hsün* mentioned above, a long time after it came into standard use. As discussed in Chapter 1, Buddhist missionaries were already attracting the attention of literati like Chang Heng around A. D. 100. A century of missionary activities separates Sun Yen and Fu Ch'ien, the alleged inventors of the *fan-ch'ieh* system, from Chang Heng. As stated in Chapter 2, translation of Buddhist scriptures started in earnest from around A.D. 150 with the assistance of Chinese collaborators. Considering the nature of the job, it will not be wrong to assume that the Chinese who were involved had a reasonable academic background. Prosecution of scholarly circles and students by Han authorities during this period suggests that new winds were blowing in the intellectual world. So, the possibility of some intellectuals like Sun Yen and Fu Ch'ien to come to know about the novel phonetic script and to evince interest in it cannot be ruled out.

The introduction of forty-two Siddham letters by Kumārajīva and Buddhabhadra has already been mentioned in Chapter 3. Two earlier translations of the *Prajñāpāramitā Sūtra*, one by Dharmarakṣā titled *Kuang-tsan po-jo-po-lo-mi ching* 光讚般若波羅密経 in A.D. 282, and the other by Mokṣala (無羅叉 Wu-lo-ch'a) titled *Fang-kuang po-jo ching* 放光般若経 in A.D. 291 had also introduced the Siddham letters in Chinese transcription. Whereas Mokṣala gave forty-two letters like the two latter works, Dharmarakṣā gave only forty. A comparison of the four sets of letters reveals that they are not otherwise identical. For instance, Mokṣala and Buddhabhadra used compound letters also, which Kumārajīva and Dharmarakṣā didn't. Again, Dharmarakṣā gave the letter **a**, the only vowel present among the four sets of letters, not as the first letter as in the other three cases, but as the fourteenth letter. If this letter is brought to the initial position, then the order of the first few letters in all the four sets will be **a, ra, pa, ca, na**. ... To be brief, the Siddham letters of the third century translators Dharmarakṣā and Mokṣala consisted of only one vowel **a**, and the rest were consonant letters. It would not have been very difficult for one with linguistic acumen to notice the fact that the consonant letters consisted of an initial consonant plus the vowel **a**. Sun Yen and Fu Ch'ien may have extracted similar information from the missionaries. However, a native origin of the *fan ch'ieh* system cannot be ruled out completely. Even in such a case, it is reasonably certain that Siddham provided the theoretical basis for popularising this concept of phonetic spelling.[6]

3. Consonant Classes

It has been stated above that the division of letters into vowels and consonants in Siddham could have played a role in devising the *fan-ch'ieh* system for expressing the

sounds of characters. The Chinese adopted a number of other Siddham phonetic concepts as well.

One is the classification of consonants on the basis of their places of origin. Hsieh Ling-yün referred to it in his discussion on the Siddham letters. In traditional Sanskrit grammar, the letters **ka, kha, ga, gha, ṅa** are classified as ***kaṇṭhya*** or velars, **ca, cha, ja, jha, ña** as ***tālavya*** or palatals, **ṭa, ṭha, ḍa, ḍha, ṇa** as ***mūrdhanya*** or retroflexes (or cerebrals), **ta, tha, da, dha, na** as ***dantya*** or dentals, and **pa, pha, ba, bha, ma** as ***oṣṭhya*** or labials. The Chinese Siddham scholars adopted this phonetic classification of consonants, albeit with some modification. Unlike in Sanskrit, there was no linguistic standardisation in China. The identity of consonants varied from author to author. Taking the dentals **ta, tha, da, dha, na** as an instance, Hsieh Ling-yün described them as tongue tip or tongue top sounds, whereas Chih-kuang 智広 defined them as guttural sounds.(7)

In China, there was a traditional form of classifying sounds called *wu-yin* 五音 or the five sounds used in music. The musical scale was divided into the five steps known as *kung* 宮, *shang* 商, *chüeh* 角, *chih* 徵, and *yü* 羽, starting with the lowest and ending in the highest. These terms were also used in phonetic writings. After the Sanskritic terms were introduced by Hsieh Ling-yün and others, the Chinese phoneticians switched over to the Sanskritic concept in their writings, with some modification. The Chinese established seven consonant classes to cater to the needs of their language. The terms used by the Chinese for these classes differ somewhat from those of Siddham. The English equivalents of the Chinese terms are given below, along with their literal meanings, in order to avoid any misunderstanding. First, there are five major classes. They are *ya-sheng* 牙声 meaning "molar sounds" or velars, *ch'ih-sheng* 齒声 meaning "tooth sounds" or dentals, *she-sheng* 舌声 meaning "tongue sounds" or linguals, *hou-sheng* 喉声 meaning "throat sounds" or gutturals, and *ch'un-sheng* 唇声 meaning "lip sounds" or labials. In addition to the above five, there are two minor sound classes, consisting of one consonant each, viz., *pan-ch'ih-sheng* 半齒声 meaning semi-dental and *pan-she-sheng* 半舌声 meaning semi-lingual.

Shen Kua, mentioned above, describes the adoption of the Siddham concept in his *Meng-hsi pi-t'an* as follows:

> The *wu-yin* was evolved by the musicians on the basis of rhythms. There was no standardisation. The general practice was to refer to the turbid sounds as *kung*, clearer sounds as *shang*, the clearest sounds as *chüeh*, and the sounds that couldn't be determined to be either clear or turbid as *chih* and *yü*. The Ch'ieh-yün scholars assigned the terms labial, lingual, velar, dental, and guttural to *kung*, *shang*, *chüeh*, *chih*, and *yü* respectively. ... Besides the five categories mentioned above, there are two other types of sound in Siddham. One originates from the navel and is pronounced through the lips. ... The other is the nasal sound pronounced inside the nose.(8)

As mentioned earlier, *Ch'ieh-yün* was the first rime dictionary, compiled in A.D. 601. Another speculation on the link between Siddham and the evolution of the concept of seven

consonant classes can be found in a passage in the preface of Ch'i-yin-lüeh 七音略, a work of Cheng Ch'iao on rime tables. It states as follows:

> The literati of the Han period knew how to analyse characters (graphically) according to the (dictionary called) Shuo-wen, but they did not know that each word consisted of a mother (*mu* 母) and a child (*tzu* 子). The mother starts the word and the child follows. ... The classification of sounds in seven categories originated in Western countries and from there was introduced into China. ... Chinese monks adopted this system and gave it a definite form. This script has 36 initials which are divided into light and heavy, tenues and mediae, with perfect regularity. The sound of all the myriad things between Heaven and Earth can be reproduced in this script. ... The fact that the Indian script spread to every place where sun and moon shine is due to its schema of the Seven Sounds, whereby it penetrates the meaning of all the various foreign languages. ...[9]

4. Sound Types

Chinese sounds come in four basic types. The sounds can be unaspirated, aspirated, unvoiced, and voiced. It appears that the terms *ch'ing* 軽, *chung* 重, *ch'ing* 清, and *cho* 濁 respectively were coined for them. These terms appear quite frequently in the writings of the Six Dynasties period, although their usage was not standardised.

These terms also appear with the Siddham letters given in the Buddhist texts. In the case of earlier texts, these terms are additions made at some later date. A study of the Siddham letters in the Buddhist texts reveals that the term *chung* 重 is used quite often with voiced aspirated consonants. As against this, the term *ch'ing* 軽 is used with unaspirated consonants, but to a lesser extent. One of the works that gives these terms for every plosive consonant is *Nieh-p'an wen-tzu* 涅槃文字. Here, the unaspirated letters are shown as *ch'ing* 軽, and the aspirated letters as *chung* 重. The two unaspirated letters **ḍa** and **pa** have somehow been shown as *chung* 重 or aspirated sounds. The nasals are designated as *pu-ch'ing-pu-chung* 不軽不重.[10] In some lists of letters, like that given in *Yü-ch'ieh chin-kang-ting ching shih tzu-mu p'in* 瑜伽金剛頂経釈字母品, the letters **ṅa** and **ṇa** have clearly been described as sounds originating from the nose.[11] In the Siddham letters of Hsieh Ling-yün, the sign *chung* 重 appears with the voiced aspirated letters **gha, jha, ḍha,** and **dha.** In the Siddham list of Emperor Wu-ti of the Liang dynasty, all the voiced aspirated letters **gha, jha, ḍha, dha,** and **bha** are designated as *chung* 重. There is no *ch'ing* 軽 or *chung* 重 sign with any other plosive letter.[12] In Hsi-t'an-tzu-chi, the basic text of Siddham, Chih-kuang has designated the letters **ga, ja, ḍa, da,** and **ba** as *ch'ing* 軽, and the letters **gha, jha, ḍha, dha,** and **bha** as *chung* 重. He has left the unvoiced letters undefined.[13] It is obvious that *ch'ing* 軽 means the unaspirated sounds and *chung* 重 means the aspirated sounds in these Siddham texts.

The usage of these two terms, however, lacks consistency in Chinese texts. The section on "Phonetics" in *Yen-shih chia-hsün* states that the contemporary words differ much from those of olden times. Among them, deviations have appeared in *ch'ing* 軽 and *chung* 重, as well as in *ch'ing* 清 and *cho* 濁. There is no way to throw light on such question.[14] However, there is no explanation for these terms in the text. It appears that the two terms *ch'ing* 軽 and

chung 重, usually used for the unaspirated and aspirated sounds, were also used to mean the unvoiced and voiced sounds. The two terms *ch'ing-ch'ing* 軽清 and *chung-cho* 重濁, perhaps, came into use from this. The Yuan dynasty edition of *Yü-p'ien* applies the term *ch'ing-ch'ing* to the unvoiced sounds and *chung-cho* to the voiced sounds. In the rime dictionary *Kuang-yün* 広韻 (A.D. 1008), *ch'ing* 軽 and *chung* 重 appear to have been used sometimes to mean the consonants and vowels respectively.(15)

Although the distinction of unvoiced and voiced sounds constitutes an important criterion in the arrangement of Siddham letters, no list of letters up to at least *Hsi-t'an tzu chi* gives these terms in the pronunciation notes. Shen Kua has mentioned the terms *ch'ing* 清, *tz'u-ch'ing* 次清, *cho* 濁, and *pu-ch'ing-pu-cho* 不清不濁 in his work *Meng-hsi pi-t'an*. He has given examples from which the terms can be reconstructed as unvoiced unaspirated, unvoiced aspirated, voiced, and nasal respectively. In the rime dictionary *Yün-ching*韻鏡, the terms *ch'ing* 清, *tz'u-ch'ing* 次清, *cho* 濁, and *ch'ing-cho* 清濁 have been used to mean the unvoiced unaspirated, unvoiced aspirated, voiced and nasal sounds respectively.

There is a likelihood that the terms *ch'ing* 軽 and *chung* 重 have some Sanskritic connection. The Chinese were familiar with certain aspects of Sanskrit prosody around the early fifth century. The term "harmonizing sound" used by Hui-chiao in the biography of Kumārajīva appears in the work of Liu Hsieh (A.D. 465-522). In Sanskrit prosody, there are two terms ***laghu*** (light) and ***guru*** (heavy). These terms appear in the biography of Hsieh Ling-yün written by Shen Yüeh, whose name is associated with the identification of the four tones. Discussing the theory of poetics, Shen Yüeh writes as follows: Within a line, initials and finals must be different; within a couplet, *ch'ing* 軽 (light, ***laghu***) and *chung* 重 (heavy, ***guru***) sounds must be distinct.(16)

5. Four Tones

Tones are a basic feature in Chinese. There are four tones officially recognised in Chinese. They are *p'ing-sheng* 平声 (even tone), *shang-sheng* 上声 (rising tone), *ch'ü-sheng* 去声 (departing tone), and *ju-sheng* 入声 (entering tone). The term "four tones" appears for the first time in literature in the latter half of the fifth century. Classical Chinese being a basically monosyllabic language, a word usually consisted of one syllable. Since there were more words than syllables, a syllable expressed a multiple number of words. This created the problem of misunderstanding. It is said that the tones evolved as an answer to this problem.

A scrutiny of ancient Chinese poems reveals that they have rhyming words, and that rhyming took place in the same tone. The Chinese had a vague awareness of the phenomenon of tones. Application of the terminology used in music to language during the Han Dynasty period is considered to testify to this. The Siddham phonetic ideas introduced into China in the wake of Buddhism perhaps played a major role in the identification of the phenomenon. *Meng-hsi pi-t'an*, mentioned earlier, states that the science of phonetics started with the identification of four tones by Shen Yüeh 沈約 (A.D. 441-513). The science slowly became

thorough with the introduction of Siddham from India into China.[17]

Shen Yüeh indeed took a leading part in advocating the theory of four tones. He wrote a work entitled *Ssu-sheng p'u* 四声譜 dealing with the four tones in which he says that the existence of four tones was established by Chou Yung 周顒(died around A.D. 488). *Nan-shih* 南史, the *History of the Southern Dynasties* (compiled during A.D. 649-683), states that Chou Yung wrote a book entitled *Ssu-sheng ch'ieh-yün* 四声切韻. The book is lost, but the title suggests that it discussed the four tones along with the *fan-ch'ieh* system of expressing pronunciation. *Wen-chien chi* 聞見記 states that Chou Yung was well versed in the Siddham consonants and associates his name with the concept of *niu* 紐, the bundle formed by the characters of four tones, which will be discussed in the next section. *Nan-ch'i shu* 南斉書, the *History of Southern Ch'i Dynasty*, compiled by Hsiao Tzu-hsien 蕭子顯 (A.D. 489-537) says that Chou Yung excelled in the science of phonetics. He was also well versed in Buddhist theology. His way of speaking was very much admired by the students of the university. Recent studies say that he was a follower of the San-lun 三論 sect, and also that he was linked with Kumārajīva intellectually through a succession of Buddhist monks, as given below.[18]

Kumārajiva --> Seng-sung 僧嵩 --> Seng-yüan 僧淵
--> Fang-tu 方度 --> Seng-lang 僧朗 --> Chou Yung

A modern Chinese cultural historian, Ch'en Yin-k'o 陳寅恪, has proposed a hypothesis on identification of the four tones. Historically, all words ending in /-p/, /-t/, and /-k/ have just one tone, the entering tone. As against this, the words with nasal endings like /-m/, /-n/, and /-ng/, and with vocalic endings like /-a/, /-i/, and /-au/, and so on, belong to the other three tones. Ch'en Yin-k'o says that, of the four tones, the entering tone could be easily identified because words of this tone ended in /-p/, /-t/, and /-k/. The other three tones were distinguished on the basis of Sanskrit. Traditionally three ***svara***s or pitch accents, ***udātta***, ***anudātta***, and ***svarita***, were involved in the recitation of the Vedas, and the Buddhists incorporated this feature in reciting the sutras. This way of reciting migrated to China along with Buddhism and monks used it in reciting the sutras. The three remaining tones were identified on the basis of these three ***svara***s. In support of his argument, Ch'en Yin-k'o says that in A.D. 489 Prince Hsiao Tzu-liang 蕭子良 invited Buddhist monks and scholars of phonetics to his palace and devised a new style for reciting the sutras. Prince Hsiao Tzu-liang was a leading patron of scholarship of his time. He established the Western Villa Salon group in A.D. 487 and gathered a large number of leading scholars of the period, such as Shen Yüeh and others, around him. The latter-day Liang Emperor Wu-ti 武帝 in his youth was one of the 'eight friends' who played guiding roles in the salon. At that time an intense debate was going on in Nanking on Chinese phonetics. Chou Yung, Shen Yüeh, and their friends took leading roles in the debate. The assembly of A.D. 489 was a forum for announcing the results of the debate.[19] Despite the struggles for power, the academic life of this period was

very vibrant, with the rulers themselves often taking active part in scholastic activities. Shen Yüeh later on became a minister when Emperor Wu-ti established the Liang kingdom in Nanking. The emperor and his son agreed with many phonetic ideas of Shen Yüeh, but did not agree with Shen Yüeh's four tone hypothesis. As stated earlier, the emperor wrote a commentary on the *Mahāparinirvāṇa Sūtra* where he discussed the Siddham letters. Chou Yung was a Buddhist adherent conversant with Siddham. Siddham, perhaps, started attracting serious attention from scholars after Hsieh Ling-yün wrote *Shih-ssu yin hsün-hsü* discussing Siddham about half a century earlier. Considering all these facts, it may not be wrong to assume that Indian factors played a role in identifying the four tones.

There is a piece of evidence that tends to support the hypothesis of Ch'en Yin-k'o. Elements of Sanskrit prosody were also transmitted by Indian monks during this period. Chinese poets employed these elements to create a new avant-garde poetic genre referred to as *chin-t'i-shih* 近体詩 (Recent Style Poetry). It was highly refined into a new style of poems called *lü-shih* 律詩 during the T'ang period, These poems were composed of eight lines, and each line contained seven characters. However, a backlash in the form of reviving the old styles was started by the famous poet Li Po 李白 (A.D. 701-762) and others during the T'ang period in order to reassert the national spirit.

6. Character Bundle *niu* and Related Concepts

Following the establishment of the four tones, the concept of *niu* 紐 was evolved to group the characters rationally. Literally, the word *niu* means string or knot, and the dictionary *Yü-p'ien* defines it as "bundle". This term bundle is applied to a group of four characters belonging to the four tones but related to each other phonetically. As stated in the preceding section, the *Wen-chien chi* associates the concept of bundles with Chou Yung and says that they consist of characters representing all the four different tones. Wei Pao 維宝 describes bundles in his *Chien* 箋 by saying that they bundle together the characters representing all the four tones. The characters (thus bundled) have the same initial and the same final. They belong to the same unvoiced, voiced, unaspirated or aspirated category. Three typical examples of character bundles have been shown in Table 5.[20] The tonal order here is even, rising, departing, and entering.

The description of bundles given above states that the characters banded together in a bundle have the same sound. Although in the second line the pronunciations *gan* and *gen* are different at present, at the time when the concept of *niu* was formulated they had the same sound. A look at the examples given in the table will show that whereas the first three characters in each set have the same sound, that of the last one differs, ending in /-p/, /-t/, and /-k/ instead of /-m/, /-n/, and /-ng/ respectively. The apparent discrepancy can be explained easily from the arrangement of the Siddham letters. The correspondences of Siddham letters for these three cases has also been shown in Table 5.

In Sanskrit, **p-m, t-n, k-ṅ** are considered to be consonants of the same class because

they originate from the same point of articulation. There is a general agreement among the scholars of Chinese that this correspondence provided the basis for the hypothesis of character bundles. This correspondence has been retained ever since in Chinese.

Table 5: Character bundles and their Siddham correspondences

含 *kam*	頷 *kam*	憾 *kam*	合 *kap*
元 *gan*	阮 *gen*	願 *gan*	月 *gat*
同 *dong*	動 *dong*	洞 *dong*	独 *dok*

pa	**pha**	**ba**	**bha**	**ma**
ta	**tha**	**da**	**dha**	**na**
ka	**kha**	**ga**	**gha**	**ṅa**

The Chinese phoneticians coined the term *yang-sheng* 陽声 or "positive tone" for the characters ending in nasal /-m/, /-n/, and /-ng/, and the term *yin-sheng* 陰声 or "negative tone" for the characters ending in the vowels /-a/, /-i/, and /-au/, and so on, as against the term *ju-sheng* or entering tone for the characters ending in the consonants /-p/, /-t/, and /-k/. One set of character bundles was formed by lumping three positive tone characters having even, rising, and departing tones together with one entering tone character. A particular rule was followed while doing this lumping. The characters ending in /-ng/, /-n/, and /-m/ were lumped with the characters ending in /-k/, /-t/, and /-p/ respectively. Now, of the characters with negative tone, there were many with a second reading which was an entering tone. For instance, the character 塞 was pronounced something like *sei* and *sek*. This, perhaps, suggested the existence of some sort of a bond between the negative tone characters and the entering tone characters. So, another set of bundles was established by lumping together three negative tone characters of even, rising, and departing tones with one entering tone character. Thus the bundles of both the types consisted of four characters in four tones. Next, bundles of seven characters were created by joining the two bundles with the entering tone character as the common link. In other words, such bundles were constituted by three characters of positive tone and three characters of negative tone, with an entering tone character positioned in the middle. Here the IMV (see "Introductory Information") in all the seven characters were the same. The three types of bundles have been shown in Table 6.[21] In the bundles, the fourth character has an entering tone. The others come in the tonal order of even, rising, and departing.

Later on, the bundle consisting of negative tone and entering tone characters was discontinued, leaving behind the bundle of positive tone and entering tone characters. The positive tone and entering tone bundle can be justified from a phonetic angle, since the endings /-ng/ and /-k/ form a velar pair, /-n/ and /-t/ form a lingual pair, and /-m/ and /-p/ form a labial pair. But no such phonetic justification is possible in the case of the negative tone and entering tone bundle. The discontinuation of this bundle suggests a strong influence

of Sanskritic phonetic ideas. The positive tone and entering tone bundle constituted an important basis in the compilation of the rime dictionary *Kuang-yün*.

Table 6: Character bundles of positive, negative, and entering tone

a) Bundle of positive tone-entering tone characters

郎	朗	浪	洛
lang	*lang*	*lang*	*lak*

b) Bundle of negative tone-entering tone characters

黎	禮	麗	捩
lei	*lei*	*lei*	*let*

c) Bundle of positive tone-entering tone-negative tone characters

光	廣	珖	郭	戈	果	過
kuang	*kuang*	*kuang*	*kuak*	*kua*	*kua*	*kua*

It may be mentioned here that with the passing of time, the term *niu* slowly acquired the meaning of the initial I, and as against this the terms *yün* 韻 and *tieh* 疊 were coined to denote the final MVE. The semi-syllabic nature of Siddham letters apparently failed to provide the tool necessary for resolving the constituent elements of MVE one step further. The arrangement of the four characters in a bundle was standardised in the order of even tone, rising tone, departing tone, and entering tone.

References

(1) Mair, Victor H.; Mei, Tsu-lin, "The Sanskrit Origins of Recent Style Prosody", *Harvard Journal of Asiatic Studies*, V. 51, No. 2, December 1991, pp. 382-383.

As the title shows, this paper gives a very good exposition of the elements of Sanskrit prosody transmitted to China during the period, and the way the Chinese adapted them.

(2) Yen Chih-t'ui, *Yen-shih chia-hsün*; Utsunomiya, Kiyoyoshi (Tr), *Ganshi Kakun*, Chūgoku Koten Bungaku Taikei, V. 9, Heibonsha, Tokyo, 1977, p. 580B-581T, 顔之推 顔氏家訓.

(3) Konishi, Jinichi, *Bunkyō Hifuronkō*, V. 1, Daihachishu Shuppan Co. Ltd. Kyoto, 1948, p. 174, 小西甚一著 文鏡秘府論考.

(4) Annen, *Shittanzō*, TSDK, V. 84, p. 382T, 安然著 :悉曇藏.
Yen Chih-t'ui, p. 568T.

(5) Shen Kua, *Meng-hsi pi-t'an*; Umehara, Kaoru (Tr), *Mukei Hitsudan*, V. 2, Heibonsha, Tokyo, 1989, p. 107, 沈括著 梅原郁訳 夢渓筆談 2.

(6) Dharmarakṣā, *Kuang-tsan po-jo-po-lo-mi ching*, TSDK, V. 8, pp. 195-196, 竺法護訳 光讃般若波羅密経
Mokṣala, *Fang-kuang po-jo ching*, TSDK, V. 8, p. 26, 無羅叉訳 放光般若経.

Mair; Mei, p. 392.

Buddhabhadra gives **ta** in the place of **na**. As shown in Table 3 in Chapter 3, Annen has changed it to **na**.

(7) Chih-kuang, *Hsi-t'an tzu chi*, TSDK, V. 54, p.1188T, 智広著 悉曇字記.

Misawa, Junjirō, *Inkyō no Kenkyū*, Section 5, Inkyo Kenkyukai, Kobe, 1960, p. 9, 三沢諄治郎著 韻鏡の研究.

(8) Shen Kua, p. 109.

(9) Van Gulik, R.H., *Siddham*, Sarasvati Vihar Series, V. 36, Interntional Academy of Indian Culture, Nagpur, pp. 43-44.

(10) Annen, p. 412M.

(11) Ibid., p. 407T.

(12) Ibid., p. 409B, p. 410B.

(13) Chih-kuang, p. 1188T- M.

(14) Yen Chih-t'ui, p. 580B.

(15) Misawa, pp. 214-215.

(16) Mair; Mei, pp. 394-395.

(17) Shen Kua, p. 89; Van Gulik, p. 42.

(18) Konishi, pp. 421-22.

(19) Konishi, pp. 459, 422-423.

Yasuda, Jiro, "The Changing Aristocratic Society of the Southern Dynasties and Regional Society: Particularly the Hsiang-yang Region", *Acta Asiatica*, Toho Gakkai, V. 60, Tokyo, 1991, p. 50.

(20) Konishi, p. 150.

(21) Annen, p. 381B.

Chapter 7. Rime Dictionaries and Rime Tables

1. Rime Dictionaries

There are three broad stages in the development of lexicography in China. In the first stage dictionaries giving just the meanings of characters were prepared. *Shuo-wen chieh-tzu* belongs to this category. *Yü-p'ien* 玉篇, compiled in A.D. 543, initiated the second stage by adding readings to the characters. The readings were given in *fan-ch'ieh* spelling, and this became the standard practice in all the subsequent dictionaries. The third stage started with the compilation of the rime dictionary *Ch'ieh-yün* 切韻 in A.D. 601. This was a specialized dictionary where all the characters were arranged under rime headings. *T'ang-yün* 唐韻, an enlarged version of *Ch'ieh-yün*, was produced in A.D. 751. This was followed by *Ta-sung ch'ung-hsiu kuang-yün* 大宋重修広韻, popularly known as *Kuang-yün* 広韻, published in A.D. 1007. Of these three rime dictionaries, only *Kuang-yün* is still extant. The other two exist only in fragments or as quoted in different works. It is believed that *Ch'ieh-yün* arranged the characters under 193 rime headings. Thirteen more rimes were added in *T'ang-yün* to increase the number to 206. It appears that this number had general acceptance among the scholars of the period since *Kuang-yün* also has 206 rimes.(1)

2. Composition of *Kuang-yün*

2.1. Rimes

Kuang-yün, which exists in complete form, provides a fair view of the composition of rime dictionaries. In *Kuang-yün*, the rimes are arranged under the four tones. The first two volumes of the dictionary are devoted to rimes belonging to the even tone. The third volume lists the rising tone rimes, and the fourth volume accommodates the departing or falling tone rimes. The fifth and final volume covers the entering tone rimes.

The beginning of the section on each tone starts with a table of contents showing all the rimes given there. The first two volumes give 57 rimes sharing the even tone. The third volume contains 55 rimes sharing the rising tone. The fourth accommodates 60 rimes sharing the departing or falling tone, and the fifth consists of 34 rimes sharing the falling tone. All these rimes added together make 206 rimes in all.

A scrutiny of the order in which the 206 rimes are distributed among the four tones reveals the cardinal role the concept of character bundles (*niu* 紐) played in compiling the rime dictionaries. The rimes can be divided into two types, one type ending in a vowel and the other type ending in a consonant. If the vowel-ending rimes are eliminated and the order in which the remaining consonant-ending rimes appear in the dictionary is investigated, the role of the character bundle concept becomes very obvious. The order in which the 206 rimes appear in *Kuang-yün* under the four tones has been shown in Table 7. The first four rimes listed under the four tones are: even tone 東 /-ung/, rising tone 董 /-ung/, departing tone 送 /-ung/, and entering tone 屋 /-uk/. As has been discussed earlier, a character bundle consists

Table 7: Two hundred and six rimes and sixteen *she*s

	Rime				*She*		Rime				*She*
1.	東	董	送	屋	通	35.	蕭	篠	嘯	○	効
2.	冬	○	宋	沃		36.	宵	小	笑	○	
3.	鍾	腫	用	燭		37.	肴	巧	效	○	
4.	江	講	絳	覺	江	38.	豪	皓	號	○	
5.	支	紙	寘	○	止	39.	歌	哿	箇	○	果
6.	脂	旨	至	○		40.	戈	果	過	○	
7.	之	止	志	○		41.	麻	馬	禡	○	仮
8.	微	尾	未	○		42.	陽	養	漾	薬	宕
9.	魚	語	御	○	遇	43.	唐	蕩	宕	鐸	
10.	虞	麌	遇	○		44.	庚	梗	映	陌	梗
11.	模	姥	暮	○		45.	耕	耿	諍	麥	
12.	齊	薺	霽	○	蟹	46.	清	靜	勁	昔	
13.	○	○	祭	○		47.	青	迥	徑	錫	
14.	○	○	泰	○		48.	蒸	拯	證	職	曾
15.	佳	蟹	卦	○		49.	登	等	嶝	徳	
16.	皆	駭	怪	○		50.	尤	有	宥	○	流
17.	○	○	夬	○		51.	侯	厚	候	○	
18.	灰	賄	隊	○		52.	幽	黝	幼	○	
19.	咍	海	代	○		53.	侵	寝	沁	緝	深
20.	○	○	廢	○		54.	覃	感	勘	合	咸
21.	眞	軫	震	質	臻	55.	談	敢	闞	盍	
22.	諄	準	稕	術		56.	鹽	琰	豔	葉	
23.	臻	○	○	櫛		57.	添	忝	栝	帖	
24.	文	吻	問	物		58.	咸	豏	陷	洽	
25.	欣	隱	焮	迄		59.	衔	檻	鑑	狎	
26.	元	阮	願	月	山	60.	嚴	儼	釅	業	
27.	魂	混	恩	没		61.	凡	范	梵	乏	
28.	痕	很	恨	○							
29.	寒	旱	翰	曷							
30.	桓	緩	換	末							
31.	刪	潸	諫	黠							
32.	山	産	襇	鎋							
33.	先	銑	霰	屑							
34.	仙	獮	線	薛							

The 206 rimes are divided into 61 groups. In each group, the rimes are arranged in the order of even, rising, departing, and entering tones. The 206 rimes are distributed among 16 *she*s.

of four characters of four tones with the same initial and the same final. The same final in this case also means that the end consonants belong to the same sound category. The end consonants in the four rimes given above belong to the velar category. These four rimes are, in effect, nothing but a character bundle minus the initials.

The first four rimes seen above have /-ng/ and /-k/ as the end consonants. They are followed by other rimes ending in /-ng/ and /-k/. Next a number of rimes ending in vowels appear. These are followed once more with rimes ending in /-ng/ and /-k/. Following this, there are entries of another set of vowel-ending rimes. After this, the rimes ending in /-n/ and /-t/ appear, followed by vowel-ending rimes once more. Finally, the rimes ending in /-m/ and /-p/ are given. As shown in Table 7, this way of arranging the 206 rimes distributes them among 61 groups. Read horizontally, the table shows the rimes of the same sound category,

and read vertically, it shows the order in which the rimes appear in *Kuang-yün*. It should be noted that the groups without the entering tone rimes in the table are the vowel-ending rimes. There is one exception in the rime groups ending in /-n/ and /-t/. The entering tone rime is somehow missing for the twenty-eighth group. In short, the consonant ending rimes in *Kuang-yün* appear in the order /-ng/～/-k/, /-n/～/-t/, and /-m/～/-p/. This is also the order in which the consonants appear in the Siddham Varṇamālā, albeit with the positions of the oral and nasal consonants reversed.

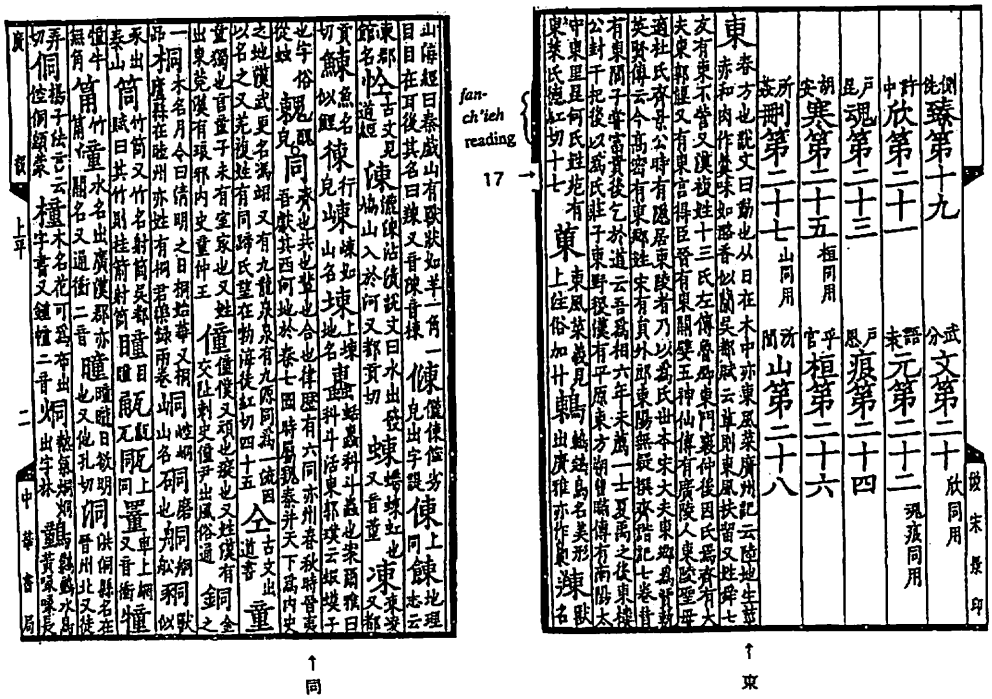
There is another piece of evidence to suggest the role of the Siddham Varṇamālā in the arrangement of rimes in the rime dictionaries. The first rime dictionary, *Ch'ieh-yün*, was compiled by nine Chinese scholars, one of whom was Yen Chih-t'ui. In his book *Yen-shih chia-hsün*, Yen Chih-t'ui states that he was born in a Buddhist family.[2] He was well versed in Buddhist theology and defended Buddhism in this book. Being a philologist, he also discussed the sounds of characters extensively in this work. Siddham was known among the Chinese scholars of his time. Emperor Wu-ti of the Liang Dynasty knew Siddham very well and also wrote on Siddham. Yen Chih-t'ui was eighteen when Emperor Wu-ti died in A.D. 549. He has written about the emperor in a number of places in his book. Being a devout Buddhist and philologist himself, it is unlikely that he was unaware of the Siddham letters.

2.2. Small-Rimes

It has been stated above that the characters are arranged under 206 rime headings in *Kuang-yün*. There are 26,194 characters listed in *Kuang-yün*.[3] Consequently, each rime, on average, consists of more than one hundred characters. These characters are arranged in the rime scheme according to a system called *hsiao-yün* 小韻 or "small-rime". Small-rime groups together the characters with identical pronunciation, i.e., identical IMVE/T of a rime. Thus, a small-rime gives the actual pronunciation of characters listed under it. Now, within a rime the MVE/T is common. So, a small-rime differs from another if the initial consonant differs. This is the broad framework. There is no fixed rule in the arrangement of small-rimes except that the character used for representing the rime is also used to represent the first small-rime of the rime. For instance, as shown in Fig. 2, the first rime listed in *Kuang-yün* is /-ung/ in even tone, represented by the character 東. This character 東 also represents the first small-rime of this rime. Next, the meaning of the character is given. After this, the reading *tung* of the small-rime is given in *fan-ch'ieh* spelling. This is followed by the number 17. It means that this small-rime is made up of 17 characters with the identical pronunciation *tung*. For other characters of this small-rime, only the meaning is given. These seventeen characters are followed by the next entry 同, with a circle on the top. The character is followed by its meaning and its reading *dung* given in *fan-ch'ieh* spelling. It carries the number 45, which means that there are 45 characters with the same reading in this small rime. In this way, 3,874 small-rimes are listed in *Kuang-yün*, distributed among the 206 rimes. Although the characters belonging to a small-rime are supposed to have identical pronunciation, occasionally

some characters within a small-rime carry different *fan-ch'ieh* spellings.

Fig. 2: First two pages of *Kuang-yün* and rime /-ung/



A scrutiny of *Kuang-yün* reveals some interesting facts. In some cases a character has more than one tone and consequently belongs to more than one rime. In fact, there are 235 characters with both even and rising tones, 470 characters with both even and departing tones, 252 characters with both rising and departing tones, and 29 characters with three tones, viz., even, rising, and departing tones.[4] A character listed as a constituent member of a small-rime within a rime class sometimes forms an independent small-rime in a different rime. Again, a character representing a small-rime of one rime class occasionally represents another small-rime within another rime. There are also cases where a constituent member of a small-rime of a rime constitutes an independent rime. The character 凍, belonging to the small-rime 東 *tung* of the same rime class, is an independent small-rime in the departing tone rime 送 /-ung/ with the same reading, *tung*. Only the tone is different here. Again, the small-rime 中 **tiung* of the rime 東 is also a small-rime of the departing tone rime 送 /-ung/. In some cases, a character has more than one reading. The character 梵 is a constituent member of a small-rime with the probable reading **b'ung* belonging to the first rime 東. This 梵 appears as an independent rime with the probable reading /-iwam/. Since it is a rime, it is also the first small-rime of the group with the probable reading **b'iwam*.

3. Sound Tables - Shou-wen's Work

These dictionaries, perhaps, motivated Chinese scholars to put the rimes in the form of tables. Such tables may have served the purpose of a ready reference for knowing the readings of characters. The rime tables, along with one devoted to the initial consonants, covered the entire sound system of the Chinese language. So they are popularly known as the Chinese sound tables. The rime tables, in a sense, can be considered to be a direct offshoot of the rime dictionaries.

One of the earliest works that can be directly associated with the sound tables is that of Shou-wen 守温, a monk who is believed to have lived towards the end of the T'ang period (A.D. 618-907). Only three pages of his work, popularly known as *Shou-wen ts'an-chüan* 守温残卷, have been found. There are references to other sound tables like the one entitled 洪韻 *Hung-yün* prepared around this time by Buddhist monks, but they are now lost.[5]

The monk Shou-wen first gives the consonants, thirty in all, dividing them into five categories, labials, linguals, velars, dentals, and gutturals. There are four labial sounds, with the probable values /p/, /p'/, /b'/, and /m/. The linguals are divided into two groups. One is *she-t'ou-yin* 舌頭音 (tongue-tip sounds) with the probable values /t/, /t'/, /d'/, and /n/. The other is *she-shang-yin* 舌上音 (tongue-top sounds) with the probable values /t^{j}/, /t^{j}'/, /d^{j}/, and /n^{j}/ respectively. The velars are given by six characters. One stands for /l/ which latter-day phoneticians established as a separate category, viz., semi-lingual. The probable values of the other five are /k/, /k'/, /g'/, and /ng/. It should be noted that there is one character in excess here. It is significant that Shou-wen has used the expression "etc." only with this group. This expression has not been used with any other group. The dentals are also divided into two groups, *ch'ih-t'ou-yin* 齒頭音 (teeth-tip sounds) consisting of three probable sounds: /ts/, /ts'/, and /dz'/, and *cheng-ch'ih-yin* 正齒音 (pure teeth sounds), consisting of four probable sounds: /ṭs/, /ṭs'/, /ḍz'/, and /ṣ/ or /ts^{j}/, /ts^{j}'/, /dz^{j}'/, and /s^{j}/. There are six guttural sounds divided into two groups, three unvoiced sounds: /s/, /z/, and /χ/, and three voiced sounds: /ɣ/, /ʾ/, and /ʔ/. There is one discrepancy in the guttural group. Two dental sounds /s/ and /z/ belonging to the teeth-tip group are lumped in the guttural group. Later in this work the teeth-tip sounds have been mentioned twice, and on both these occasions the two sounds have been lumped together with the teeth-tip sounds. Shou-wen mentions the unaspirated and aspirated sounds, but their exact phonetical values are not clear. He divides the rimes into four *teng* 等 or divisions, and gives their examples under the four tone headings, viz., even tone, rising tone, departing tone, and entering tone.[6]

This framework of Shou-wen developed into the latter-day sound tables. The sound tables that have survived in complete form and come down to us were prepared during the Sung (A.D. 960-1279) and subsequent periods. One such work, the *Yün-ching* 韻鏡, will be discussed here.

4. *Yün-ching*

The sound tables of the *Yün-ching* basically deal with the sound values of characters for the period from around the sixth century to the tenth century. The author of the *Yün-ching* is not known. However, it carries two prefaces by Chang Lin-chih 張麟之 dated A.D. 1161 and 1203. He says that other sound tables, titled *Hung-yün*, prepared by Buddhist monks are known. He searched for the author for fifty years, but the search proved futile. *Yün-ching* did not attract much attention in China. In Japan, its value was discovered by a Japanese monk named Shinpan 信範, who made a copy of it in A.D. 1252. Since then, it has been used widely as a basic reference material in linguistic studies in Japan.(7)

There are forty-four sound tables in *Yün-ching*. These forty-four tables accommodate the entire sound system of the Chinese language. The introductory section gives the first table, which lists the initial consonants. The remaining forty-three tables are devoted to the rimes and constitute the main text of the work. All the rime tables have an identical set-up.

4.1. Table of Initial Consonants

Table 8 shows the table of initial consonants given in the introductory section of *Yün-ching*. Phonetic terms are used here to designate the initial consonants. In addition, a Chinese character is assigned to each initial consonant. Their phonetic values shown alongside are those worked out by Karlgren and others.

The title of this table is 36 Consonants. The table is divided into six groups. The first group carries the heading *ch'un-yin* 脣音 or labials. Then there are four subheadings, *ch'ing* 清, *tz'u-ch'ing* 次清, *cho* 濁, and *ch'ing-cho* 清濁, meaning unvoiced unaspirated, unvoiced aspirated, voiced, and nasal respectively. It will be seen that the unvoiced sound has two forms, unaspirated and aspirated, whereas the voiced sound has only one form. There is some dispute over the exact nature of this voiced sound. It is generally assumed that it represents the voiced aspirated sound. Next, the phonetic values of the four subheadings are given with two sets of characters. The top set carries the remark "heavy labial sounds" and represents the sounds /p/, /p'/, /b'/, and /m/. The bottom set also carries the remark "light labial sounds" and represents the sounds /f/, /f'/, /v'/, and /m^{v}/. This last one is a dentilabial sound comparable to /mf/ in the German word: Kamfer.(8) Thus the top row gives the bilabial consonants and the bottom row gives the dentilabial consonants.

The second group carries the heading *she-yin* 舌音 or linguals. The four subheadings are the same as those mentioned above. Here also, the phonetic values are given by two sets of characters. The top set carries the remark "tongue-tip sounds" and represents the dental consonants /t/, /t'/, /d'/, and /n/. The bottom set carries the remark "tongue-top sounds" and represents the palatal consonants /t^{l}/, /t^{l}'/, /d^{l}'/, and /n^{l}/.

The third group carries the heading *ya-yin* 牙音 or velars. The same four subheadings are given here, representing the consonants /k/, /k'/, /g'/, and /ng/.

The fourth group carries the heading *ch'ih-yin* 齒音 or dentals. It has five subheadings:

Table 8: Thirty-six consonants (The initial consonants of the rime tables)

Labial	Unvoiced unaspirated	幫 p	非 f	
	Unvoiced aspirated	滂 p'	敷 f'	
	Voiced	並 b'	奉 v'	
	Nasal	明 m	微 m^{v}	
		(heavy)	(light)	
Lingual	Unvoiced unaspirated	端 t	知 t'	
	Unvoiced aspirated	透 t'	徹 $t'^{\prime}$	
	Voiced	定 d'	澄 $d'^{\prime}$	
	Nasal	泥 n	娘 n'	
		(tongue-tip)	(tongue-top)	
Velar	Unvoiced unaspirated	見 k		
	Unvoiced aspirated	溪 k'		
	Voiced	群 g'		
	Nasal	疑 ng		
Dental	Unvoiced unaspirated	精 ʦ	照 ʈs	照 ʦ$'$
	Unvoiced aspirated	清 ʦ'	穿 ʈs'	穿 ʦ$'^{\prime}$
	Voiced	從 ʣ'	牀 ʈz'	牀 ʣ$'^{\prime}$
	Unvoiced	心 s	審 ʂ	審 s$'$
	Voiced	邪 z	禪 ʐ	禪 z$'$
		(teeth-top)	(pure teeth)	
Guttural	Unvoiced unaspirated	影 ?		
	Unvoiced unaspirated	曉 χ		
	Voiced	匣 ɣ		
	Nasal	喻 '		
Semi-lingual	Nasal	来 l		
Semi-dental	Nasal	日 n$'$z$'$		

unvoiced unaspirated, unvoiced aspirated, voiced, unvoiced unaspirated, and voiced. There is no nasal sound here. The phonetic values are given by two sets of characters. The top set carries the remark "teeth-tip sounds". They represent five dental sounds, three affricates: /ʦ/, /ʦ'/, and /ʣ'/, and two fricatives /s/ and /z/. The bottom set carries the remark "pure teeth sounds". Although *Yün-ching* has treated the "pure teeth sounds" as one group, studies have revealed that this group consists of two types of sounds. One is retroflex, consisting of the three affricates /ʈs/, /ʈs'/, and /ʣ'/, and the two fricatives /ʂ/ and /ʐ/. Karlgren, however, assumes that the fifth sound /ʐ/ is missing here. The other is palatal, consisting of the three

affricates /ts^{j}/, /ts$^{j'}$/, and /dz$^{j'}$/, and two fricatives /s^{j}/ and /z^{j}/.[9]

The fifth group carries the heading *hou-yin* 喉音 or gutturals. It carries four subheadings: unvoiced unaspirated, unvoiced unaspirated, voiced, and nasal. They represent the sounds /?/, / γ /, / χ /, and / ' /. The sound / γ / represents the unvoiced guttural fricative (as in German: ach). As against this, the sound / χ / represents the voiced guttural fricative (like the sound /g/ in North German: wagen). The sound /?/ is an unvoiced plosive sound in the laryngeal position analogous to the unvoiced /k/, /t/, /p/, etc.[10] Although the subheading says that the sound / ' / is nasal, it is actually voiced, a smooth vocalic ingress, as found in English: the aim.[11]

The sixth and last group carries the heading *she-yin-ch'ih* 舌音齒 or lingual/dental. This heading shows that this group represents two categories of sounds. The subheadings say that the two sounds are nasals. However, the first is the sound /l/, and not a nasal. The second is the sound /n^{j}z^{j}/. Chinese phonetic writings define them as *pan-she-yin* 半舌音 or semi-linguals and *pan-ch'ih-yin* 半齒音 or semi-dentals respectively in order to differentiate them from the normal linguals and dentals. In short, traditional Chinese phonetic works divide the consonants into seven categories and call them *ch'i-yin* 七音 or seven sounds.

As already stated in the section entitled "Important Information" at the beginning of this book, the palatals, retroflexes, and dentals of Siddham are lumped together as linguals in Chinese works. The dentals in Chinese works consist of affricates and fricatives. The affricates are not recognised as simple sounds in Siddham. The fricatives correspond to **śa**, **ṣa**, and **sa** of Siddham.

4.2. Rime Tables — Their Composition

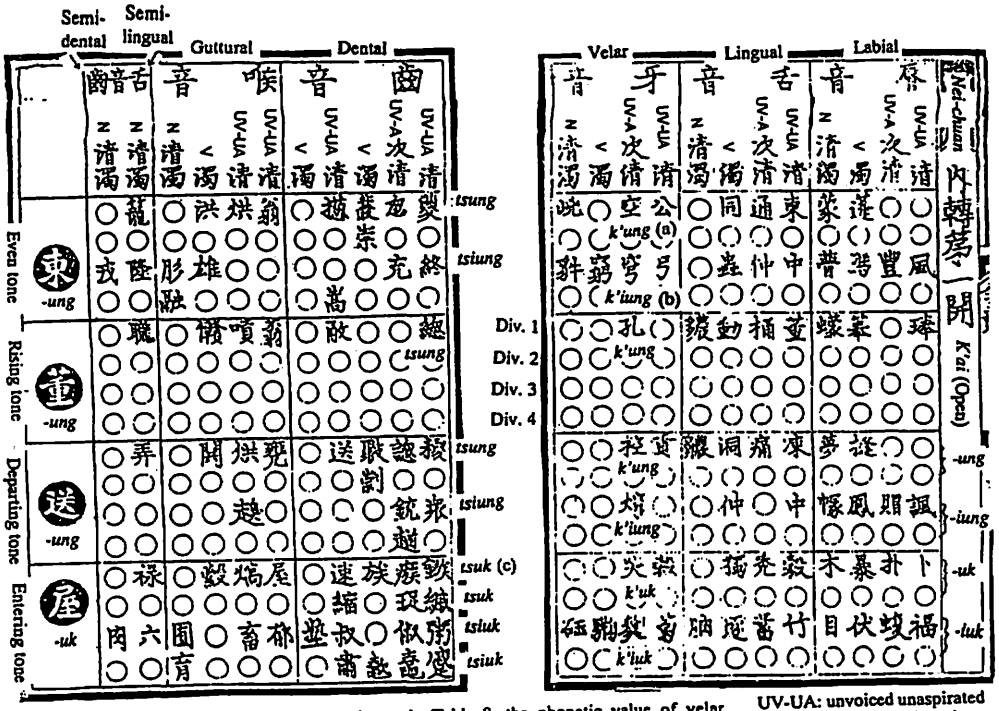
4.2.1. *Nei-chuan, wai-chuan*, and *she*

The rime tables of *Yün-ching* have a standard set-up as shown in Table 9. Each rime table starts with the word *nei-chuan* 内転 or *wai-chuan* 外転. The meanings of these two terms were transmitted orally from religious teacher to disciple as a part of the sectarian teaching called Men-fa 門法. However, the original meaning was lost with the passing of time. *Ssu-sheng teng-tzu* 四声等子, believed to have been written during the Southern Sung Period (A.D. 1127-1279), describes the two terms as follows. In the case of *nei-chuan*, Div. II does not contain any characters of labial, lingual, velar, and guttural categories. Div. II contains only dental category characters. In the case of *wai-chuan*, characters of all the five labial, lingual, velar, dental, and guttural categories are present in all the four divisions. It is very difficult to determine the precise meaning of these two terms at present.[12]

The term *she* 攝 is applied to a group of rimes that have in common the main vowel V. As shown in Table 7, the 206 rimes are divided into sixteen *she*s. Some of the *she*s have been designated by the characters used for designating the rimes. For others a character belonging to one of the concerned rimes has been used. For instance, the first *she* is designated by the character 通, which is a constituent member of the rime 東, rather the small-rime 東 to be

precise, with the reading *tung*. On the other hand, the second *she* 江 has been named after its constituent rime 江 with the reading *kang* (modern reading *chiang*). The *she*s have not been mentioned specifically in *Yün-ching*. Even then the *she* of a rime table can be determined easily by looking up the rimes in Table 7.

Table 9: Rime Table 1 of *Yün-ching*



(a) From the chart of initial consonants shown in Table 8, the phonetic value of velar unvoiced aspirate is /k'/. Therefore, the initial consonant of this character is /k'-/. The final is /-ung/. Thus the reading of this character is *k'ung*.

(b) Since Division 3 and Division 4 contain the medial /-i-/, the phonetic value of this rime is /-iung/. Therefore, the reading of this character is *k'iung*.

(c) The difference of the *tsuk-tsuk* pair lies in the extent of opening the mouth while articulating. The same holds good for the *tsiuk-tsiuk* pair.

UV-UA: unvoiced unaspirated
UV-A: Unvoiced aspirated
V : voiced
N : nasal
' : sign of aspiration
(e.g., Chinese *k'* is more or less the same as Siddham kh.)

The sixteen *she*s are divided into two groups, eight *nei-chuan* and eight *wai-chuan* as shown in Table 10. This suggests that *nei-chuan* and *wai-chuan* denote some properties of *she*, but it is difficult at present to say precisely what the properties are. Since *she* is a type of grouping based on the main vowel, it is very likely that *nei-chuan* and *wai-chuan* have some relation with vowels. The Chinese and Sino-Japanese readings of the *she*s suggest that the *wai-chuan* group is mostly made up of *she*s, whose main vowel is related to /-a-/.

A twelfth-century scholar named Cheng Ch'iao 鄭樵 (A.D. 1104-1162) has written in the preface of his *Ch'i-yin lüeh* 七音略, a work on rime tables, that the *nei-chuan* and *wai-chuan* charts were prepared to explain the use of the vowel lattice charts of the monks of the West.[13] Some scholars believe that the main vowels of the *she*s of the *nei-chuan* group

are of the narrow type, and those of the *she*s of the *wai-chuan* group are of the broad type. According to another hypothesis, *nei-chuan* contains the back vowels and *wai-chuan* contains the front vowels.[14] A modern Chinese scholar has analysed the main vowels of the *nei-chuan* and the *wai-chuan*, and proposed that the rimes containing the vowels located above the dotted line in Fig. 3 belong to the *nei-chuan* group, and those containing the vowels located below the dotted line belong to the *wai-chuan* group.[15]

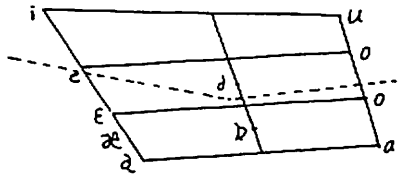
Table 10: Division of sixteen *she*s into *nei-chuan* and *wai-chuan*

nei-chuan she	通	止	遇	果	宕	曾	流	深
(Chi.)	*t'ung*	*chih*	*yü*	*kuo*	*tang*	*ch'eng*	*liu*	*shen*
(Jap.)	*tsū*	*shi*	*gū*	**kua*	** tau*	*sō*	**riu*	*shin*

wai-chuan she	江	蟹	臻	山	梗	效	假	咸
(Chi.)	*chiang*	*hsieh*	*chen*	*shan*	*keng*	*hsiao*	*chia*	*hsien*
(Jap.)	**kau*	*kai*	*shin*	*san*	**kau*	**kau*	*ka*	*kan*

(Modern readings: **kua*: *ka*, ** tau*: *tō*, **riu*: *ryū*, **kau*: *kō*)

Fig. 3: Rimes of *nei-chuan* and *wai-chuan*



4.2.2. Open-Mouth Pronunciation and Closed-Mouth Pronunciation

The *Yün-ching* rime tables are divided into three types, *k'ai* 開, *ho* 合, and *k'ai-ho* 開合. Literally, *k'ai* means "to open" and *ho* means "to put together". The meaning of *k'ai-ho* is not very clear. In the case of *ho* the lips are rounded while pronouncing. No such manipulation of lips is involved in the case of *k'ai*. Karlgren has termed *k'ai* "open mouth pronunciation" and *ho* "closed mouth pronunciation".

Broadly speaking, the rimes containing /-u-/ or /-w-/ as the medial vowel M are called closed-mouth, and those not containing these medial vowels are called open-mouth. In certain rimes, the rounding of lips is required even when no medial /-u-/ or /-w-/ is present. The rimes with /-u-/ as the main vowel V belong to this category. *Yün-ching* also treats these as closed-mouth. It has been stated in the preceding section that the *she* of a rime table can be identified easily from the rimes given in the table. Some *she*s contain two types of rimes, open-mouth and closed-mouth. Again, in *Yün-ching*, some *she*s contain all the three types, open-mouth, closed-mouth, and *k'ai-ho*. Separate tables have been allotted to the open-mouth, closed-mouth, and *k'ai-ho* rimes belonging to the same *she* in *Yün-ching*.

There are some discrepancies in the tables of *Yün-ching*. The first and eleventh rime tables, discussed later, have been designated as open-mouth, although rounding of lips is involved in pronouncing them. This naturally created some controversy. The first table involves the rime /-ung/. *Yin-yün jih-yüeh teng* 音韻日月灯, written during the Ming period (1368-1644), and many subsequent Chinese works have treated this rime as closed-mouth. Two Japanese works on *Yün-ching*, *Kango Onzu* 漢呉音図 and *Teisei Inkyō* 訂正韻鏡, as well as Karlgren have treated it as closed-mouth. The eleventh table involves the rime /-iwo/. It also has been treated as open-mouth in *Yün-ching*. *Yin-yün jih-yüeh teng*, mentioned above, has treated it as closed-mouth. A Japanese monk named Monnō 文雄 (1700-1763) has stated categorically that it is wrong to treat this table as open-mouth.[16]

4.2.3. Tones

Each rime table is divided into four broad rows, each row assigned to a tone, even, rising, departing, and entering. In arranging rimes in the four tones, the end consonant E of the final MVE constitutes an important criterion. Some Chinese characters do not have end consonants, for instance, the character 大 *ta* (big). The rime tables accommodating such characters have only three tones, even, rising, and departing. There are no entering tone row entries in these tables. The end consonant comes in three categories, velar /-ng/ and /-k/, lingual /-n/ and /-t/, and labial /-m/ and /-p/. In these pairs, the first is nasal and the second is oral. Rimes accommodating these characters have entries in all the four tones. Here, the even, rising, and departing tones have nasal endings, and the entering tone has oral endings. For instance, in the first rime table of Yün-ching shown in Table 9 earlier, the even, rising, and departing tones end in /-ng/, and the entering tone ends in /-k/. The same rule holds good for the lingual pair /-n/ and /-t/ and the labial pair /-m/ and /-p/.

4.2.4. Divisions

Yün-ching divides each tone into four subgroups, called *teng* 等 or divisions. Division is a phonetic criterion based on the extent to which the mouth opens at the time of pronouncing the tone. Chiang Yung 江永, an early eighteenth-century scholar, says about the four divisions in his *Yin-hsüeh pien-wei* 音学弁微 that in the group of four divisions, Division 1 is the biggest, Division 2 is the next in size, both Divisions 3 and 4 are narrower, with Division 4 being the narrowest. A Japanese scholar has interpreted this by saying that the mouth is opened to the maximum extent in the case of the Div. 1 sounds, and the opening is narrowed down in steps till Div. 4, which is the narrowest. Another scholar has interpreted Chiang Yung from the degree of opening of the two rows of teeth. When the two rows of teeth are fully open, the sound produced is /a/. But, when the two rows are touching each other, the sound produced is /i/. Reduction in the gap between the two rows of teeth introduced the medial /-i-/ in Div. 3 and Div. 4.[17] What Chiang Yung, perhaps, had in view is that when, say, /a/ is pronounced with the mouth wide open, the sound that is produced is /a/. But when

the same /a/ is produced by narrowing the mouth, it acquires a short, subordinated /i/, called medial /-i-/. Thus the sound becomes something like /ia/ with a medial /-i-/.

Identifying the four divisions accurately has been rendered very difficult because of a number of factors. The political centre has changed many times in China. Sometimes a number of centres contended for power. The language of officialdom, which held the status of a standard language, was often synonymous with the dialect spoken around the capital. Even within the same dialectal area, the language changed with the passing of time. Because of all these factors, it is very difficult to discover any consistent rule in the pronunciations of the four divisions. In many cases, differences in pronunciation between Div. 1 and Div. 2 as well as between Div. 3 and Div. 4 have vanished.

The Chinese phoneticians first made a broad grouping on the basis of medial /-i-/. The finals of some characters possessed a medial /-i-/ in them, and some didn't. As stated above, pronouncing the characters having this medial /-i-/ required a narrowing down of the opening of the mouth, a process not involved with the non-medial /-i-/ characters. They placed the characters with the medial /-i-/ in Divs. 3 and 4, and those without in Divs. 1 and 2.[18] It appears that the main vowel of Div. 1 was broader than that of Div. 2. For instance, Div. 1 had /-a-/, and Div. 2 had a sound closer to /-e-/. The difference between Div. 3 and Div. 4 is much more complex. In this case also the difference has vanished to a great extent. An eminent Japanese scholar suggested the presence of an intercalary semi-vowel like /-r-/ as one of the probable factors involved here. He suggested that this /-r-/ was present before the medial /-i-/ in some characters and not in others. Those with this /-r-/ were placed in Div. 3, and those without in Div. 4. Here, /i/ became /j/. For instance, Div. 3: 寄 *grje* and Div. 4: 祇 *gje*.[19]

While borrowing Chinese characters during the sixth and seventh centuries of the Christian era, the Japanese borrowed the Chinese readings of the characters as well. The Japanese language has retained these readings ever since under the name Sino-Japanese readings. A scrutiny of the Sino-Japanese readings suggests that there existed some sort of vocalic difference in the four divisions. A study of the twenty-third rime table shown in Table 11 here clearly reveals this point. In this table, the even tone velar category unvoiced unaspirated Div. 1 干 is read as *kan* as against Div. 2 姦 with the reading *ken*. The entering tone lingual category unvoiced unaspirated Div. 3 哲 is read as *tetsu*, in contrast to which Div. 4 窒 is read as *chitsu*. The Japanese of that time probably heard the sounds as /tet/ and /tit/ respectively.[20]

4.2.5. Initial Consonants

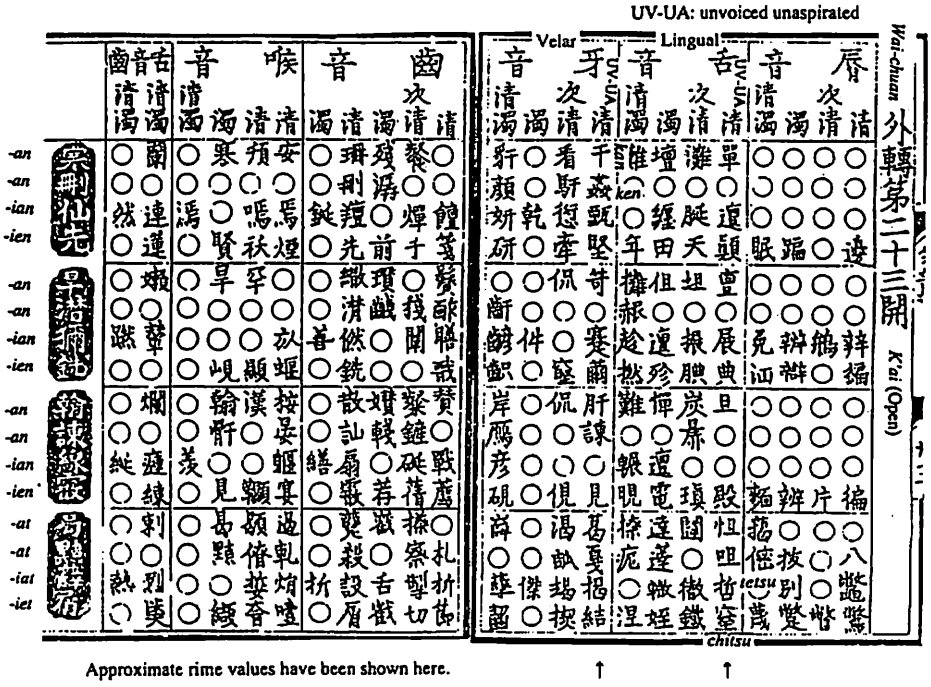
Each rime table carries the initial consonants given in Section 4.1. on the top. The consonants are given by their phonetic headings, viz., labial, lingual, velar, dental, guttural, and lingual/dental, along with their unvoiced, voiced, unaspirated, aspirated, and nasal subheadings. The Chinese characters assigned to the initial consonants are not given here.

4.2.6. Rimes

The rime tables can be divided into two types, one accommodating rimes with labial, lingual and velar consonantal endings. Here the tables usually have rimes in all the four tones, the first three with the nasal endings /-m/, /-n/, and /-ng/, and the last with their corresponding oral endings /-p/, /-t/, and /-k/. The other type accommodates the rimes ending in vowels. There are no entering tone entries in these tables.

It has been stated earlier that the 206 rimes of the *Kuang-yün* are divided into 61 rime groups. These 61 rime groups are distributed among the 43 tables of *Yün-ching*. Since there are four tones and four divisions to a tone, a rime table can accommodate up to sixteen rimes, i.e., four rime groups. Some tables accommodate one rime group. These tables have four rimes of four tones or three rimes of three tones. For instance, the first rime table shown in Table 9 accommodates one rime group and hence has four rimes in four tones. Again, some tables accommodate four rime groups with sixteen rimes, like the twenty-third rime table shown in Table 11. The rimes accommodated in a table are given on the left hand side of the table.

Table 11: Rime Table 23 of *Yün-ching*



4.2.7. Small-Rimes

It has been stated above that there are 3,874 small-rimes in *Kuang-yün*, which are distributed among the 206 rimes. The rime tables of *Yün-ching* are based almost entirely on

these small-rimes. Since the *Yün-ching* tables contain about 3,790 characters, almost all the small-rimes of *Kuang-yün* are given here. However, there are some entries in *Yün-ching* which do not exist in *Kuang-yün*. This is perhaps due to regional variations in pronunciation and the changes that took place in the language during the period intervening between *Kuang-yün* and *Yün-ching*.

The tables of *Yün-ching* are designed in the form of a grid. The point where the horizontal axis meets the vertical axis gives the actual reading at that point. For instance, in the case of the first entry 蓬 in the first rime table, shown in Table 9, the horizontal column says that the initial consonant is a labial voiced sound. So its phonetic value is /b'-/. Since the rime is /-ung/, the reading of this entry is *b'ung*.[21]

4.2.8. Rimes with Multiple Finals

A closer look at the rime tables shows certain anomalies. This point will be discussed here with the help of the first and the twenty-third rime tables of *Yün-ching* shown here in Tables 9 and 11 respectively.

First, the twenty-third rime table, shown in Table 11, will be taken up. It will be seen that each division in each tone here has an independent rime. Since there are four tones and each tone has four divisions, there are sixteen rimes in all in this table. As explained above, the pronunciations of the four divisions differ slightly from each other. So it is natural that they should form four independent rimes.

In the first rime table, shown in Table 9, each tone is represented by just one rime. For instance, the rime 東 or /-ung/ has been given against the even tone. But there are small-rimes in all the four divisions. According to Section 4.2.4 above, their pronunciations should differ slightly from each other. For instance, in the case of Div. III, there should be a medial /-i-/ present. This shows that the rime in this case ought to be /-iung/, and not /-ung/. In other words, there are at least two rimes, one without the medial /-i-/ and the other with medial /-i-/ in this tone. Simply stated, although 東 officially represents a single rime, viz., /-ung/, it actually consists of at least two rimes /-ung/ and /-iung/. In the same way, the third rime 送 represents the rimes /-ung/ and /-iung/ in departing tone, and the fourth rime 屋 represents the rimes /-uk/ and /-iuk/ in entering tone. This anomalous situation has arisen, perhaps, because there are no independent /-iung/ and /-iuk/ rimes among the 206 rimes. On the other hand, in the case of the twenty-third rime table, all the sixteen rimes are members of the 206 rimes.

A scrutiny of the *fan-ch'ieh* spellings of the small-rimes of the rime 東 /-ung/ given in *Kuang-yün* reveals that one set of characters has been used for the spellings of the finals of Div. I small-rimes, whereas another set of characters has been used for the spellings of the finals of the small-rimes of the remaining three divisions.[22] There is no confusion between the two sets. This also suggests that the rime 東 /-ung/ actually represents at least two different rimes /-ung/ and /-iung/. In short, the rule that a rime consists of a single final has been sometimes violated in the rime tables of *Yün-ching*.

5. *Yün-ching*'s relation with Other Works on Rime Tables

A number of other works on rime tables appeared during the Sung and subsequent periods. There is a basic difference between these works and *Yün-ching*. In the initial consonant table of *Yün-ching*, each consonant has been specified with the help of linguistic terms like labial, lingual, voiced, unaspirated, and so on, as well as a Chinese character. For instance, the consonant /k-/ has been defined as velar unvoiced unaspirated, and the character 見 *kien* (modern reading: *chien*) has been assigned to represent it. The rime tables in *Yün-ching* carry the linguistic terms, and not the Chinese characters. The rime tables in other works carry the Chinese characters (like 見 for the consonant /k-/) and not the linguistic terms. Another difference is that the order of initial consonants /p/, /t/, and /k/ of *Yün-ching* has been reversed in these works to /k/, /t/, and /p/, the order found in the Siddham Varṇamālā. In China, *Yün-ching* was discarded early, but other works of non-*Yün-ching* lineage remained in use as standard reference materials in phonetic studies.

6. Phonetic Information Carried by Transcribed Sanskrit Words

The sound tables provide concrete evidence that the Chinese sounds have changed with the passing of time. For instance, in the initial consonant table, the character 見 represents velar /k/. At present it is read as *chien*. This shows that the phonetic value of the initial consonant has shifted from /k/ to /ch/.

In translated Buddhist texts, many Sanskrit words and mantras were transcribed with Chinese characters. The Sanskrit-Chinese glossaries of I-ching and others also have many transcribed Sanskrit words. These transcriptions show the phonetic value of the characters of the period when the translations were made. Since translation was carried out over centuries, these transcribed words provide a clue concerning the phonetic changes taking place in China over centuries.

After the sutras were translated, handbooks giving the readings and meanings of Sanskrit Buddhist words in the sutras were prepared. Many of these were prepared by Hui-lin 慧琳 (A.D. 768-820), a native of Kashgarh. He collected all such handbooks prepared by him and others and compiled *I-ch'ieh ching yin-i* 一切経音義 between A.D. 780-810. A study of the characters used here for denoting the Siddham sounds reveals that a number of closely similar rimes, entered as separate rimes in *Ch'ieh-yün*, had merged together to form a single rime. This testifies to the remark of a T'ang period scholar named Li Fu 李涪 in his work *K'an-wu* 刊誤 that the distinction of rimes like *tung-toung* 東-冬 shown in *Ch'ieh-yün* was no longer necessary. Passages from the *Yün-ch'üan* 韻銓 of Wu Hsüen-chih 武玄之 (lived around A.D. 650) quoted by Annen in his *Shittanzō* also show that many closely similar rimes had merged into one. Older Chinese did not differentiate the /f/ sound from the /p/ sound. Hui-lin's transcription testifies that the /f/ sound had already separated from the /p/ sound during his time.[23]

Siddham makes a distinction between the dental **ta**, **tha**, **da**, **dha**, **na** sounds and the

retroflex **ṭa, ṭha, ḍa, ḍha, ṇa** sounds. The table of initials given in *Yün-ching* shows that there are two types of lingual sounds. The Buddhist texts translated during the T'ang period show that the retroflex sounds were transcribed with characters belonging to the second row of the lingual group. Again, there is also a retroflex fricative **ṣa** in Siddham. This was also transcribed with a particular set of dental /s-/ characters.[24] The retroflex fricative sound is still present in Northwest Mandarin and Hakka dialects. Thus, the transcribed Sanskrit words suggest the existence of these sounds or sounds close to these in Chinese during the T'ang period. Karlgren, however, has strong reservations about the Chinese understanding of the Siddham retroflex sounds. He suspects that these sounds were modified in Central-Asian Prakrit before transmission to China. He says that the second row lingual sounds were palatal in character. There is a piece of evidence that tend to support Karlgren's contention. *Nieh-p'an wen-tzu* 涅槃文字, a work of the middle T'ang period, gives pronunciation note for the retroflex letters **ṭa, ṭha, ḍa, ḍha**, and **ṇa** saying that these sounds are pronounced by striking the tongue against the upper palate. No such note has been given for the other letters. This note suggests that the above retroflex sounds were foreign to the Chinese. However, Karlgren maintains that the retroflex fricative /ṣ-/ sound was there in Chinese.[25]

It is generally assumed that the phonetic values of the initials given in the table for initials in rime tables by and large hold good for the characters recorded in *Yü-p'ien*, the first dictionary to give the readings of all the characters in *fan-ch'ieh* spelling. In other words, the phonetic values of the initials remained unchanged for a very long period of time in those days. The transcription of Siddham syllables in *K'ung-ch'iao-wang chou ching* 孔雀王呪経 (A.D. 520) by Kapila tends to substantiate this assumption. For instance, he has used the characters belonging to the 見: /k-/ group for transcribing the Siddham unvoiced unaspirated **k**-syllables. Similarly, he has used the 溪: /k'-/ group characters (Chi. *ch'i*, Jap. *kei*) for the unvoiced aspirated **kh**-syllables, and the 群: /g'-/ group characters (Chi. *ch'un*, Jap. *gun*) for the voiced **gh**-syllables. Thus transcriptions provide valuable data to verify the aspiration and voicing of the characters.[26]

As stated earlier, some Buddhist texts carry a section on the Siddham letters. Here each letter is transcribed with a Chinese character. Tone signs are also appended to the transcribed characters in certain cases. A study of the tones of the characters used by Hsüen-ying 玄応 and I-ching in their Varṇamālās, prepared in A.D. 661 and A.D. 692 respectively, reveals that the long vowels **ā, ī, ū** are shown by the even tone characters, and the short vowels **a, i, u** are shown by the rising tone or entering tone characters. A Japanese monk named Kūkai 空海, who studied Siddham in China during A.D. 804-806, has used the departing tone for the long vowels and the rising tone for the short vowels in his list of Siddham letters.[27] This suggests that the even tone and departing tone had a longer duration in pronunciation than the rising tone and entering tone.

References

(1) Tōdō, Akiyasu, *Chūgokugo Oninron*, Koseikan, Tokyo, 1980, p. 102,藤堂明保著 中国語音韻論.

(2) Yen Chih-t'ui, *Yen-shih chia-hsün*; Utsunomiya, Kiyoshi (Tr), *Ganshi Kakun*, Heibonsha, Tokyo, 1977, p. 536, 顔之推著 宇都宮清吉訳 顔氏家訓.

(3) Sakai, Kenichi, *Chūgoku Gogaku Kenkyū*, Kyuko Shoin, Tokyo, 1995, p. 273, 坂井健一著 中国語学研究.

(4) Ibid., p. 255.

(5) Tōdō, p. 132.

(6) Misawa, Junjirō, *Inkyō no Kenkyū*, Inkyō Kenkyūkai, Kobe, 1960, p. 190, 三沢諄治郎著 韻鏡の研究

(7) Tōdō, p. 132.
Mabuchi, Kazuo, *Nihon Ingakushi no Kenkyū*, Pt. 1, Rinsen Shoten, Tokyo, 1984, p. 558.

(8) Karlgren, Bernhard, *Compendium of Phonetics in Ancient and Archaic Chinese*, The Museum of Far Eastern Antiquities, Bulletin 22, Stockholm, 1954, p. 230.

(9) Hirayama, Hisao, "Chūko Kango no Onin", Ushijima Tokuji, et al, ed.: *Gengo*, Chūgoku Bunka Sōsho, V. 1, Taishukan Shoten, Tokyo, 1967, pp. 145-46, 平山久雄著 中古漢語の音韻、牛島徳次他編 中国文化叢書 1.

(10) Karlgren, p. 228.
Karlgren says that the vocal chord opens here suddenly, a "Knacklaut", as found in German: die · Ecke.

(11) Karlgren, p. 228.
Karlgren has assigned the symbol / · / for /ʔ/. Some Japanese works like those of Ushijima Tokuji et. al, Misawa Junjirō and Ōya Tōru have refrained from assigning any phonetic value to / ' /.

(12) Tōdō, pp. 246-47.
Ōya, Tōru, *Inkyōkō · Zuitō Onzu*, V. 1, Benseisha, Tokyo, 1978, p. 82, 大矢透著 韻鏡考・隋唐音図上.

(13) Tōdō, p. 249.
Cheng Ch'iao, "Ch'i-yin lüeh", *Teng-yü -wu-chung*, I-wen-yin-shu-kuan, Taipei, 1957, p. 7, 鄭樵著 七音略、等韻五種.

(14) Hirayama, p. 131, Tōdō: p. 248.

(15) Rai, Tsutomu, "Naiten Gaiten ni tsuite", *Chūgoku Gogaku*, V. 19, Sep. 1948, p. 77, 頼惟勤著 内転・外転について, 中国語学.

(16) Misawa, pp. 78, 421, 445.

(17) Ōya, pp. 60, 61.
Konishi, Jinichi, *Bunkyō Hifuronkō*, V. 1, Daiichi Shuppan, Kyoto, 1948, pp. 163-164, 小西甚一著 文鏡秘府論考.

(18) Karlgren, p. 221.
Tōdō, p. 208. Tōdō has used /j/ instead of /i/.

(19) Tōdō, pp. 220-221.

(20) The Japanese syllables, as a rule, ended in vowels. So the Japanese added the vowel /u/ to /tet/ and /tit/ and Japanised them into /tetu/ and /titu/. However, the sound /tu/ changed into /tsu/, and the sound /ti/ changed to /chi/. Consequently the readings became *tetsu* and *chitsu*.

(21) Since no unaspirated-aspirated distinction has been made here, some scholars say that the phonetic value of this initial is unaspirated /b-/, and the reading of this entry is *bung*.

(22) *Kuang-yün*, V.1, Taiwan Chung-hua-shu-chü, Taipei, 1967, pp. 2-7, 広韻.

In Div. 1, 紅, 東, and 公 have been used to denote the finals of the small-rimes. In Divs. 2, 3, and 4, 弓, 戎, 中, 宮, 終, and 融 express the small-rime finals. There is no common character in the two sets. Only in one case, a Div. 1 small-rime 空 has been used to denote the pronunciation of the final of a Div. 3 small-rime 豐. The *fan-ch'ieh* spelling of this character has been given as 敷空切.

(23) Tōdō, p. 104.

Hui-lin's work shows that the rimes like /-jie and /-ji/ (支－脂) and others have merged into a single rime. Li-fu says that the distinction of the rimes like /-ung/ and /-uong/ (東－冬) is no longer necessary.

(24) Ibid., pp. 196-98.

The characters belonging to division 2 of the 審 group (審、二等) were used exclusively for transcribing the retroflex /ṣ/ sound of Siddham.

(25) Karlgren, p. 226.

Annen: *Shittanzō*, TSDK, V. 84, p. 412M, 安然著 悉曇藏.

(26) Kōno, Rokurō, "Gyokuhen ni Arawaretaru *hansetsu* no Oninteki Kenkyū", *Kōno Rokurō Chosakushū*, V. 2, Heibonsha, Tokyo, 1979, pp. 30-31.

河野六郎著 玉篇に現れたる反切の音韻的研究, 河野六郎著作集 第二巻.

(27) Mizutani Shinjō, *Chūgokugoshi Kenkyū*, Sanseido, Tokyo, 1994, pp. 304-302, 水谷真成著 中国語史研究 Annen, *Shittanzō*, pp. 362-63.

Chapter 8. Siddham - Its Perception in Japan

1. Sanskrit Comes to Japan

According to Japanese records, Sanskrit was introduced into Japan in the year A.D. 607 when Ono no Imoko 小野妹子, the head of the second diplomatic mission to China, brought back some palm leaf manuscripts written in Sanskrit from China. The palm leaf manuscripts of *Prajñāpāramitā Hṛdaya Sūtra* and "Uṣṇīṣa Vijaya Dhāraṇī " preserved in the Hōryūji temple of Nara are said to be the manuscripts of Ono no Imoko.[1] Even if the records are correct, it was too early for the Japanese to show any interest in the language of these manuscripts as the Japanese themselves were struggling hard to acquire writing through the adoption of the Chinese script during this period.

About a century later, an Indian monk named Bodhisena (A.D. 704-760) came to Japan in A.D. 736 along with his Champa disciple Buttetsu 仏哲. This provided an opportunity for the Japanese to study Sanskrit directly under an Indian. He was appointed for teaching Sanskrit in a college in Nara in A.D. 750, and a record says that he taught "Buddhoṣṇīṣa Dhāraṇī", "Sahasrabhuja Dhāraṇī", "Prajñāpāramitā Dhāraṇī", and "Cakravarti Cintāmaṇi Dhāraṇī" to one Hada no Kitatsu.[2] Since the **dhāraṇīs** are basically mantras or magical formulas, which are to be recited rather than understood, it can be presumed that Bodhisena's teaching was limited to reading the Siddham letters. Bodhisena's disciple Buttetsu carried a book called *Shittanshō* 悉曇章 with him. The Japanese, in all probability, did not show much interest in the language. The time was not yet ripe.

The situation changed, however, about half a century later with the introduction of Tantric Buddhism. Two eminent monks named Saichō 最澄 (A.D. 767-822) and Kūkai 空海 (A.D. 774-834) went to China in A.D. 804 along with a diplomatic mission and returned in A.D. 805 and A.D. 806 respectively. Both of them studied Tantrism and Siddham in China. Kūkai, especially, studied Siddham under Prajñā, a monk from Kashmir. After returning home, Saichō founded the Tendai Sect which borrowed heavily from Tantric Buddhism. Kūkai, on the other hand, founded the Shingon Sect which was based almost entirely on Tantrism. The word *shingon* 真言 means mantra, a type of magical formula that the Indians traditionally believed could be used to invoke some sort of supernatural power. These two sects founded by Saichō and Kūkai played a vital role in popularising Siddham in Japan.

As in the case of China, the word Sanskrit was not known in Japan. The word *shittan* they used for the language was the Japanese way of pronouncing the Chinese word *hsi-t'an* 悉曇, which was derived from the word Siddham, the script in which the language was written in China. In Japan also, the word meant both the language and the script.

2. Early Encounters

2.1. Siddham up to Annen

Annen (A.D. 841-?) was perhaps the first Japanese to write an exhaustive treatise on

Sanskrit, *Shittanzō*. Besides giving a picture of Sanskrit as it was known to the Japanese in the ninth century, this work throws some light on the early developments regarding Sanskrit in Japan.

There is no official record of Bodhisena carrying any book with him. Annen, however, quotes a word **samyakṣabuddha** from a book of Bodhisena in *Shittanzō*, while explaining the ***visarga*** sound.[3] The title of the book is not mentioned. Buttetsu's *Shittanshō*, mentioned earlier, may have survived till the seventeenth century. An eminent Siddham scholar named Jōgen 浄厳 (A.D. 1639-1702) has quoted from it in his work.[4] Annen has discussed the contents of Buttetsu's book briefly in his *Shittanzō*. This discussion suggests that Buttetsu's book was a primer of Siddham letters. As stated earlier, Annen has given the Sanskrit Varṇamālā from a number of sources in the fifth chapter of his work. Unfortunately, the list of Buttetsu's Varṇamālā is missing here.

Annen says that Buttetsu's book starts with the words **namaḥ sarvajñaya siddhaṃ**. Next come the sixteen vowels, starting with **a**. After this, there are the twenty-five plosive consonants starting with **ka**. Then eight non-plosive consonants follow, starting with **ya**. Next comes **kṣa**. Annen has somehow given only these four letters, viz., **a, ka, ya, kṣa** at this point, skipping the others. Following **kṣa**, Annen gives the combinations of the letters. Only the first letter of each set of combinations is given here. They are thirteen in all. In the very beginning he gives just the letter **ka**, thereby suggesting symbolically the combination of **ka** and other consonants with the vowels. Next he gives the combinations of consonants among themselves, starting with **kya**, and then followed by **kra, kla, kva, kma, kña, kṇa, kna, rka, ska, krya**, and **klya**. Here, the compounds **kya, kra, kla** and others symbolically suggest the combination of the consonants with **ya, ra, la** and others.[5]

The Siddham letters at the time of Annen had minor variations. In certain cases, letters of apparently the same appearance had different readings. Annen has discussed this point by quoting letters from diverse sources. From Buttetsu, the vowels **a, ā, i, ī, u, ū, ṛ, ṝ, ḷ, ḹ, o, au, aṃ**, and **aḥ** have been quoted, leaving out **e** and **ai**. In the case of consonants, only the letters **ṅa, ña, ṇa, na, ma, cha, ḍha, pha**, and **kṣa** have been quoted.[6]

Kūkai was perhaps the first Japanese to write on Siddham letters. His *Bonji Shittan Jimo narabini Shakugi* 梵字悉曇字母并釈義 consists of just three pages in the 84th volume of *Taishō Shinshū Daizōkyō*. In this work Kūkai explains the reason for studying the Siddham letters. He says that the **dhāraṇī** mantras are effective in keeping away calamities and illnesses. In Siddham letters and words, a letter has fathomless meaning. I-ching has transmitted the mantras without translating them. Amoghavajra and other masters, who transmitted and taught the mantras, have all used the Brāhmī letters. One attains **buddha-jñāna** (Buddha's wisdom) by reading and writing the Brāhmī letters. Reciting and seeing these letters assure one of **dharma-kāya** (Buddha's body). These letters are at the root of all teachings and knowledge.[7]

Kūkai gives the Siddham letters twice in this work. In both cases he starts with the

expression **siddhaṃ rastu**, whose meaning he gives as the accomplishment of an auspicious thing. Next, he gives the vowels, followed by the consonants. His lists do not contain the letter **llaṃ**. His last letter is **kṣa**. Kūkai has added pronunciation notes to most of the letters. The pronunciation notes given with the letters can be summed up as follows. The vowels **ā**, **ī**, **ū**, **ṝ**, **ḹ**, **o**, and **au** are long sounds. The vowels **ṛ**, **ṝ**, **ḷ**, and **ḹ** are lingual sounds. In the consonants, **ka** and **ga** are long sounds, **ṅa** and **na** are nasal sounds, and **gha**, **jha**, **ḍha**, **dha**, and **bha** are aspirated sounds. Annen has quoted Kūkai's list of Siddham letters in his *Shittanzō*. In this list, **ma** has been described as a nasal sound. Kūkai has added tone signs to most of the letters. He has assigned the departing tone to the long vowels. He has added the same departing tone to the vowels **ai** and **aṃ**, and the consonants **ḍha** and **dha**.[8] This suggests that these letters were pronounced with a somewhat longer duration. From the description given above, it can be easily seen that the main object of the work was to serve as a guidebook to read the mantras.

Kūkai has discussed the addition of vocalic signs to the consonants. He gives the letter **ka** and its combinations with eleven vowels, leaving out the vocalic combinations with **ṛ**, **ṝ**, **ḷ**, and **ḹ**. He next says that the letter **ka** produces twelve letters by combining with the vowels. In this way, each consonant letter produces twelve letters. Thus, the consonant letters produce four hundred and eight letters in vocalic combination. Again, two, three, and four consonants combine among themselves, and these compound letters have their vocalic combinations. This makes 13,872 letters in all. Unfortunately, no compound letter has been given in the main text. Kūkai has also appended a meaning to each Siddham letter. For example, he gives the meaning of the first letter **a** as follows: "This letter means 'not'. It is the basis of all teachings. The first sound that comes out when one opens his mouth is this **a**. No sound can be produced without this sound **a**. Hence it is the mother of all the sounds. It is also at the root of all the letters. ... All the Buddhist and non-Buddhist teachings originate from this letter." The meaning of the letter **kha** has been given as follows: "All dharmas are same as emptiness. It is not possible to comprehend its meaning."[9] It appears that Kūkai understood the Siddham letters not as a phonetic script, but as some form of pictographic writing similar to the Chinese characters.

Hsi-t'an tzu-chi of Chih-kuang, the basic text book of Siddham already discussed in Chapter 5, served as the basic primer for the learners of Siddham in Japan as well. Kūkai brought this book with him to Japan in A.D. 806.

2.2. Siddham of Annen

A study of Annen's *Shittanzō* reveals the information on Siddham that was known to the Japanese during his time, viz., the latter half of the ninth century. Annen has quoted the Varṇamālā from different sources in his *Shittanzō*. These Varṇamālās show that the four vowels **ṛ**, **ṝ**, **ḷ**, and **ḹ** were treated in an arbitrary manner by their authors. Some contain all four of them. In some the last two are missing, and in some all the four are missing. In the

case of consonants, only a few Varṇamālās have the letter **llaṃ**. One of these is Annen's own given at the end of his work. All the Varṇamālās, however, contain the letter **kṣa**, although the Chinese transcription, in some cases, suggests the reading **llaṃ**.

In Siddham, the plosive consonants are categorised according to the place of their origin, viz., velar, palatal, retroflex, dental, and labial. In China, categorisation was accepted, but there was no standardisation as in the case of Sanskrit. The Varṇamālās quoted by Annen from various sources testify to this. For example, **ca**, **cha**, **ja**, **jha**, and **ña** have been defined as linguo-dentals in one case and dentals in another. Similarly, **ta**, **tha**, **da**, **dha**, and **na** have been defined as velars in one case and dentals in another.(10)

The unvoiced-voiced classification of consonants is very important in Siddham. The twenty-five plosive consonants **ka**, **kha**, **ga**, ..., **ba**, **bha**, **ma** are usually referred to as 5-5 letters in Japanese writings, since they come in groups of five letters arranged in five rows. Annen says that the first two letters in each row constitute the *jūsei* 柔声 sound, the next two the *dosei* 怒声 sound, and the last one the *hijūdosei* 非柔怒声 sound. These three terms can be identified positively as unvoiced, voiced, and nasal sounds respectively. Although the Chinese and Japanese writings arrange the Siddham letters in a vertical manner, in this section Annen has arranged the twenty-five plosive consonants horizontally in the traditional Indian way.(11) The Chinese works traditionally use the terms *seion* 清音 and *dakuon* 濁音 for the unvoiced and voiced sounds respectively. Annen uses these terms in the context of *in* 韻 or rime. He says that the rimes come in two types. The *sei* 清 sounds and the *daku* 濁 sounds will rime only with their own kinds. The *sei* sounds will not rime with the *daku* sounds and vice versa.(12) Unfortunately, Annen has not defined the two sounds. He has not said anything about the relation of the two sets of terms either.

Annen has also discussed the modified forms the letters assume, using a variety of terms like *hantaimon* 半体文 or *hantai* 半体 or *hanji* 半字, i.e., half-consonants or half-letters, and *manji* 満字 or full-letters. He cites the word **siddhaṃ** to explain half-letters and full-letters. The compound **ddha** is composed of **da** and **dha**. Annen says that when **da** is not added on the top of **dha**, the letter **dha** is a half-letter. When **da** is added to **dha**, a full-letter is obtained. This suggests that a half-letter meant a consonantal ligature and a full-letter meant a compound letter. The letter **kṣa** poses an interesting case. It comes in many Varṇamālās quoted by Annen. He has added a remark saying that it is a compound formed by the consonants **ka** and **ṣa**.(13)

The Siddham letters possess the dual property of syllable and alphabet. Quite often the ***halanta*** sign is added to a consonant letter to show specifically that it a pure consonant. For instance, **ka** + ***halanta*** sign → /k/, **kha** + ***halanta*** sign → /kh/. Annen has discussed the ***halanta*** sign in detail. Chih-kuang called the ***halanta*** sign *ta-ta* 怛達 or *to-ta* 多達, and considered it to be similar to *pan-t'i* (Jap. *hantai*) 半体 or consonantal ligature in his *Hsi-t'an tzu-chi*. Annen, in his discussion on ***halanta***, starts with Chih-kuang's term *hantai*, but immediately switches over to the term *hanon* 半音, and uses *hantai* no more. Thus he

differentiates ***halanta*** from ligature. He uses the term *hanji* 半字 for consonantal ligature. He uses the ***halanta*** sign with **ka** and **ta**, and adds the term *hanon* to denote that the letters turn into pure consonants /k/ and /t/. He says that such sounds come frequently in mantras. He cites a word **arolika** which has the ***halanta*** sign attached to **ka**. Next he adds the term *hanon* to show that the word should be pronounced as /arolik/. He also cites the word **sarvabuddha** and says that **ra** and **da** here are *hanon*, or in other words, they have the property of the pure consonants /r/ and /d/. At the end of his discussion Annen has given all the consonantal letters with the ***halanta*** sign attached to them.[14]

He has also discussed ***chandravindu*** and ***visarga***, called *kūten* 空点 and *nehanten* 涅槃点 respectively. He says that the *kūten* is given in the form of a small circle over the crescent. The fifth letters in the five-line arrangement are read with a *kūten* sound. The *nehanten* is given by two dots put vertically by the side of the letters.[15] In Japan, *kūten* acquired the meaning of nasal stop sound, and *nehanten* acquired the meaning of oral stop sound. The five-line arrangement here means the twenty-five plosive letters, which are traditionally arranged in five lines.

Annen has divided the consonants into three groups while explaining sandhi in his *Shittan Jūnirei* 悉曇十二例. He says as follows:

> In Brāhmī sounds there are sandhi rules. Sometimes the initial sound of the lower letter is attached to the final sound of the upper letter while reading. Again, sometimes the final sound of the upper letter is imposed on the top of the immediately following letter. The twenty-five plosive letters and nine non-plosive letters constitute three groups. ... In the plosive letters, The first group, *kōnai* 喉内, starts from inside the throat. The **ka** letters constitute this group. The second group, *zetsunai* 舌内, starts from inside the tongue. The **ca**, **ṭa**, and **ta** letters belong to this group. The third group, *shinnai* 唇内, starts from inside the lips. The **pa** letters constitute this group. The nine non-plosive letters also come in three groups. The letters **ya**, **ha**, and **kṣa**, constitute the *kōnai* group, the letters **ra**, **la**, **śa**, **ṣa**, and **sa** constitute the *zetsunai* group, and the letter **va** is a member of the *shinnai* group. ... The ***anusvāra*** and ***visarga*** sounds come in three types, guttural, lingual, and labial. The ***anusvāra*** sound **kaṃ** is read as *kau* (< *kang*), *ken* or *kem*. The ***visarga*** sound **kaḥ** is read as *kaku*, (< *kak*), *katsu*, (< *kat*), or *kafu* (< *kaf* < *kap*). They are like the (rime) finals of Chinese. These three types of sounds are common in Siddham. Again, when a letter of the above three groups (guttural, lingual, and labial) comes below, its initial sound is read with the final sound of the letter above it.[16]

After this, Annen cites three words, **saha**, **sata**, and **sabha** with their Chinese transcriptions read as *sakka* 索訶, *satta* 薩埵, and *samba* 三婆. Annen continues by saying that all these three words start with the letter **sa**. Since the following letter starts with three types of sounds (guttural, lingual, and labial), the preceding letter acquires three types of final sounds. There are notes appended to each of the three words. In the case of **saha** the note says that the initial sound of the second letter is guttural. (This is because **ha** belongs to the guttural category.) So the first letter **sa** acquires guttural /k/ as the final sound. So its reading becomes /sak/. In Japan, **ha** was read as /ka/. So the reading of the word became

/sak-ka/. In the case of **sata** the note says that the initial sound of the second letter is lingual. So the first letter **sa** acquires lingual /t/ as its final sound. Thus its reading becomes /sat/, and the reading of the word became /sat-ta/. In the case of **sabha** the note says that the initial sound of the second letter is labial. So the first letter **sa** acquires labial /m/ as its final sound. Thus its reading becomes /sam/, and the reading of the word became /sam-ba/. It should be noted that whereas the acquisition is oral in the first two cases, it is nasal in the third case. Annen has given no reason for this discrepancy. It will be seen that the Chinese transcriptions produced such readings.

The above presentation of Annen shows that *kōnai* covers the velars, *zetsunai* covers the palatals, retroflexes, and dentals, and *shinnai* covers the labials. In Japanese philological writings, *kōnai* means guttural stops, *zetsunai* means lingual stops, and *shinnai* means labial stops. The three are also known by a common name *sannai* 三内 or three stops.

Such corruption in reading especially affected the mantras used extensively in Buddhist rituals during Annen's time. Annen says that the letters **ṅa, ña, ṇa, na,** and **ma** possess *kūten*, i.e., ***anusvāra***, or a nasal stop element. (Annen seems to have used the nasal letters symbolically to mean the plosive letters.) The eight letters **ya, ra, la, va, śa, ṣa, sa,** and **ha** possess *nehanten*, i.e., ***visarga***, or an oral stop element. When the letters of these two types follow a (consonant) letter, the (consonant) letter thus followed acquires an ***anusvāra*** element or a ***visarga*** element. Annen calls this phonetic change *renjō* 連声 or sandhi, and proposes a hypothesis to classify it. The sandhi of the twenty-five plosive and the eight non-plosive consonants comes in two types, *soken* 麁顯 and *nanmitsu* 粟 密. Each of these is divided into four sub-types, *daijūgoshō* 第十五章, *katamata* 加他摩多, *jionseita* 自音成他, and *taonzokuji* 他音属自. Each of these are further subdivided into three groups, *kōnai* 喉内: guttural stop, *zetsunai* 舌内: lingual stop, and *shinnai* 唇内: labial stop.[17] Unfortunately Annen has given no examples to illustrate his hypothesis.

Annen says that a number of punctuation marks are used in Siddham at the time of writing. The mark  is used in the beginning while writing. In other words, this mark signifies the start of writing. The mark  is used after every phrase. At the end of a sentence the mark  is used. At the end of a paragraph, one of the marks ,  ,  , or  is used. Such marks come in diverse shapes.[18]

Buddhist monks from different parts of India were engaged in missionary work in China. They pronounced the Siddham letters and words in their own native fashion. Annen mentions Middle Indian, South Indian, and North Indian ways of pronouncing. In Japan, the Chinese characters were pronounced in two ways, North Chinese and South Chinese. Annen says that more North Chinese sounds and less South Chinese sounds were used for transcribing the Middle and North Indian Siddham sounds. The reverse was the case for the South Indian Siddham sounds.[19]

Annen has given some information on grammar. About declension, he writes that ***subanta*** has eight inflections. They are ***nṛdeśa, upadeśaṇa, kartṛkaraṇa, saṃpradādike,***

apādattiḥ, ***svāmibhāvādiḥ***, ***saṃnidhānādi*** , and ***āmantraṇa***. He gives the words in Siddham script along with their transcriptions in Chinese. He next continues that these have singular, dual, and plural forms. Thus, there are twenty-four inflected forms in all. Again, there are masculine, feminine, and neuter gender forms. Each of these have twenty-four forms. This makes a grand total of ninety-six forms.[20]

Next, Annen gives an example of inflection in three genders as shown in Table 12. [21] Annen also gives the declensions of the three nouns **puroṣa**, **bhagava**, and **buddha**. These are shown in Table 13. Apparently, **puroṣa** and **bhagava** are mistakes of **puruṣa** and **bhagavata** respectively. It will be seen that there is no uniformity in the declined forms of these three words.[22]

Table 12: Inflection in three genders

	Masculine	Feminine	Neuter
nṛdeśa	**bhabhana**	**bhabhanati**	**bhabhata**
upadeśaṇa	**bhabhanataṃ**	**bhabhanatima**	**bhabhatta**
kartṛkaraṇa	**bhabhanatā**	**bhabhanatya**	
saṃpradādike	**bhabhanate**	**bhabhanate**	same
apādattiḥ	**bhabhanataḥā**	**bhabhanatyaā**	as
svāmibhāvādiḥ	**bhabhanataḥa**	**bhabhanatyaaḥ**	mascu-
saṃnidhānādi	**bhabhati**	**bhabhanatyama**	line
āmantraṇa	**he** is added to the ***nṛdeśa*** form		

A careful study of Annen's *Shittanzō* also reveals that the Chinese had some difficulty in pronouncing certain Siddham sounds. For example, in the letters quoted from *Nieh-p'an wen-tzu* 涅槃文字, a work of the middle T'ang period, there is a note added to the retroflex letters **ṭa**, **ṭha**, **ḍa**, **ḍha**, and **ṇa** saying that they are pronounced by striking the tongue against the upper palate.[23] No such description has been given for other letters quoted in this work. This suggests that the Chinese probably had some difficulty in pronouncing these retroflex letters.

Table 13: Declension of three nouns

nṛdeśa	**puroṣa**	**bhagava**	**buddha**
upadeśaṇa	**puroṣaṃ**	**bhagavataṃ**	**buddhaṃ**
kartṛkaraṇa	**puroṣiṇa**	**bhagavata**	**buddhā**
saṃpradādike	**puroṣaya**	**bhaagavate**	**buddhe**
apādattiḥ	**puroṣatta**	**bhagavatta**	**buddhaa**
svāmibhāvādiḥ	**puroṣasa**	**bhagavataḥ**	**buddhaḥ**
saṃnidhānādi	**puroṣi**	**bhagavati**	**buddhi**
āmantraṇa	**he puroṣa**	**bhagavaṃ**	**he buddha**

3. Siddham After Annen

The tradition of Siddham studies initiated by Kūkai and nurtured by Annen continued more or less uninterrupted up to the Meiji Restoration, despite many ups and downs. The monks tried to understand Siddham from the materials they had at their disposal. It was a pursuit undertaken in complete isolation without any Indian being present to assist them. The way they understood Siddham will be discussed here.

3.1. Classification of Sounds

The unvoiced-voiced distinction as well as the unaspirate-aspirate distinction are very important criteria in the arrangement of Siddham letters. It appears that these areas attracted only minor attention in China. This was perhaps because the Chinese were familiar with the concept. As stated above, Annen has also referred to these classifications in his *Shittanzō* only casually. For the unvoiced and voiced sounds, Annen has used the terms *jūsei* and *dosei* in the context of Siddham and *seion* and *dakuon* in the context of Chinese. For the unaspirated and aspirated sounds he used the terms *kei* 軽 and *chō* 重. These concepts attracted much attention among latter-day scholars in Japan. One of the earliest Japanese writers to address the problem of the two sets of terms for the unvoiced and voiced sounds is Myōkaku 明覚 (A.D. 1054- ?). He quotes Annen's line mentioned earlier in his *Shittan Taitei* 悉曇大底 and says that *jūsei* is *seion* and *dosei* is *dakuon*. The first two terms mean the unvoiced sounds and the next two terms mean the voiced sounds. He then continues by saying that the letters **ga**, **gha**, **ja**, **jha**, **ḍa**, **ḍha**, **da**, **dha**, **ba**, and **bha** are *dakuon*. Here, he has added the note *chō* with the aspirated letters **gha**, **jha**, **ḍha**, **dha**, and **bha**.[24] Perhaps the best exposition on this point has been given by Jiun 慈雲 (A.D. 1718-1804). He has used tables to explain these terms in a number of his works. These tables, in a sense, sum up the information given by the earlier scholars. These tables also show the variants of the terms which were in use. Table 14 shows such a table given in *Jōjū Kichijōgi* 成就吉祥儀.[25]

Jiun has not maintained any uniformity in using the terms in his works. Whereas, in general, he has used the terms *sei* 清 and *jūsei* 柔声 for the unvoiced sounds in the above table, he has used these two terms more specifically for the unvoiced unaspirated sounds in the table of *Shittan Bunsho* 悉曇聞書. In this work he has used the terms *jisei* 次清 and *jijūsei* 次柔声 for unvoiced aspirated sounds, *daku* 濁 and *dosei* 怒声 for voiced unaspirated sounds, and *jidaku* 次濁 and *jidosei* 次怒声 for voiced aspirated sounds. He has used the two terms *fujūsei fudosei* 不柔不怒声 and *fusei fudaku* 不清不濁 for the nasal sounds. In another work entitled *Shittanshō Sōshō Kōsetsu* 悉曇章相承口説, Jiun has used the term *fukei fuchō* 不軽不重 for the nasal sounds. In this very work he has described **ka**, **kha**, **ga**, **gha**, and **ṅa** as dentals, **ca**, **cha**, **ja**, **jha**, and **ña** as velars, **ṭa**, **ṭha**, **ḍa**, **ḍha**, and **ṇa** as linguals, **ta**, **tha**, **da**, **dha**, and **na** as gutturals, and **pa**, **pha**, **ba**, **bha**, and **ma** as labials.[26]

Table 14: Jiun's terminology for Siddham letters

sei 清 (unvoiced)	**pa**	**ta**	**ṭa**	**ca**	**ka**		*kei* 軽 (unaspirated)
							jūsei 柔声 (Unvoiced)
	pha	**tha**	**ṭha**	**cha**	**kha**		*chō* 重 (aspirated)
daku 濁 (voiced)	**ba**	**da**	**ḍa**	**ja**	**ga**		*kei* (unaspirated)
							dosei 怒声 (voiced)
	bha	**dha**	**ḍha**	**jha**	**gha**		*chō* (aspirated)
	ma	**na**	**ṇa**	**ña**	**ṅa**		*bisei* 鼻声 (nasal)
							hijū hido 非柔非怒 (nasal)
	shin	*kō*	*zetsu*	*shi*	*ga*		
	唇	喉	舌	歯	牙		
	labial	guttural	lingual	dental	velar		

3.2. Alphabetic Behavior of Siddham Consonant Letters

Annen's treatment of the alphabetic property of consonant letters has been discussed earlier in this chapter. He has used a new term *hanon* with the letters having the ***halanta*** sign, in order to show that they are alphabetic. Another early Japanese scholar who paid serious attention to the alphabetic behavior of Siddham consonant letters is Myōkaku. He found an explanation of *hanon* in the *Ta-jih ching-i shih* 大日経義釈 of I-hsing 一行. It says as follows:

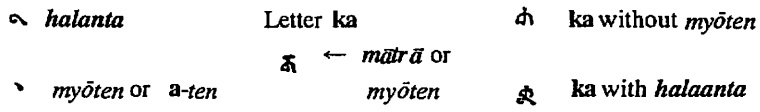
> If the letter short **a** is subtracted from the letter **ka** and then the sound short *kai* is made within the throat, the sound does not remain **ka** any more. This is because the letters **ka** and short **a** make the sound **ka**. Hence, without the letter short **a** it is not possible to produce the sound **ka**. It is a compound sound. All others (consonant letters) follow this pattern This explains the significance of **a** in the letter **ka**. If the horizontal line is not given on the top like the letter **ka**, it will not make the sound **ka**. It will lack the sound **a**. The line on the top makes the sound **a**. ... If the sound **a** is absent, or in other words, if the mouth is not opened, the sound will not be produced. The letter **a** is present in all (consonant) letters. A letter will not be formed without this **a** as its base. It is necessary to have the letter **a**. A letter will not be a letter if it does not have its head. This **a** constitutes the head. ...[27]

Myōkaku then presents his own view by saying that the letters like **ka** with the ***halanta*** sign attached to them do not have the sound **a**. The sound of the letter **ka** is *kua*. If *a* is eliminated, it immediately becomes *ku*. Myōkaku mostly uses the Chinese transcriptions in his explanation. He writes *kua* and *ku* in katakana script. The Siddham letter **a** is transcribed here with the Chinese character 阿. Myōkaku has used this character for expressing **a** in this passage. The short horizontal line coming at the top of Siddham letters is called ***mātrā*** in Sanskrit.

Another Siddham scholar Jōgen has given a good explanation of the alphabetic behavior

of Siddham consonant letters in his ***Siddhaṃ Sanmitsushō*** (***Siddhaṃ*** 三密鈔). He also tried to explain it from the angle of ***mātrā*** and ***halanta*** by quoting from diverse sources. He says: "Sometimes the thirty-four Siddham letters are written without the horizontal line on the top. They have the ***halanta*** sign below them. For example, the letters **ka** and **kha** written in this way with the ***halanta*** sign below are pronounced as *katsu* and *ketsu*." Here, Jōgen gives the letters **ka** and **kha** in Siddham script without the horizontal line or ***mātrā*** on the top, and their readings *katsu* and *ketsu* both in Chinese transcription and in the Japanese kana script. He has done it because he had no other way to express alphabetic /k/ with the Japanese script. In Japanese, the letter *tsu* was often used to denote a stop element, and this he used to convey the alphabetic nature of the letters **ka** and **kha**. Jōgen continues: "The letters with the ***halanta*** sign should be read as *hanon*. The *hanon* is pronounced like the entering tone." Jōgen then gives the thirty-four consonant letters with the ***halanta*** sign, but without the ***mātrā*** on the top. This is followed by examples like **arolik**, **phat**, and **bat**, etc. He then adds: "The horizontal line that appears on the top of the consonant letters stands for **a**. This horizontal line is omitted in the *hantaiji* (ligatures). In such a case the echo **a** vanishes. This constitutes the *hanon*. The letter **ta** represents the sound *tsu* + *a*. When this letter **ta** is written by omitting /a/ on the top and by adding the ***halanta*** sign below it, it is read simply as *tsu*."[28] Jōgen has represented this /a/ with the letter **a** without the horizontal line on the top. He has also added the note "borrowed reading" in the cases of *tsu* + *a* and *tsu*. The above argument clearly suggests that Jōgen used the terms *hanon* and *hantaiji* in an effort to explain the phenomenon that the consonant letters occasionally behave like alphabets. The readings *katsu*, *ketsu*, and *tsu* stand for the consonants /k/, /kh/, and /t/ respectively.

Fig. 4: ***Halanta*** and *myōten* or **a**-*ten* with the letter **ka**

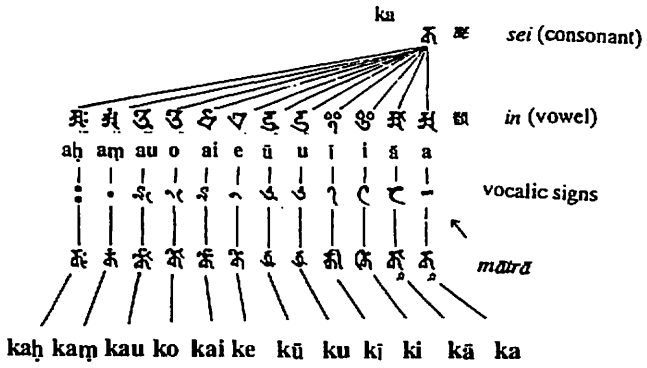


Jiun has also discussed such alphabetic usage of the Siddham letters in his *Shittan Bunsho*. Here, he uses the term *myōten* 命点 for the horizontal line or ***mātrā*** used on the top of the letter. He gives examples of letters devoid of *myōten* 命点 with the letters **ka** and **ta**. He gives two sets, one without the ***halanta*** sign and the other with the ***halanta*** sign. In both these cases the ***mātrā*** on the top is missing. Following this he says that the *myōten* is the **a**-*ten*, and that the ***halanta*** sign is added to the letters which do not have *myōten*. He gives the **a**-*ten* in the form of an extended horizontal dot. These have been shown in Fig. 4. Next he adds that the ***halanta*** sign is appended to the letters which do not take the **a**-*ten*. As a man without his head dies, **ka** and the others will not become letters without the **a**-*ten*.[29] It is to be noted that Jiun has used the term *ten* 点 here. The term *ten* usually means the vocalic signs that are added to the consonant letters in Siddham, for instance, **ka** + **i**-*ten* --> **ki**. For the

letters as such, the term *ji* 字 is used. It is clear that Jiun used **a**-*ten* to explain the syllabic character of the Siddham consonant letters. The absence of this **a**-*ten* renders the letters alphabetic.

A scrutiny of the writings on Siddham reveals that there had been a vague awareness of the alphabetic character of Siddham consonant letters since early times. The basic Siddham textbook *Hsi-t'an tzu chi* of Chih-kuang also provides evidence to this effect. After giving the twelve vowels, Chih-kuang says: "these twelve letters constitute the *yün* (Jap. *in*) 韻 or vocalic signs of the letters of the sections that will follow. If the consonant letter **ka** is combined with the twelve vowels such as **a**, **i**, **u**, we will get the twelve letters **ka**, **ki**, **ku**, etc." Chih-kuang states here that the letter **ka** has an element of **a** in it. Minus this **a**, the letter obviously becomes an alphabet. Chih-kuang has used the term *sheng* (Jap. *sei*) 声 for consonant letter. The *Shittan Hidenki* 悉曇秘伝記 of Shinpan 信範 (A.D. 1223-1287) carries a graph, shown in Fig. 5, giving the combinations of the letter **ka** with vowels. In explaining the graph, Shinpan quotes the line of Chih-kuang given above. In the graph, Shinpan designates the letter **ka** as *sei* and the vowels as *in*. Next, Shinpan gives the vocalic signs, and here he has given a horizontal line, the ***mātrā*** that comes on the top of the consonant letters, as the vocalic sign for short **a**. Finally, Shinpan explains the vocalic combinations of **ka** by saying that *sei* and *in* join together to form the twelve letters like **ka**, **ki**, and **ku**, etc.[30] Shinpan has used Siddham letters in this work, unlike Chih-kuang who used Chinese transcriptions. Thus, an overall view of *sei*, *in*, *myōten*, **a**-*ten*, *hantaiji*, *hantai*, *hanji*, and the *tatatsu* ***halanta*** sign taken together strongly suggests that there was an awareness of the alphabetic behavior of the Siddham consonant letters in China and Japan.

Fig. 5: Combination of letter **ka** with vowels



3.3. Gender

Gender is an important area in Sanskrit grammar. It comes in three types, masculine, feminine, and neuter. The Japanese were vaguely aware of gender. It did not attract much attention in Japan. As mentioned earlier, Annen discussed it while describing declension, and

illustrated it with the word **bhabhana**. Jiun just takes it up casually and says that the masculine gender and feminine gender exist. The word for man is **nara**, and the word for woman is **nārī**. He does not discuss gender in detail.[31]

3.4. Sandhi

The Japanese pronounced the Siddham compound letters and words according to their Chinese transcriptions. The transcribed readings deviated from their Siddham originals. This phenomenon occurred especially in the mantras. The Japanese thought that the deviations were caused by sandhi.

As seen earlier, Annen divided sandhi into two basic types, *soken* and *nanmitsu*, and then further subdivided each of these into four groups, *daijūgoshō*, *katamata*, *jionseita*, and *taonzokuji*. Each of these was further divided into three sub-groups, *kōnai*, *zetsunai*, and *shinnai*. Annen belonged to the Tendai Sect. The Shingon Sect had a great rivalry with the Tendai Sect, and the Shingon monks did not accept Annen's grouping. Chih-kuang discussed the combination of consonants among themselves in the eighteenth section of his *Hsi-t'an tzu chi*. He divided the combinations into fifteen types, and used the term sandhi with the second type and the sixth type. About the second type he says that there are cases when compound letters formed by different letters are read in sandhi form. About the sixth type he says that when two letters form a sandhi, there are cases where the letter appears afterward and the sound appears beforehand.[32] The monks of the Shingon Sect accepted these two types of sandhi and called them *nitai sōzoku* 二体相続 and *ittai fuzetsu* 一体不絶. respectively. These were divided into two groups each, *soken* and *nanmitsu*. Each of these was further sub-divided into three sub-groups, *kōnai*, *zetsunai*, and *shinnai*.

An important scholar to treat sandhi in more detail after Annen is Myōkaku. He says that if the letters **ka**, **kha**, **ga**, **gha**, **ha**, and **kṣa** follow a letter, the preceding letter acquires a guttural ***visarga*** sound, for instance **saha** 索賀 (/sak-ka/). Similarly, if the letters **ca**, **cha**, **ja**, **jha**, **ṭa**, **ṭha**, **ḍa**, **ḍha**, **ta**, **tha**, **da**, **dha**, **ra**, **la**, **śa**, **ṣa**, and **sa** follow a letter, the preceding letter acquires a lingual ***visarga*** sound, for instance **paca** 鉢佐 (/fas-sa/). Finally, if the letters **pa**, **pha**, **ba**, **bha**, and **va** follow a letter, the preceding letter acquires a labial ***visarga*** sound, for instance **tapa** 答波 (/taf-fa/). Similarly, the preceding letter will acquire a guttural ***anusvāra*** element if followed by **ṅa**, a lingual ***anusvāra*** element if followed by **ña**, **ṇa**, and **na**, and a labial ***anusvāra*** element if followed by **ma**.[33]

The book that was used most widely by the students of Siddham from around the seventeenth century is *Shittan Renjōshū* 悉曇連声集. It has a number of versions and is believed to have been written by a monk named Chōzen 澄禅 (A.D. ? - 1680). This book gives the picture of sandhi as it was understood by the Japanese. It discusses sandhi as interpreted by both the Tendai and Shingon schools. These will be discussed below, starting with the Shingon school, on the basis of Chōzen's work. Chōzen assumes that the twenty-five plosive consonants harbour an ***anusvāra*** element, and the eight non-plosive consonants harbour

a ***visarga*** element. The ***anusvāra*** element comes in three types, /ng/ (this evolved into /u/ in Japan) for gutturals, /n/ for linguals, and /m/ for labials. The ***visarga*** element also comes in three types, /k/ for gutturals, /t/ for linguals, and /p/ for labials. It will be seen that Chōzen's assumptions are slightly different from those of Myōkaku. Myōkaku assumed that only the nasal letters harboured the ***anusvāra*** or nasal stop elements, and the non-nasal letters (including the plosives) harboured the ***visarga*** or oral stop elements.

As stated above, the Shingon school divided sandhi into two types, *nitai sōzoku* and *ittai fuzetsu*. Chōzen describes the *nitai sōzoku* form of sandhi as follows: "When a number of letters come one after another, the upper letter is read with an ***anusvāra*** element or a ***visarga*** element. The (lower) letter is also read simultaneously. This is the *nitai sōzoku* (form of sandhi). It has been established on the basis of the Group 2 compounds (of Section 18) of Chih-kuang's *Hsi-t'an tzu chi*." About the *ittai fuzestu* form of sandhi Chōzen says that "When a number of letters come one after another, the upper letter is read with an ***anusvāra*** element or a ***visarga*** element. The (lower) letter is not read here. This is the *ittai fuzetsu* (form of sandhi). It has been established on the basis of the Group 6 compounds (of Section 18 of Chih-kuang's *Hsi-t'an tzu chi*)."[34] What Chōzen meant here is that when two adjacent letters undergo sandhi, the first letter acquires a stop element under the influence of the second letter; but while doing so, the second letter is retained in one case and discarded in the other.

Next, the Shingon school divided each of the above into two subtypes, viz., *soken* and *nanmitsu*. Chōzen says that the plosive letters harbour an ***anusvāra*** element, and the non-plosive letters harbour a ***visarga*** element. When the upper letter is read with an ***anusvāra*** element under the influence of the immediately following plosive letter, or the upper letter is read with a ***visarga*** element under the influence of the immediately following non-plosive letter, it is the case of *soken*. When the upper letter is read with a ***visarga*** element under the influence of the immediately following plosive letter, or the upper letter is read with an ***anusvāra*** element under the influence of the immediately following non-plosive letter, it is the case of *nanmitsu*. Thus *soken* means within-the-class change, and *nanmitsu* means between-the-classes change.[35]

The above four cases will be illustrated with actual examples. First, the *soken* subtype of *nitai sōzoku* sandhi will be explained with the word **padma** (lotus). It consists of three letters **pa**, **da**, and **ma**. It was transcribed as 鉢頭摩 and was accompanied by a note saying that the last two characters formed a compound. The Japanese read the three characters as *fan*, *do*, and *ma*, with *do* and *ma* representing the compound letter **dma**. The Japanese pronounced the word as *fandoma*. It will be seen that there is an additional element /n/ in this reading. Here, the second letter is **da**. It belongs to the plosive lingual group and harbours the ***anusvāra*** or nasal element /n/. The first letter **pa** acquires this /n/ under the influence of the second letter **da**. So the phonetic value of the first letter **pa** becomes /pan/. The Japanese read it as *fan*, and the reading of the word became *fandoma*.[36]

Next, the *nanmitsu* subtype of *nitai sōzoku* sandhi will be explained with the compound

letter **stra** given by Chih-kuang in Chinese transcription 悉多羅 in his *Hsi-t'an tzu chi*. This compound letter is formed by the three letters **sa**, **ta**, and **ra**. In this case, the sandhi rule applies to the combination of the first two letters **sa** and **ta**. Now, the second letter **ta** belongs to the plosive lingual group, and harbours the ***anusvāra*** element /n/. Since it is a case of *nanmitsu*, the first letter **sa** acquires not the ***anusvāra*** element /n/ but the lingual ***visarga*** element /t/ under the influence of **ta**. So the phonetic value of the first letter **sa** becomes /st/, and that of the compound letter becomes /st-tra/. This becomes the theoretical phonetic value of the compound formed by the three letters **sa**, **ta**, and **ra** under this rule. The Japanese actually pronounced this compound as *shittara*, since Japanese phonetic rules demand that a consonant should always be followed by a vowel except for gemination and nasal *n*.

The *soken* subtype of *ittai fuzetsu* sandhi will be explained with the compound **mṅka** also cited by Chih-kuang. The compound **mṅka** is composed of three letters **ma**, **ṅa**, and **ka**. Chih-kuang gives the reading of **mṅka** by the three characters 麼盎迦 with a note stating that the three letters form a compound. A scrutiny of Chih-kuang's transcription of Siddham letters shows that the first character stands for **ma**, whereas the second and the third characters together represent the compound **ṅka** formed by the letters **ṅa** and **ka**. In other words, the letter **mṅka** is a compound letter formed by the letter **ma** and the compound letter **ṅka**. The first two letters **ma** and **ṅa** are involved in sandhi here. Here, **ṅa** is the second letter. It belongs to the plosive guttural group, and harbours the ***anusvāra*** element /ṅ/. This /ṅ/ gets attached to the first letter **ma**, and the theoretical reading of the first letter **ma** becomes /mṅ/. Now, the second letter **ṅa** loses its own sound according to the sandhi rule. So the theoretical reading of the compound letter becomes /mṅ-ka/. Chih-kuang gives the sandhi reading of the compound **mṅka** with the two Chinese characters 莽迦. Here the first character 莽 stands for /mṅ/, and the Chinese read it, in all likelihood, as *mang*. The Chinese probably read this compound letter as *mang-ka*. Since the guttural nasal element in Japanese is /u/ (ng > u), the Japanese actually read this word as *mau-ka* or *mō-ka*.[37]

Finally, the *nanmitsu* subtype of *ittai fuzetsu* sandhi will be explained with the word **siddhaṃ**, which usually appears in the beginning of the works on Siddham. It is transcribed in Chinese as 悉曇. These two characters were read something like *sit* and *dam* respectively, and together produced a sound very close to the word **siddhaṃ**. This word consists of the two letters **si** (**sa** + **i**) and **ddhaṃ**, the latter being a compound of **da** + **dha** + **aṃ**. Here, sandhi involves the first two letters **si** and **da**. The second letter **da** belongs to the plosive lingual group, and harbours the ***anusvāra*** element /n/. Since it is a case of *nanmitsu*, the first letter **si** acquires not the ***anusvāra*** element /n/ but the lingual ***visarga*** element /t/ under the influence of **da**. So its phonetic value becomes /sit/. Again, since it is a case of *ittai fuzetsu* sandhi, the letter **da** vanishes. Consequently, the phonetic value of the word becomes /sit-dhaṃ/. The Japanese read this word as *shittan*.

Next, *soken* and *nanmitsu* are further divided into two groups each, *onbin* 音便 and *fuonbin* 不音便. This is a typical Japanese concept formulated to interpret the pronunciation

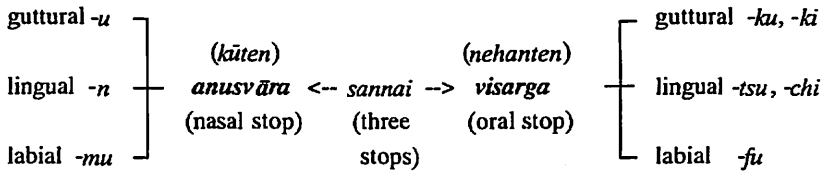
of Sanskrit words as practised in Japan. The concept is based on the Japanese kana characters which the Japanese used for transcribing the sounds of compound letters and words. It can be explained in the following way.

The Chinese characters have three nasal stop endings, /-ng/, /-n/, and /-m/. These three nasal endings have the corresponding oral stop endings /-k/, /-t/, and /-p/. In Japan, the following modifications occurred to these two types of endings in order to fit them in with the Japanese phonetic system.

Nasal stop	*-ng* --> *-u*	*-n* --> *-n* (unchanged)	*-m* --> *-mu*
Oral stop	*-k* --> *-ku, -ki*	*-t* --> *-tsu, -chi*	*-p* --> *-fu*

These are called *sannai* 三内 or three stops. The nasal stop version is called *kūten sannai* 空点三内 and the oral stop version is called the *nehanten sannai* 涅槃点三内. These have been shown graphically in Fig. 6.

Fig. 6: Three stops



The Japanese divided the Siddham letters into guttural, lingual and labial groups in order to treat them according to this *sannai* or three stops hypothesis. Table 15 shows the grouping given by Shinpan in his *Shittan Hidenki*.[38]

Table 15: Grouping of Siddham letters by Shinpan

Guttural group:	**a, ā, ka, kha, ga, gha, ṅa, ha**
Lingual group:	**i, ī, e, ai, ca, cha, ja, jha, ña, ṭa, ṭha, ḍa, ḍha, ṇa, ta, tha, da, dha, na, ra, la, śa, ṣa, sa**
Labial group:	**u, ū, o, au, pa, pha, ba, bha, ma, va**

Guttural nasal		Guttural oral		Guttural lingual	**ya**
Lingual nasal	**aṃ**	Lingual oral	**aḥ**	Guttural lingual	**kṣa**
Labial nasal		Labial oral			

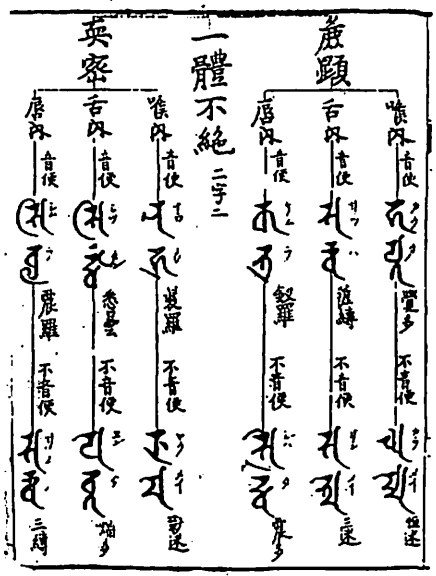
On certain occasions, the letter coming before a guttural letter acquires a guttural ***anusvāra*** or ***visarga*** element. Similarly, the letter coming before a lingual letter acquires a lingual ***anusvāra*** or ***visarga*** element, and the letter coming before a labial letter acquires a labial ***anusvāra*** or ***visarga*** element. This is called *onbin*. In other words, *onbin* implies the

phonetic change taking place within the same sound category. As against this, there are occasions when the letter coming before a guttural letter acquires a lingual or labial ***anusvāra*** or ***visarga*** element. Similarly, sometimes the letter coming before a lingual letter acquires a guttural or labial ***anusvāra*** or ***visarga*** element, and the letter coming before a labial letter acquires a guttural or lingual ***anusvāra*** or ***visarga*** element. This is called *fuonbin*. In short, *fuonbin* implies the phonetic change taking place between different sound categories. As stated above, the Siddham letters are divided into three categories, guttural, lingual, and labial, in this *onbin-fuonbin* treatment.

Shittan Renjōshū gives the whole scheme of sandhi discussed above in a tabular form. As stated earlier, sandhi has two broad divisions, *nitai sōzoku* and *ittai fuzetsu*, and separate tables are assigned to each. Figs. 7 and 8 show two such tables.[39] The examples are given here in Siddham script. The sandhi readings are given both in Chinese characters and Japanese katakana characters. Following the conventional practice, /k/, /t/, /f/, and /m/ endings of the sandhi forms are given by the Japanese katakana characters *ku*, *tsu*, *fu*, and *mu* respectively. The voiced kana characters are given in unvoiced form. Figs. 7 and 8 have been reproduced in Appendices 1 and 2 at the end of this chapter along with an explanation for the examples.

Fig. 7: *Nitai sōzoku* sandhi

Fig. 8: *Ittai fuzetsu* sandhi



The Tendai school, on the other hand, adhered to the classification proposed by Annen. Annen first divided sandhi into two types, *soken* and *nanmitsu*. The Tendai definition of the two terms is the same as that of the Shingon school described above. Next, Annen further divided these into four sub-types: *jionseita*, *taonzokuji*, *daijūgoshō*, and *katamata*. *Shittan Renjōshū* describes these four as follows. In *jionseita*, of the two letters involved in sandhi,

the first letter, called *ta* 他, acquires an ***anusvāra*** element or a ***visarga*** element under the influence of the second letter, called *ji* 自. Here, the second letter is also read. In *taonzokuji*, the meanings of *ji* and *ta* are the same as above. Of the two letters involved in sandhi, the second letter *ji* becomes the ***anusvāra*** element or the ***visarga*** element of the first letter *ta*, but loses its own sound in the process.[40] It will be seen that these two cases represent the *nitai sōzoku* and *ittai fuzetsu* respectively of the Shingon school.

Next, regarding *daijūgoshō*, Chōzen says that it is, by and large, the same as *taonzokuji*. However, the difference is that in this case just the compounds of Section 15 (of *Hsi-t'an tzu chi*) come as the second letter. In the case of *soken*, the first letter will acquire an ***anusvāra*** element. In the case of *nanmitsu*, it will acquire a ***visarga*** element.[41] This sandhi is made up of compounds where the five nasal letters **ṅa, ña, ṇa, na,** and **ma** come as the first letter. When these compound letters come as the second letter, their nasal letters, which harbour ***anusvāra*** element, will be involved in the sandhi reading. Since *soken* involves a within-the-class change, the preceding letter will acquire only the ***anusvāra*** element. Similarly, since *nanmitsu* involves a between-the-classes change, the preceding letter will acquire only the ***visarga*** element. There is no other possibility. In short, the basic fact remains that the preceding letter, in this case, acquires an ***anusvāra*** or a ***visarga*** element under the influence of the letter that follows. Consequently, it is just a special case of the *nitai sōzoku* of the Shingon school.

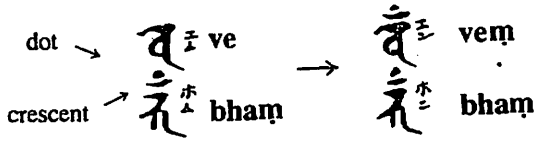
Finally, Chōzen explains *katamata* as follows. The explanation, however, is a bit complicated.

> The fourth type is *katamata*. The ***anusvāra*** element has two forms. One comes in the form of a dot, and the other in the form of a crescent-and-dot (i.e., ***candravindu***). What Annen meant is that the dot represents the vowel **aṃ**, and the crescent sign of crescent-and-dot represents the (nasal consonant) letters **ṅa, ña, ṇa, na,** and **ma**. Hence Annen made it a separate type of sandhi. The dot of the eleventh letter of the twelve vowels is taken, and the five letters **ṅa**, etc., are added below it. The dot is called *ji* and **ṅa**, etc., are called *ta*. However, in this sandhi, (contrary to the normal practice) *ji* comes first and *ta* comes next. So it is called *katamata* (i.e., adding the other vowels). Here, both *ji* and *ta* should be nasalised. For instance the word **veṃbhaṃ**, where the nasal element of **aṃ** is read with both the letters. Annen has established this sandhi on the basis of the letters of Group 9 of Section 18 of *Hsi-t'an tzu chi*. These letters come with the crescent sign.[42]

Chōzen says that Annen established this sandhi on the basis of the letters of Group 9 of Section 18 of *Hsi-t'an tzu chi*. *Hsi-t'an tzu chi* may have meant the letters with the ***chandravindu*** sign here. However, Annen has given just the crescent sign and no letter for this group in his *Shittanzō*. By "the five letters **ṅa**, etc., are added below it" Chōzen meant that the crescent sign is added below the dot. This, in effect, is the ***chandravindu*** sign. A scrutiny of the examples given by Chōzen reveals that the second letter in all the cases bears the ***chandravindu*** sign. No other type of sandhi contains such letter. In mantras, there were some words with such letters, and it is likely that the pronunciations of these letters along with the letters immediately preceding them were nasalised. Annen, perhaps, assumed that the second letter

in the spelling was the ***chandravindu*** and proposed a new type of sandhi for this. As both the letters were nasalised, Annen's followers added a nasal element, something like /m/, to both of them. It seems that in the case of the word **ve-bhaṃ**, they arrived at a phonetic value something like /vem-bham/. They read the word as *emubomu* or *embom*, reducing the letter **ve** to *e*. Fig. 9 explains the mechanism advocated by the Tendai monks. Here, the first word **vebhaṃ** has been taken from Chōzen's *katamata* sandhi table, and the second word **veṃbhaṃ** from his explanation. The ***chandravindu*** in this case has been represented by **ṃ**.

Fig. 9: The word **veṃbhaṃ**



Japanese reading: *emubomu* or *embom*

The Shingon school, however, countered Annen's contention by saying that the second letter in this case is not the ***chandravindu***, but the consonant **bha**. So it naturally supplies /m/ to the preceding letter **ve** and its phonetic value becomes /vem/. Since the second letter **bha** is also pronounced, it is just a case of *nitai sōzoku*.[43] The phonetic value of the word becomes /vem-bhaṃ/. The Japanese read it as *emubomu* or *embom*. The Tendai interpretations of *onbin*, *fuonbin*, and *sannai* are the same as those of the Shingon school.

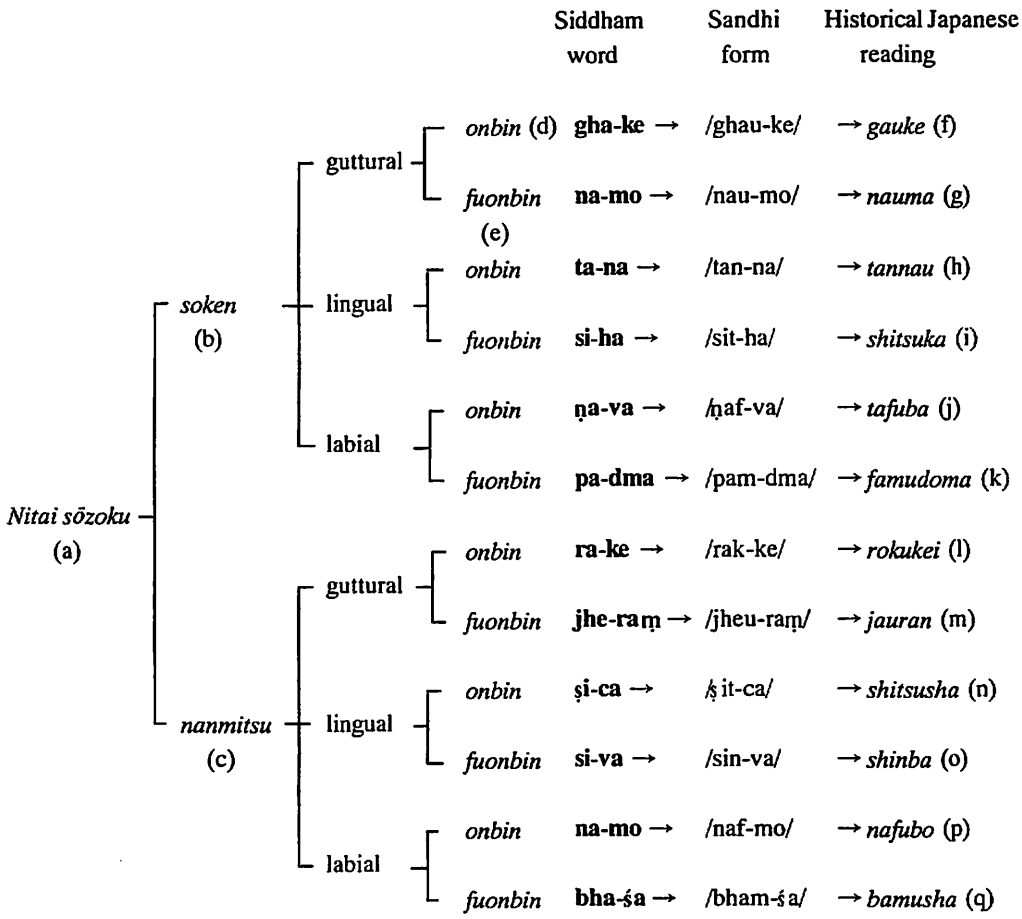
The above discussion shows that the Japanese thought sandhi to be a type of phonetic change taking place while pronouncing two adjacent letters in a compound letter or a word. The Chinese characters used for transcribing were responsible for this. The normal Sanskritic concept of sandhi involving two words was totally ignored in Japan. It was ignored in China also. One example of sandhi, vowel sandhi to be precise, however, appears as a note in the travelogue *Ta-t'ang hsi-yü chi* 大唐西域記 of Hsüan Tsang 玄奘. The note appears for the word **avalokiteśvara**. The note says that this word is an example of the *ho-tzu lien-sheng* (Jap. *gōji renjō*) 合字連声 of Sanskrit. If the word is broken up, it becomes **avalokita** and **īśvara**.[44] The term *ho-tzu lien-sheng* literally means sandhi formed by compounding letters.

Myōkaku also has quoted the above example, but has not identified it as vowel sandhi. Myōkaku has given a number of other examples that can be associated with vowel sandhi in his *Shittan Yōketsu* 悉曇要訣, but he has not associated them with *ho-tzu lien-sheng*. He says that the word **paramāṇu** means "extremely small" and is made from **parama** meaning "extremely" and **aṇu** meaning "small". The word **maheśvara** means "great god", and is made from the words **mahā** meaning "great" and **īśvara** meaning "god". The word **mahendra** means "great emperor", and is made up of **mahā** meaning "great" and **indra** meaning "emperor". The word **lokeśvara** means "god of the world", and is made up of **loka** meaning "world" and **īśvara** meaning "god".[45] Myōkaku has not even mentioned the word *renjō* or

sandhi in the context of these words.

Jiun has also discussed some cases of vowel sandhi in his *Shittan Jiki Bunsho*. Unlike Myōkaku, he uses the term *ho-tzu lien-sheng* of Hsüan Tsang, and cites **maheśvara** as an example of this sandhi. He also quotes the above example of Hsüan Tsang and says that the word **valokitaīśvara** is formed from the words **valokita** meaning "to see" and **īśvara** meaning "god".[46] But he did not probe the topic any further. Nor did he state specifically that these were the cases of vowel sandhi. Jiun has made two spelling mistakes here. The correct spellings are **avalokiteśvara** and **avalokita**.

Appendix 1: *Nitai sōzoku*



(a) In *nitai sōzoku*, a letter preceding another letter acquires an ***anusvāra*** element or a ***visarga*** element, which is not present in the spelling, under the influence of the letter that follows. The sound of the second letter is retained. This results in a change in the reading of the word, although the Siddham spelling remains unchanged.

(b) In *soken*, the phonetic change involved remains confined within the same class, that is, within the ***anusvāra*** class or within the ***visarga*** class.

(c) In *nanmitsu*, the phonetic change involved takes place between the classes. Here the phonetic change takes place from the ***anusvāra*** class to the ***visarga*** class and vice versa.

(d) In *onbin*, the phonetic change takes place within the same category. In other words, the change takes place within the guttural category or lingual category or labial category.

(e) In *fuonbin*, the phonetic change takes place between the categories. In other words, the change takes place from the guttural category to the lingual or the labial category, or from the lingual category to the guttural or the labial category, or from the labial category to the guttural or the lingual category.

The following six are the examples of *soken* or within-the class changes.

(f) In **gha-ke**, the second letter **ke** is a combination of **ka** + **e**. This **ka** belongs to the plosive guttural category. It harbours the ***anusvāra*** element /ng/, which becomes *u* in Japan. The preceding letter **gha** acquires this *u*, and the sandhi form of the word becomes /ghau-ke/. The Japanese transcribed and read the word as *gauke*.

(g) In **na-mo**, the second letter **mo** is a combination of **ma** + **o**. This **ma** belongs to the plosive labial category. This is a case of *fuonbin*. So, although it harbours the ***anusvāra*** element /m/, the preceding letter **na** takes the guttural ***anusvāra*** element /ng/, which becomes *u*. So the sandhi form becomes /nau-mo/. The Japanese transcribed and read the word as *nauma*.

(h) In **ta-na**, **na** belongs to the plosive lingual category. It harbours the ***anusvāra*** element /n/. This is acquired by the preceding letter **ta**. So its sandhi form becomes /tan-na/. The Japanese transcribed and read the word as *tannau*.

(i) In **si-ha**, **ha** belongs to the non-plosive guttural category. Although it harbours the ***visarga*** element /k/, being *fuonbin*, the preceding letter **si** takes the lingual ***visarga*** element /t/. So the sandhi form becomes /sit-ha/. The Japanese read the letter **ha** as *ka*. The Japanese transcribed the word as *sitsuka* and read it as *sikka*.

Notes: 1) The Japanese developed a convention early to add /u/ to the consonants /k/, /t/, /f/, /s/, and /m/ when they were not followed by a vowel.

2) In Japanese, the kana character *tsu* usually duplicates the /k/, /t/, /f/, /s/, and /sh/ sounds immediately following.

(j) In **ṇa-va**, **va** belongs to the non-plosive labial category. It harbours the ***visarga*** element /f/, which is acquired by the preceding letter **ṇa**. So the sandhi form becomes /ṇaf-va/. The Japanese read this **ṇa** as *ta* and **va** as *ba*. The Japanese transcribed and read the word as *tafuba*.

(k) In **pa-dma**, **dma** is a compound of **da** and **ma**. Here, **da** belongs to the plosive lingual category. Although it harbours the ***anusvāra*** element /n/, being *fuonbin*, the preceding letter **pa** takes the labial ***anusvāra*** element /m/. So the sandhi form becomes /pam-dma/. The Japanese transcribed it as *famudoma* and read it as *famdoma* or *fandoma*.

Note: The Japanese often pronounced the character *mu* as /m/ or /n/.

The following six are the examples of *nanmitsu* or between-the-classes changes.

(l) In **ra-ke**, **ke** is a combination of **ka** + **e**. This **ka** belongs to the plosive guttural category. Although it harbours the ***anusvāra*** element /ng/, the preceding letter **ra** takes the guttural ***visarga*** element /k/. So the sandhi form becomes /rak-ke/. The Japanese transcribed the word as *rokukei* and read it as *rokkei*.

(m) In **jhe-raṃ**, **ra** belongs to the non-plosive lingual category. Although it harbours the ***visarga*** element /t/, being *fuonbin*, the preceding letter **jhe** takes the guttural ***anusvāra*** element /ng/, which becomes *u*. So the sandhi form becomes /jheu-raṃ/. The Japanese transcribed and read it as *jauran*.

(n) In **ṣi-ca**, **ca** belongs to the plosive lingual category. Although it harbours the ***anusvāra*** element /n/, the preceding letter **ṣi** takes the lingual ***visarga*** element /t/. So the sandhi form becomes /ṣit-ca/. The Japanese transcribed the word as *shitsusha* and read it as *shissha*.

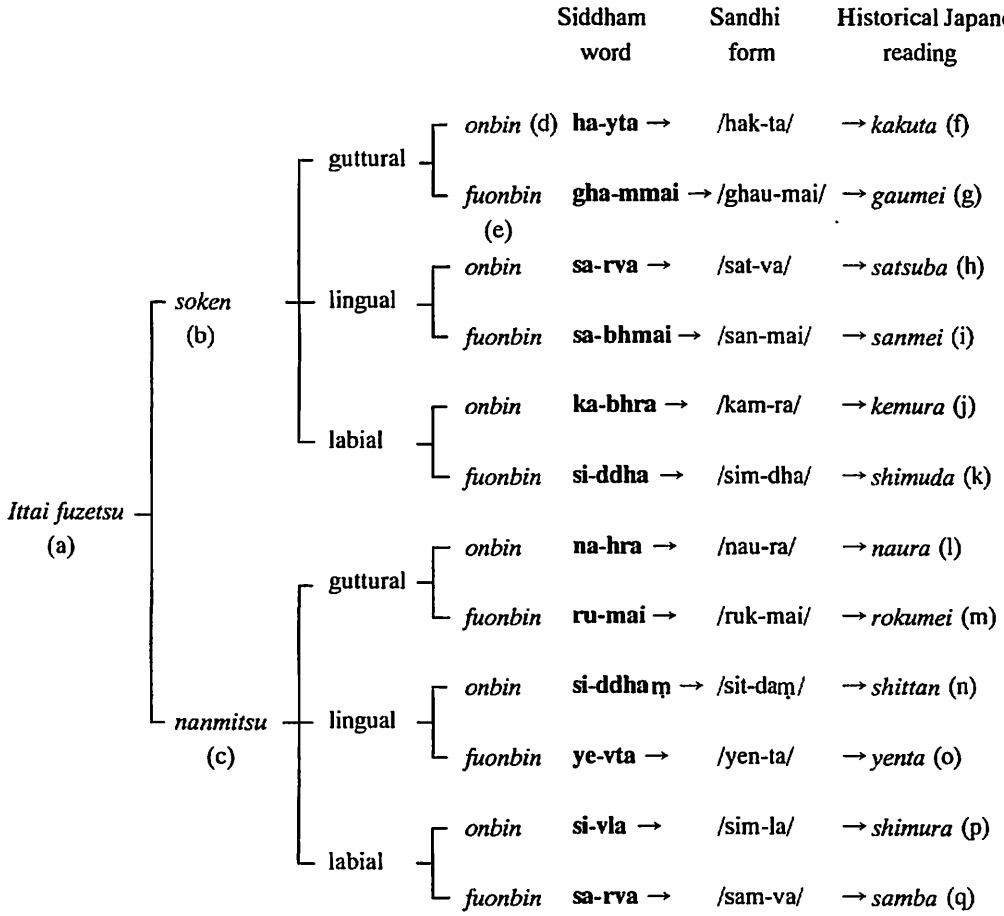
(o) In **si-va**, **va** belongs to the non-plosive labial category. Although it harbours the ***visarga*** element /f/, being *fuonbin*, the preceding letter **si** takes the lingual ***anusvāra*** element /n/. So the sandhi form becomes /sin-va/. The Japanese read **va** as *ba*. So they transcribed and read the word as *shinba* or *simba*.

(p) In **na-mo**, **mo** is a combination of **ma** + **o**. This **ma** belongs to the plosive labial category. Although it harbours the ***anusvāra*** element /m/ the preceding letter **na** takes the labial ***visarga*** element /f/. So the sandhi

form becomes /naf-mo/. The Japanese somehow transcribed **mo** as *bo*. So the transcription and reading became *nafubo*.

(q) In **bha-śa, śa** belongs to the non-plosive lingual category. Although it harbours the *visarga* element /t/, being *fuonbin*, the preceding letter **bha** takes the labial *anusvāra* element /m/. So the sandhi form becomes /bham-śa/. The Japanese transcribed the word as *bamusha* and read it as *bamsha* or *bansha*.

Appendix 2: *Ittai fuzetsu*



(a) In *ittai fuzetsu*, a letter preceding another letter acquires an ***anusvāra*** element or a ***visarga*** element, which is not present in the spelling, under the influence of the letter that follows. The sound of the second letter is discarded. This results in a change in the reading of the word, although the Siddham spelling remains unchanged.

(b) In *soken*, the phonetic change involved remains confined within the same class, that is, within the ***anusvāra*** class or within the ***visarga*** class.

(c) In *nanmitsu*, the phonetic change involved takes place between the classes. Here the phonetic change takes place from the ***anusvāra*** class to the ***visarga*** class and vice versa.

(d) In *onbin*, the phonetic change takes place within the same category. In other words, the change takes place within the guttural category or the lingual category or the labial category.

(e) In *fuonbin*, the phonetic change takes place between the categories. In other words, the change takes place from the guttural category to the lingual or the labial category, or from the lingual category to the guttural or the labial category, or from the labial category to the guttural or the lingual category.

The following six are the examples of *nanmitsu* or between-the-classes changes.

(f) In **ha-yta**, **yta** is a compound of **ya** and **ta**. Now, **ya** belongs to the non-plosive guttural category, and harbours the *visarga* element /k/. Here, **y** vanishes and /k/ gets attached to the preceding letter **ha**. So the sandhi form becomes /hak-ta/. The Japanese read **ha** as *ka*. So they transcribed and read the word as *kakuta*.

(g) In **gha-mmai**, **mmai** is a compound made up of **ma** and **mai**. Now, **ma** belongs to the plosive labial category, and harbours the *anusvāra* element /m/. This is a case of *fuonbin*. So, **m** vanishes and, instead of /m/, the guttural *anusvāra* element /ng/, which becomes *u* in Japanese, gets attached to the preceding letter **gha**. So the sandhi form becomes /ghau-mai/. The Japanese transcribed and read the word as *gaumei*.

(h) In **sa-rva**, **rva** is a compound of **ra** and **va**. Now, **va** belongs to the non-plosive lingual category, and harbours the *visarga* element /t/. Here, **r** vanishes and /t/ gets attached to the preceding letter **sa**. So the sandhi form becomes /sat-va/. The Japanese pronounced **va** as *ba*. So they transcribed and read the word as *satsuba*.

(i) In **sa-bhmai**, **bhmai** is a compound of **bha** and **mai**. Now, **bha** belongs to the plosive labial category, and harbours the *anusvāra* element /m/. Here, **bh** vanishes and, being *fuonbin*, instead of /m/, the lingual *anusvāra* element /n/ gets attached to the preceding letter **sa**. So the sandhi form becomes /san-mai/. The Japanese somehow transcribed it as *sanmei* and read it as *sanmei* or *sammei*.

(j) In **ka-bhra**, **bhra** is a compound of **bha** and **ra**. Now, **bha** belongs to the plosive labial category, and harbours the *anusvāra* element /m/. Here, **bh** vanishes and /m/ gets attached to the preceding letter **ka**. So the sandhi form becomes /kam-ra/. The Japanese somehow transcribed the **ka** here as *ke*. So the Japanese transcribed and read the word as *kemura*.

(k) In **si-ddha**, **ddha** is a compound of **da** and **dha**. Now, **da** belongs to the plosive lingual category, and harbours the *anusvāra* element /n/. Here, **d** vanishes and, being *fuonbin*, instead of /n/, the labial *anusvāra* element /m/ gets attached to the preceding letter **si**. So the sandhi form becomes /sim-dha/. The Japanese transcribed the word as *shimuda*, and, perhaps, read it as *shimda* or *shinda*.

The following six are the examples of *nanmitsu* or between-the-classes changes.

(l) In **na-hra**, **hra** is a compound of **ha** and **ra**. Now, **ha** belongs to the non-plosive guttural category, and harbours the *visarga* element /k/. Here, **h** vanishes and the guttural *anusvāra* element /ng/, which becomes *u* in Japanese, gets attached to the preceding letter **na**. So the sandhi form becomes /nau-ra/. The Japanese transcribed and read the word as *naura*.

(m) In view of the fact that the second letter in this group is a compound, the word ought to have been **ru-mmai**. Here, **mmai** is a compound of **ma** and **mai**. Now, **ma** belongs to the plosive labial category, and harbours the *anusvāra* element /m/. Here, **m** vanishes and, being *fuonbin*, instead of /m/, the guttural *visarga* element /k/ gets attached to the preceding letter **ru**. So the sandhi form becomes /ruk-mai/. The Japanese transcribed and read the word as *rokumei*.

(n) In **si-ddhaṃ**, **ddhaṃ** is a compound of **da** and **dhaṃ**. Now, **da** belongs to the plosive lingual category, and harbours the *anusvāra* element /n/. Here, **d** vanishes and the lingual *visarga* element /t/ gets attached to the preceding letter **si**. So the sandhi form becomes /sit-dhaṃ/. The Japanese transcribed it as *shitsuta* and read it as *shittan*.

(o) In **ye-vta**, **vta** is a compound of **va** and **ta**. Now, **va** belongs to the non-plosive labial category, and harbours the *visarga* element /f/. Here, **v** vanishes and, being *fuonbin*, instead of /f/, the lingual *anusvāra* element /n/ gets attached to the preceding letter **ye**. So the sandhi form becomes /yen-ta/. The Japanese transcribed and read the word as *yenta*.

(p) In **si-vla**, **vla** is a compound of **va** and **la**. Now, **va** belongs to the non-plosive labial category, and harbours the ***visarga*** element /f/. Here, **v** vanishes and the labial ***anusvāra*** element /m/ gets attached to the preceding letter **si**. So the word is pronounced as /sim-la/. The Japanese transcribed **la** with kana *ra*. So the transcription of the word became *shimura*, and it was read as such.

(q) In **sa-rva**, **rva** is a compound of **ra** and **va**. Now, **ra** belongs to the non-plosive lingual category, and harbours the ***visarga*** element /t/. Here, **r** vanishes and, being *fuonbin*, instead of /t/, the labial ***anusvāra*** element /m/ gets attached to the preceding letter **sa**. So the sandhi form becomes /sam-va/. The Japanese transcribed and read it as *samba*.

References

(1) Nakamura, Zuiryū; Ishimura, Kiei; Mitomo, Kenyō, *Bonji Jiten*, Yuzankaku, Tokyo, 1977, p. 38, 中村瑞隆、石村喜英、三友健容著 梵字辞典.

(2) Van Gulik, R.H., *Siddham*, Sarasvati Vihara Series, V. 36, International Academy of Indian Culture, Nagpur, p. 111.

(3) Annen, *Shittanzō*, TSDK, V. 84, p. 391T, 安然著 悉曇蔵.

(4) Nakamura et al., p. 40.

(5) Annen, p. 392T - M.

(6) Ibid., p. 389T - M.

(7) Kūkai, *Bonji Shittan Jimo narabini Shakugi*, TSDK, V. 84, pp. 361M - 362T, 空海著 梵字悉曇字母并釈義.

(8) Ibid., pp. 362 - 363.
Annen, p. 407B.

(9) Kūkai, p. 362.

(10) Annen, pp. 412M, 411T, 408T, 415B.
ca ... **ña** have been designated as linguo-dentals in the *Nieh-p'an wen- tzu* 涅槃文字 list. Ch'üan-chen 全真 has defined them as dentals.
ta ... **na** have been designated as dentals by Nanda and gutturals by Ch'üan-chen.

(11) Ibid., p. 384T.

(12) Ibid., p. 382T.

(13) Ibid., pp. 390B, 431B, 373M.

(14) Chih-kuang, *Hsi-t'an tzu chi*, TSDK, V. 54, p. 1189B, 智広著 悉曇字記.
Annen, p. 405M - B.

(15) Annen, pp. 389M, 414B, 416B.

(16) Annen, *Shittan Jūnirei*, TSDK, V. 84, p. 463T-M, 安然著 悉曇十二例.

(17) Annen, *Shittanzō*, pp. 366B, 416B.

(18) Ibid., p. 373B.

(19) Ibid., p. 366B.

(20) Ibid., pp. 384B - 385T.
Annen has written these terms as ***sumanta***, ***dridvese***, ***upadvesade***, ***kadrikarade***, ***sapradhadike***, ***apadhane***, ***samibhacadi***, ***sanidhanardva***, and ***amantrade***. Annen has used the same character for **de** and **ne**. He has numbered the cases, and shown the declined forms against these numbers. The corrections given here are based on J. Takakusu's footnote on page 173 of I Tsing's *A Record of the Buddhist Religion as Practised in India and the Malay Archipelago*, Munshi Manoharlal, Delhi, 1966.

(21) Ibid., p. 385T.

(22) Ibid., p. 385T - M.
(23) Ibid., p. 412M.
(24) Mabuchi, Kazuo, *Nihon Ingakushi no Kenkyū*, Pt. 1, Rinsen Shoten, Kyoto, 1984, p. 408, 馬渕和夫著 日本韻学史の研究 1.
(25) Jiun, *Jōjū Kichijōgi*, Jiun Sonja Zenshū, V. 9(1), Shibunkaku, Kyoto, 1974, p. 137, 慈雲著 成就吉祥儀
(26) Jiun, *Shittan Bunsho*, Jiun Sonja Zenshū, V. 9(1), p. 102, 慈雲著 悉曇聞書.
Jiun, *Shittanshō Sōshō Kōsetsu*, Jiun Sonja Zenshū, V. 9(1), p. 7, 慈雲著 悉曇章相承口説.
(27) Myōkaku, *Shittan Yōketsu*, TSDK, V. 84, p. 527M-B, 明覚著 悉曇要訣.
(28) Jōgen, ***Siddhaṃ*** *Sanmitsushō*, TSDK, V. 84, p. 779M - B, 浄厳著 ***Siddhaṃ*** 三密鈔.
(29) Jiun, *Shittan Bunsho*, p. 118.
(30) Chih-kuang, p. 1187M.
Shinpan, *Shittan Hidenki*, TSDK, V. 84, p. 644, 信範著 悉曇秘伝記.
(31) Jiun, *Shittan Jiki Bunsho*, Pt. 1, *Jiun Sonja Zenshū*, V. 9(1), p. 184, 慈雲著 悉曇字記聞書.
(32) Chih-kuang, p. 1187M.
(33) Myōkaku, p. 508M - B.
(34) Chōzen, *Shittan Renjōshū*, Copy in the collection of Kyoto Kogei Seni University library, p. 1.
It bears the date of Kanbun era (1661-1673). There is no publisher's name. It is a small booklet of eighteen pages, with twenty charts and one inch size characters.
(35) Ibid., p. 4.
(36) Myōkaku, pp. 510M, 512B.
Jōgen, p. 745T.
The character 鉢 was perhaps read like *pat* when the transcription was made. The early eleventh century Chinese rime dictionary *Kuang-yün* 広韻 gives its reading as 北末切, showing the */-t/* final. In Japan, the final */-t/* of *pat* was modified to *tsu* and *chi* according to the Japanese phonetic rules, and the reading of the character became *fatsu* and *fachi*. But the Japanese texts persistently give the reading of this character as *fan* in the context of **padma**. Jōgen gives this character as a transcription for the letter **pa**, and gives both *fatsu* and *fan* as its reading in kana script.
(37) Chih-kuang, *Hsi-t'an tzu chi*, V. 54, pp. 1187-89.
Jiun, *Shittan Jiki Bunsho*, V. 2, p. 301.
(38) Shinpan, *Shittan Hidenki*, p. 643.
(39) Chōzen, pp. 2-3.
(40) Ibid., pp. 5-6.
(41) Ibid., p. 7.
(42) Ibid., p. 8.
(43) Mabuchi, pp. 92-93.
(44) Hsüan-tsang, *Ta-t'ang hsi-yü chi*; Nomura, Yōshō (Tr), *Daitō Saiikiki*, KIK-WKS, Shidenbu V. 16(1), p. 143, 玄奘著 野村耀昌訳 大唐西域記.
(45) Myōkaku, pp. 546M, 550M, 557B.
(46) Jiun, *Shittan Jiki Bunsho*, pp. 145, 203.

Chapter 9. Siddham in Japanese Linguistic Studies

The study of Siddham initiated by Japanese Tantric monks for reciting the mantras correctly led, in due course of time, to the study of their own language. This chapter will be devoted to the role of Siddham in Japanese linguistic studies.

1. Origin of Kana Characters

The Japanese started borrowing script from China from around the fifth or sixth century of the Christian era, and shortly after that they started using the Chinese characters to write their own language. *Manyōshū* 万葉集, the oldest collection of Japanese poems which is supposed to have been compiled during the latter half of the eighth century, provides a very good idea of the way the Japanese employed the Chinese characters to write their language. It shows that the Japanese used the Chinese characters phonetically, ignoring their semantic values, for writing Japanese words. These phonetically used Chinese characters gave birth to the two Japanese syllabaries, katakana 片仮名 and hiragana 平仮名, in due course of time. These two script forms are also known by the common name kana 仮名.

The oldest specimens of katakana script appear in the Chinese Buddhist scriptures in the form of phonetic symbols. The Chinese Buddhist texts employed a large number of Chinese characters, and reading them was a big problem for the Buddhist monks in Japan. The monks simplified some characters by eliminating part of them, and used the truncated characters to denote the reading of the difficult characters. This simplification affected only the shape of the characters, and not their readings. In this way the monks evolved a set of phonetic letters, the katakana, for recording the readings of the difficult Chinese characters. Needless to say, the set they evolved satisfied the phonetic requirements for writing the Japanese language also. It is generally believed that the katakana script evolved during the latter part of the eighth century and the early part of the ninth century.

There was much speculation about the origin of the katakana script during the Edo period (A.D. 1603-1868). A hypothesis somehow arose that these characters were created by Kibino Makibi 吉備真備, an eminent scholar and minister, who studied in China for eighteen years from A.D. 717 to A.D. 735. Arai Hakuseki 新井白石 (A.D. 1657-1725), an eminent scholar of the eighteenth century, speculates about the origin of Japanese kana characters as follows in his *Dōbun Tsūkō* 同文通考, written during A.D. 1711-1715. He says that, by taking a cue from the consonantal ligatures of Brāhmī letters, the katakana characters were formed by omitting parts of the Chinese characters and then pronouncing these truncated characters according to their original readings. The word *kata* 片 has a meaning similar to the consonantal ligature of Siddham.[1]

Ever since the introduction of Tantric Buddhism based on esoteric mantras in the ninth century, Japanese monks, especially those of the Tendai and Shingon sects, studied Siddham in order to pronounce the mantras correctly. Even in the days of Arai Hakuseki, a large

number of Shingon and Tendai monks studied Siddham script for conducting religious rituals. So when Arai Hakuseki tried to evolve a hypothesis on the origin of katakana script, he found a ready-made model in the consonantal ligatures of Siddham. He linked the origin of katakana script with the consonantal ligatures. Fig. 10 shows some of the Chinese characters from which the katakana forms evolved.

Fig. 10: Parent Chinese characters of some kanas

阿→ア	伊→イ	宇→ウ	江→エ	於→オ
a	*i*	*u*	*e*	*o*

加→カ	幾→キ	久→ク	天→テ	呂→ロ
ka	*ki*	*ku*	*te*	*ro*

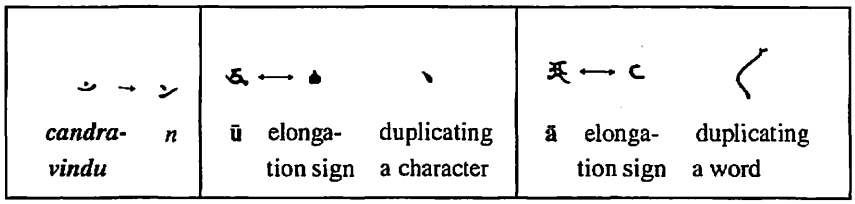
It has been stated above that the kana syllabaries evolved from the Chinese characters. However, there is one kana character which did not originate from the Chinese characters. The arrangement of the kana syllabaries does not include this kana. It is shown as a separate entity. It is the kana *n*. The independent sound /n/ is not a native Japanese sound. The Japanese started borrowing Chinese words on a large scale from around the seventh century, and many Chinese characters ended in the sound /n/. The independent sound /n/ appeared in Japanese under the impact of this large scale borrowing. Since Japanese syllables ended in vowels, the Japanese transcribed this sound with Chinese characters having the reading /mu/ or /nu/ in the early stages. After the kana syllabaries evolved, the kana characters *mu* and *nu* were used to express this sound. At some unknown point of time the kana character *n* was conceived to express this sound. The practice of using the kana characters *mu* and *nu* for expressing the sound, however, continued even after the kana *n* came into vogue. Since this was not a native sound, the arrangement of the kana syllabaries ignored it.

Arai Hakuseki advanced a hypothesis on the origin of the kana character *n* in his *Dōbun Tsūkō*. He says that both the katakana and the hiragana *n* were obtained by modifying the Siddham ***chandravindu*** sign. He also says that the dot-like sign used in Siddham for elongating the vowel **u** was borrowed in Japanese to duplicate a kana sound. Again, the curved sign used in Siddham for elongating the vowel **a** was borrowed for duplicating Japanese words.[(2)] These signs have been shown Fig. 11. It must be mentioned that the contention of Arai Hakuseki is just a hypothesis.

2. Gojūonzu Arrangement of Kana Characters

The Japanese kana syllabaries are a phonetic form of writing, and as such they express the sounds used in the Japanese language. A very important question in the process of the evolution of the kana characters is the number of sounds involved in the Japanese language. Arai Hakuseki, mentioned above, has proposed a hypothesis in this regard in his *Dōbun*

Fig. 11: Evolution of kana *n* and some Siddham signs used in Japanese



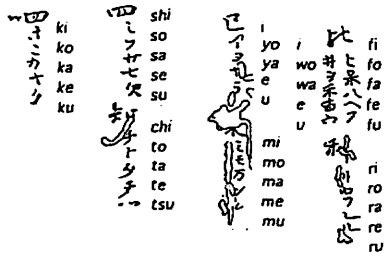
Tsūkō. He writes that under an imperial edict during the reign of Emperor Saga 嵯峨 (A.D. 809-823), Kūkai, the founder of the Tantric Shingon sect in Japan, analysed the sounds involved in Japanese on the basis of Siddham and found that there were forty-seven sounds.[3]

Once a rough idea of the number of kana characters was obtained, the question of their arrangement cropped up. The Japanese of the period had two ready-made models before them. One was the traditional Indian arrangement of the Siddham letters, and the other was the arrangement of the Chinese characters given in the Chinese primer *Ch'ien-tzu wen* 千字文, popularly known as the Ametsuchi 天地 model. The Japanese tried both the arrangements, but gave up the Ametsuchi model before long. The arrangement of kana characters prepared on the basis of the Siddham model is known as Gojūonzu 五十音図, which literally means fifty-sound chart. It is called so because the total number of vowel and consonant kana characters given in the chart comes roughly to fifty. The voiced kana characters are excluded in this arrangement. The Gojūonzu has been given in the section entitled "Important Information" at the beginning of this book.[4]

The oldest specimen of Gojūonzu appears at the end of a copy of *Kujakkyō Ongi* 孔雀経音義, a work dealing with the readings of words in the Chinese translation of *Buddhamātṛkā Mahāmayūrī Vidyārājñī Sūtra* and their meanings. The copy containing the Gojūonzu chart is believed to have been made between A.D. 1004 and A.D. 1028. It contains only eight lines, with five characters in each line as shown in Fig. 12. A comparison of this chart with the standard Gojūonzu shows that the vowels and the *na*-line are missing here. Again, the order of vowels and the sequence of consonants are also different.

Fig. 12: Oldest Gojūonzu

ki	*ko*	*ka*	*ke*	*ku*
shi	*so*	*sa*	*se*	*su*
chi	*to*	*ta*	*te*	*tsu*
i	*yo*	*ya*	*e*	*yu*
mi	*mo*	*ma*	*me*	*mu*
fi	*fo*	*fa*	*fe*	*fu*
i	*o*	*wa*	*e*	*u*
ri	*ro*	*ra*	*re*	*ru*



The kana characters were, by and large, arranged arbitrarily up to around the second half of the thirteenth century, and did not follow the standard Siddham Varṇamālā pattern. The

oldest chart with an arrangement conforming to that of the Varṇamālā bears the date A.D. 1204, although two older but undated charts are also known. This gradually became the standard Gojūonzu, and more or less got general acceptance towards the end of the thirteenth century.

Most of the Gojūonzu charts appear in Buddhist texts, mostly works on Siddham which the monks wrote for their disciples. A scrutiny of the early charts reveals that although the separate entity of the vowels and the consonants as found in the Varṇamālā was maintained, the order of the vowels and the sequence of the consonants differed from those of the Varṇamālā. Again, the order and sequence varied from chart to chart also. Even the same author would use charts with different sequences in different works. The deviation from the standard arrangement can be explained in some cases, but for others it is difficult to pinpoint the reason.

Myōkaku, the most eminent Siddham scholar of his time, has given a number of Gojūonzu charts in his works. Three of his works on Siddham and one on the phonetics of Chinese characters give these charts. The charts appearing in *Shittan Yōketsu* 悉曇要訣, his most famous work on Siddham, and in *Hanon Sahō* 反音作法, a work on the phonetics of Chinese characters, perhaps, hold some clue for the discrepancy in the arrangement of the kana symbols. *Shittan Yōketsu* lists one chart and *Hanon Sahō* lists two. The vowels come in the very beginning and their order is the same in all three charts, but the sequence of the kana consonant characters differs from chart to chart. The order of the vowels is *a, i, u, e, o* as in the present-day Gojūonzu. The three different sequences of the kana consonant characters given in the three tables are (a) *ya, ka, sa, ta, na, ra, fa, ma, wa,* (b) *ka, ya, sa, ta, na, ra, fa, ma, wa*, and (c) *ka, sa, ta, na, ra, fa, ma, wa, ya*.[5] These three arrangements differ from the standard arrangement *ka, sa, ta, na, fa, ma, ya, ra, wa* modelled after the Varṇamālā and used at present.

The Japanese tried to understand the reading of Siddham words from their Chinese transcriptions. These transcriptions quite often changed the pronunciation of Siddham words. The Indian grammatical works divide the plosive consonants into five categories, velar, palatal, retroflex, dental, and labial. As stated earlier, in Japan, these five categories of sounds were modified into three groups called *sannai* 三内 in order to accommodate the phonetic changes brought about in the readings of Siddham words due to Chinese transcriptions. The velars constituted the *kōnai* 喉内 or guttural group, the palatals, retroflexes, and dentals constituted the *zetsunai* 舌内 or lingual group, and the labials constituted the *shinnai* 唇内 or labial group. As discussed in the preceding chapter, this grouping dates back at least to Annen, who has mentioned it in his *Shittan Jūnirei* 悉曇十二例.

The Japanese scholars adopted the three groups along with the five Siddham sound categories in Japanese phonetic studies. Myōkaku arranged the kana consonant characters in his Gojūonzu charts in conformity with the three groups of Annen stated above. Thus, Myōkaku grouped the *ka* and *ya* kana characters as the gutturals, the *sa, ta, na*, and *ra* kana

characters as the linguals, and the *fa, ma*, and *wa* kana characters as the labials. It will be seen that the *ya* kana characters come at the end after the labial *wa* kana characters in the third chart. This shifting may be due to carelessness on the part of the person who copied the text, although the possibility of deliberate alteration cannot be ruled out completely. The *ka* kana characters precede the *ya* kana characters in the standard Gojūonzu arrangement. But the order has been reversed in the first chart. As will be seen in the next paragraph, this change in the order was made by Myōkaku himself. It must be mentioned here that there are many cases where different copies of the same text carry different versions of the Gojūonzu. For instance, three extant copies of *Bonji Keiongi* 梵字形音義, also written by Myōkaku, carry three different versions. The oldest copy, made in A.D. 1122, gives the kana characters in the order of *a, ka, sa, ta, na, fa, wa, ya, ra*, and *ma*. The copy of A.D. 1250 lists the order as *a, ka, sa, ta, na, ra, fa, ma, wa*, and *ya*. The most recent copy made in A.D. 1726 shows the order as it is known in the standard arrangement.(6)

Myōkaku wrote *Shittan Yōketsu* to explain the readings of Siddham words in Japan. The readings deviated from the spellings. Myōkaku tried to explain the readings with the help of Japanese words. He used the terms guttural, lingual, and labial to make his point in this work. Rather than following the Siddham arrangement mechanically, he perhaps thought it better to arrange the kana characters in a way that would facilitate the understanding of the Siddham readings. Myōkaku writes as follows just before introducing his own version of the Gojūonzu:

> In Japan there are forty-seven characters. All of them are phonetic characters. They were conceived on the basis of Siddham. As in the case of weaving, here nine characters constitute the warp, and five characters constitute the woof. They weave forty-five characters. Two more characters are added to them, making forty-seven characters in all. Of these, five characters are similar to the twelve vowels **a**, etc., of the Siddham letters, and nine characters are similar to the thirty-four letters such as **ka** and the others. The five characters are *a, i, u, e*, and *o*. The nine characters are *ya, ka, sa, ta, na, ra, fa, ma*, and *wa*. In Siddham letters, thirty-four letters form the warp and twelve letters form the woof. They weave four hundred and eight letters. ... Now, the kanas will be shown by appending the Siddham letters. This will show that the sounds are the same.(7)

Following this, Myōkaku gives the kana syllables in the sequence stated above along with their Siddham transcriptions. The sequence of kana characters clearly shows that Myōkaku did not copy the Siddham model deliberately. He arranged the kana syllables in the sequence of gutturals, linguals, and labials. The Japanese monks undoubtedly manipulated the arrangement of the kana characters, but they never tampered with the traditional arrangement of the Siddham letters.

3. Diacritical Sign for Voicing

It has been stated above that the Gojūonzu charts traditionally ignored the voiced sounds. A look at the voiced kana characters given in the Gojūonzu chart will show that they are basically the same as their unvoiced counterparts. The only difference is that they have a

diacritical voicing sign, called *dakuten* 濁点, a symbol resembling two dots, on the top right-hand side. For instance, the unvoiced kana character *ka* カ turns into voiced *ga* ガ with the addition of the voicing sign. The Chinese characters from which the unvoiced kana characters evolved have been identified by Japanese scholars long time back, and there are many old works containing the Gojūonzu written in Chinese characters. But this process of evolution did not take place for the voiced sounds. The interesting fact is that a chart showing the twenty voiced sounds in Chinese characters has been found, but these Chinese characters did not evolve into the voiced kana characters.

The fact that the Japanese opted for a diacritical sign for voicing rather than evolving separate voiced kana characters presupposes that they had a fairly good understanding of the science of phonetics. They knew that the unvoiced and the voiced sounds basically belonged to the same phonetic category. So instead of evolving voiced kana characters, they invented a voicing symbol and converted the unvoiced characters into their voiced counterparts by adding this symbol. In this way they eliminated twenty characters at one stroke.

A study of the orthographic rendering of voiced sounds in Japanese reveals some interesting facts. *Kojiki* 古事記, the oldest record of Japanese mythology and early history, compiled in A.D. 712, differentiates, as a rule, the voiced sounds from the unvoiced sounds. Here, the unvoiced sounds have been recorded with unvoiced Chinese characters, and the voiced sounds have been shown with voiced Chinese characters. This distinction broke down occasionally in *Manyōshū*, a collection of poems compiled towards the end of the eighth century. The distinction broke down completely during the ninth century. This coincided with the time when the Japanese started using the kana syllabaries. As if reflecting the breakdown of the unvoiced-voiced distinction, the voiced sounds were written with the unvoiced kana characters. A literate Japanese of the period could easily say whether a kana character should be read in its unvoiced or voiced form in a Japanese passage from the context. The need for specifying the voicing sound, however, arose from another exigency.

Tantric Buddhism laid primary emphasis on pronouncing the mantras correctly. The translators of sutras, by and large, left the mantras in their original Siddham script. However, they transcribed their readings with Chinese characters beside the Siddham letters in order to assist recitation. A scrutiny of the sutras of early ninth century Japan reveals that in the translated section of the main text many Chinese characters bear kana pronunciation notes, but no such notes appear with the Chinese transcriptions of the mantras. The reason is very simple. They were not sure of the pronunciation of the Siddham mantras, and hence were not in a position to add pronunciation notes to the transcriptions. There was nobody around to guide them. Moreover, there was no compulsion for correct pronunciation.

With the founding of the Tantric sects in the beginning of the ninth century, emphasis shifted to correct pronunciation of the mantras. The Japanese monks tried to read the mantras directly from the Siddham script to ensure correct pronunciation, but committing the letters and their pronunciations to memory was a formidable task. The Chinese transcriptions of the

Siddham letters undoubtedly proved to be a good guide, but there was no Indian to turn to in case of doubt. Around this time the unvoiced-voiced distinction in orthography was also breaking down in Japan. Chinese voiced characters were often read in an unvoiced manner. Since the mantras were totally foreign to the Japanese, specifying the voiced sounds in the transcriptions became an urgent necessity to ensure correct pronunciation. This forced the monks to add voicing pronunciation notes to the transcriptions. Thus, the first attempts at recording the voicing of sounds were made in the transcriptions of the mantras.

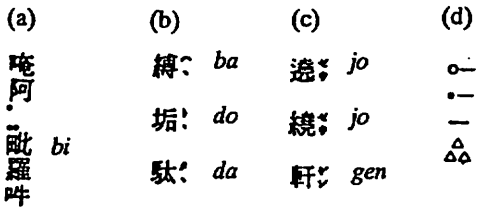
One of the earliest texts recording the diacritical sign for voicing is a copy of *Chin-kang ting lien-hua pu hsin nien-sung i-kuei* 金剛頂蓮華部心念誦儀軌. This sutra was translated by Amoghavajra in the third quarter of the eighth century and brought to Japan in A.D. 847. This sutra carries many mantras written in Siddham script along with their Chinese transcriptions. In the copy concerned, a Japanese monk added the voicing diacritical sign to the Chinese transcriptions of the mantras around A.D. 889. These Chinese characters gave the approximate readings of the Siddham letters. Since the trend was to read the voiced characters in an unvoiced manner, the voicing diacritical note told the reader that the reading should be in voiced form. The diacritical sign used here has the shape of the water radical 氵, which happens to be the radical of the character *daku* 濁 of *dakuten* also. This character was used as a technical term for the voiced sounds in Chinese phonetic writings. The noteworthy fact with this document is that the voicing diacritical sign appears only with the transcriptions of mantras and nowhere else.

The Japanese monks devised other symbols also for denoting the voiced sounds. In another copy of *Chin-kang ting lien-hua pu hsin nien-sung i-kuei* the voicing sign appears in the form of a dot added on the top left-hand of the concerned Chinese characters. Here, the readings have been given in unvoiced katakana also. It bears the date A.D. 987. A copy of the *Taizōkai Shiki* 胎藏界私記 of Kūkai made in A.D. 979 carries the voicing sign in the form of a dot below the unvoiced katakana characters. Another work, the *Myōhō Rengekyō Shakumon* 妙法蓮華経釈文 of a Japanese monk named Chūsan 仲算 (A.D. 935-976), shows voicing by adding a dot on the top right-hand corner of the unvoiced kana characters. The voicing sign has been shown in the form of two circles above the Chinese characters in a copy of the *Gomahiki* 護摩秘記 of Kūkai bearing the date A.D. 1035.[8] Fig. 13 shows the different types of voicing signs discussed above. It may be added that the voicing sign in its present form came into standard use only during the Edo period (A.D. 1603-1868).

4. Euphonic Change

Certain Japanese words undergo phonetic change, usually known as *onbin* or euphonic change in Japanese linguistics, when pronounced. The Japanese Siddham scholars designated these euphonic changes as *renjō* or sandhi from their similarity with the phonetic changes involved in Siddham compound letters and words. In the eleventh century, the Japanese Siddham scholars used Japanese words undergoing euphonic change to explain Siddham

Fig. 13: Different types of voicing signs



(a) Single dot below the character is the sign for unvoiced sound. Double dot above the character is the voicing sign.
(b) Dot below the katakana character is the voicing sign.
(c) Single dot on the right-hand top of the katakana character is the voicing sign.
(d) Other voicing signs.

sandhi. Later on, they employed the model of Siddham sandhi classification to classify the Japanese euphonic changes.

The first Japanese scholar to record Japanese euphonic changes is Myōkaku. He cited the euphonic changes in Japanese words to explain the phonetic changes undergone by Siddham words in pronunciation. In his *Shittan Yōketsu*, he dealt with the problem in the form of questions and answers. A typical question and answer set is given below.

> Question: The sound of the letter **hu** is *ko* or *ku*. So, when ***anusvāra*** is added to it, it should be pronounced as *komu* or *kumu*. Why is it pronounced as *umu*? It sounds like the ***anusvāra*** sound *mu*, or the sound *umu* formed by combining ***anusvāra*** with the letter **u**. There is no sound of the letter **ha** in the pronunciation.
>
> Answer: Indeed the letter **huṃ** should be pronounced as *komu*. Vajrabodhi also has given its reading as *komu* using two characters *ko gomu* 戸含 with the note "combine two". ... [9] (But in Japan,) this letter is read as *umu* in the **dhāraṇī**s. ... Both in China and in India, the five characters *ka, ki, ku, ke, ko* interchange with the characters *a, i, u, e, o*. So the word **siha** (lion) is transcribed with Chinese characters as 辛阿 *sima*. ... In many Buddhist texts, *ishana*, the presiding deity of **Kāmadhātu** has been called *kishana*. Here also, *i* and *ki* have been interchanged. In Japan also, we pronounce *kakite* as *kaite*, *kikite* as *kiite*, *tsukite* as *tsuite*, *nakimono* as *naimono*, *fukakusa* as *fukausa*, and *shitagutsu* as *shitauzu*. [10]

The Japanese Siddham scholars conventionally read the letter **ha** as *ka*. In pronouncing the Siddham words containing this letter or its combination, often the sound /k/ was dropped in Japan. So an explanation for the dropping of /k/ in pronunciation was the aim of the question. Myōkaku tried to explain the dropping of /k/ by citing similar examples from the day-to-day Japanese of his time. It may be mentioned that the final /u/ of *komu*, *umu*, etc., is just an addition according to the Japanese convention of vocalizing the consonantal endings.

Myōkaku has given other examples of such phonetic changes. To a question why the

letters **ra, la, ca, cha, ja, jha, śa, ṣa,** and **sa** become (geminational) *tsu* when combining with other letters, Myōkaku says that these letters are the linguo-dentals and other types of lingual sounds. So they are read with the lingual stop sound. When the letter **ña** is read as *ja* and comes before a letter, it is read as a lingual oral stop sound. In Japan also, the kana characters *ra, ri, ru, re,* and *ro* become (geminational) *tsu* when they are pronounced abruptly (*kyūsei* 急声). For example, *sarishi* is pronounced as *sasshi*, *torisaka* as *tossaka, harite* as *hatte, kirite* as *kitte,* etc.[11] Myōkaku cites these as the cases where the kana syllables *ra, ri, ru, re,* and *ro* assume the form of the lingual oral stop /t/. This /t/ appears in the form of gemination of the consonant immediately following. Myōkaku also cites examples where they assume the form of the lingual nasal stop /n/. For instance, *tarinamu* turns to *tannamu*, *arinamu* to *annamu, sarunotoki* to *sannotoki*, and so on. There are also cases when the kana *nu* turns into the lingual nasal stop /n/. For example, *shiranuchi* becomes *shiranchi, toranuchi* becomes *toranchi*, and so on.[12]

Myōkaku tried to explain here that the Siddham letters cited above turned into a lingual oral stop when they came before another letter. This transformation appeared in the form of gemination of the immediately following consonant. Unfortunately he has given only the above mentioned letters and no Siddham words. The Japanese examples given by Myōkaku here involve three types of changes. The first set of examples involves the transformation of the kana syllables *ra, ri, ru, re,* and *ro* into gemination of the consonant immediately following. The second set of examples involves the transformation of these kana syllables into the lingual nasal stop /n/. The third set involves the kana *nu* becoming the lingual nasal stop /n/.

Some of the other types of phonetic changes recorded by Myōkaku elsewhere in his work are given below.

sashite → *saite*	*nashite* → *naite*
kachite → *katte*	*kafite* → *kaute* (pronounced *kōte*)
faruame → *farusame*	*kanemono* → *kanamono*

Although Myōkaku was the first to record the Japanese euphonic changes, he did not make any attempt to systematically classify his data. An attempt was made around A.D. 1734 by a monk named Shōten 盛典 in his *Wago Renjōshū* 和語連声集 to classify the changes. This was, perhaps, the first attempt of its kind. Shōten adopted the model of *renjō* or sandhi classification of Chōzen used in Siddham studies during his days as the basis for his classification.

Shōten has made a number of assumptions that were current among the Siddham scholars of his day for his model. He assumes that the twenty-five plosive consonants **ka, kha, ga, ..., ba, bha, ma** harbour nasal stop elements in latent form. The non-plosive consonants **ya, ra, ..., sa, ha** harbour latent oral stop elements. In the case of kana syllables, the *a, ka, ya* kana characters belong to the guttural category, and they harbour the guttural stop elements. The nasal stop element is expressed by /u/ and the oral stop element is expressed by /ki/, /ku/.

The *sa, ta, na, ra* kana characters belong to the lingual category and harbour the lingual stop elements. The nasal stop element is expressed by /n/ and the oral stop element is expressed by /chi/, /tsu/. The *fa, ma, wa* kana characters belong to the labial category and harbour the lingual stop elements. The nasal stop element is expressed by /mu/ and the oral stop element is expressed by /fu/.[13]

Shōten says that sandhi comes in two types, *ittai fuzetsu* 一体不絶 and *nitai sōzoku* 二体相続. Each of these has two subdivisions, *soken* 麁顕 and *nanmitsu* 冥密. Each of these are further subdivided into *onbin* 音便 and *fuonbin* 不音便. He explains his model as follows. Two adjacent kana characters in a Japanese word sometimes undergo phonetic change. There are two types of phonetic changes. In one type, of the two kana syllables involved, the first kana is read with an additional oral or a nasal stop sound under the influence of the second kana. The second kana loses its own sound in the process. This is called the *ittai fuzetsu* phonetic change. In the other type, of the two kana syllables involved, the first kana is read with an additional oral or nasal stop sound under the influence of the second kana as in the above case. But here, the second kana character is also read simultaneously. This is called the *nitai sōzoku* phonetic change.[14] In short, the first type involves transformation of a kana syllable into an oral or a nasal stop element. As against this, the second type involves acquisition of an oral or a nasal stop element.

Next, Shōten says that of the two kana syllables involved, when the first kana character is read with a nasal stop element under the influence of the nasal stop element of the second kana character, or the first kana character is read with an oral stop element under the influence of the oral stop element of the second kana character, this is called a *soken* phonetic change. But, when the first kana character is read with an oral stop element although the second kana character harbours a nasal stop element, or the first kana character is read with a nasal stop element although the second kana character harbours an oral stop element, this is called a *nanmitsu* phonetic change. Thus, *soken* is a within-the-class change, and *nanmitsu* is a between-the-classes change.

Shōten explains *onbin* and *fuonbin* euphonic changes as follows. Sometimes, (a) the second character belongs to the guttural category, and the first character is read with a guttural nasal or oral stop element, (b) the second character belongs to the lingual category, and the first character is read with a lingual nasal or oral stop element, and (c) the second character belongs to the labial category, and the first character is read with a labial nasal or oral stop element. These are the cases of *onbin*. But sometimes, (a) the second character belongs to the guttural category, but the first character is read with a lingual or labial nasal or oral stop element, (b) the second character belongs to the lingual category, but the first character is read with a guttural or labial nasal or oral stop element, and (c) the second character belongs to the labial category, but the first character is read with a guttural or lingual nasal or oral stop element. These are the cases of *fuonbin*. In other words, *onbin* is a within-the-category change, and *fuonbin* is a between-the-categories change.[15] Shōten's model

for the *renjō* or sandhi phonetic changes has been shown in Appendix 3 at the end of this chapter, along with an explanation for the changes.

Shōten explains each and every phonetic change given in the table with the help of Siddham letters. This he does because of difficulties he experienced in explaining the changes in certain cases. A study of the changes undergone by the first word *nakunasu* and the seventh word *fukakuiru* will give some idea of the problems Shōten faced while classifying the changes. In both the cases, *ku* changes to *u*. The change is within the guttural category. He interprets the first case as a change within the nasal class, and the second case as a change from the oral class to the nasal class. Shōten explains the apparent inconsistency with the help of the Siddham letters. He assumes that the kana *ku* in the first case belongs to the family of the Siddham letter **ka**. This **ka** is a plosive guttural letter and harbours the nasal stop element /u/. So *ku* naturally changes into its nasal *u*. Since the change takes place within the nasal class, it is a case of *soken* or within-the-class change. Shōten assumes that in the second case the kana *ku* belongs to the family of the Siddham letter **ha**, which the Japanese conventionally read as *ka*. This **ha** is a non-plosive guttural letter and harbours the oral stop element /k/. The *ku* here changes to guttural nasal *u* instead of its own guttural oral /k/. Since the change takes place from the oral to the nasal class, it is a case of *nanmitsu* or between-the-classes change. The attempt to explain phonetic changes in this fashion, perhaps, prompted Shōten to explain every example with the help of Siddham letters.

Shōten based his classification of phonetic changes exclusively on the Siddham sandhi model. As against this, another attempt at classifying the phonetic changes from a totally different angle was made about fifty years later, around A.D. 1784 by Motoori Norinaga 本居宣長 in his *Kanji Sanonkō* 漢字三音考. He based his classification on the final results of the phonetic changes. In doing so, he arrived at a much simpler classification. He called it *onbin* or "euphonic changes". His *onbin* classification is the accepted model in the Japanese school grammar at present, with slight modification.

The contention of Motoori Norinaga is that Japanese words undergo four basic types of *onbin* changes. The first type is *i-onbin*, where the sound *ki* turns into *i*. Changes like *okite* → *oite* and *tsukitachi* → *tsuitachi* fall under this category. The second type is *u-onbin*. This phonetic change occurs under diverse situations. Sometimes a word acquires the sound *u*. For instance, *shikashite* → *shikaushite*. Again, sometimes the sounds *ma*, *mi*, *mu*, *fa*, *fi*, *fu*, *fe*, *fo*, *ku*, etc., change to *u*. For instance, *temizu* → *teuzu*, *omofite* → *omoute*, *yoku* → *you*, and so on. The third type is *hatsu-onbin* 撥音便 involving the nasal stop, usually represented by *n*. It appears in two forms. In one case, such sounds as *ni*, *nu*, *fa*, *fi*, *fo*, *bi*, *mi*, *mu*, *mo*, *ri*, and *ru*, etc., get transformed into *n*. Changes like *ikani* → *ikan*, *shinobite* → *shinonde*, *karina* → *kanna* represent such transformation. In the other case the word acquires the nasal stop *n*. The change *manaka* → *mannaka* is a typical case of acquisition. The fourth type is *soku-onbin* 促音便 where a consonant is geminated. In this case also, sometimes the geminate consonant is an acquired one or sometimes a sound is transformed into the geminate of the consonant

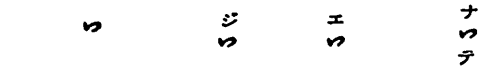
immediately following. The change *mataku* → *mattaku* is a case of geminate acquisition, and the change *narite* → *natte* is a case of geminate transformation.[16]

Motoori Norinaga was familiar with the Siddham phonetic theories which played an important role in the development of Japanese linguistic studies. As stated above, the Chinese entering tone finals /k/, /t/, and /p/ were written in kana as follows: /k/ → *ki, ku,* /t/ → *chi, tsu*, and /p/ → *fu.* Motoori was aware that this was not correct. He writes as follows:

> The foreign entering tone sounds (the syllables ending in /k/, /t/, /p/) do not possess the open finals (vowels) like the Japanese entering tone sounds *ki, ku, chi, tsu, fu.* Although they appear to be simple sounds, they are not pure simple sounds. The ending gets choked inside the throat and is barely audible. It is like the *ak* 悪 of *akki* 悪鬼, *it* 一 of *ittan* 一旦, and so on. ... If we express these entering tone sounds (the consonantal endings, like /k/ of *ak*, /t/ of *it*, etc.) with the help of the ***visarga*** sign, it will be like writing the Tōon 唐音 pronunciation of the characters 日 (sun) and 月 (moon) as *jit* and *et*. I have done this (i.e., used the ***visarga*** sign) not because I like exotic things. I have done this because there is no way to express it (such endings) with the help of kana. If we add this sign (viz., the ***visarga*** sign), everybody will know that the syllable has a choked ending.[17]

Here, Motoori Norinaga has used the ***visarga*** sign with slight modification, and not the conventional kana *tsu*, to express the sound /t/ of *jit* and *et*. He has written the two dots of the ***visarga*** horizontally and not vertically, as shown in Fig. 14. He also used this modified Siddham ***visarga*** sign as a symbol for gemination instead of the conventional kana *tsu*. He called the modified ***visarga*** sign *ten* 点 and not *ji* 字. In Siddham, the vowels come in two forms, the letter form and the vocalic sign form. The vocalic sign form is used with the consonants to obtain their vocalic combinations, like **ka** + **i** (vocalic sign) → **ki**. The vowel letters are called *ji*, a word synonymous with character. The vocalic signs are called *ten*.

Fig. 14: ***Visarga*** sign of Motoori Norinaga



Motoori's ***visarga*** sign	*jit*	*et*	*natte*

Motoori perhaps reasoned that when a consonant is geminated, say /kk/, /tt/, /pp/, etc., the first consonant of the two is not a character. Hence it is not correct to use the kana *tsu*, a character, to express a single consonant. So he decided to use the ***visarga*** sign, which was expressed by the Siddham scholars with the entering tone endings /-k/, /-t/, and /-p/ of the Chinese characters. Being familiar with Siddham phonetic theories, Motoori was well aware of the importance of Siddham in phonetic studies. In his *Kanji Sanonkō*, he has devoted a section to Siddham phonetics. In it he states that in Siddham, the sounds like the Chinese entering tone endings are called the ***visarga*** sounds. In expressing such sounds in Siddham,

two dots are added beside the letters. These two dots are called *nehanten* or ***visarga***. In this section he further states that Siddham holds the clue for knowing the old sounds of Chinese characters. So Siddham is usually employed in discussing the old Chinese sounds. A knowledge of Siddham is a must for those who want to study the science of phonetics.[18]

Motoori had some familiarity with the sandhi or *renjō* hypothesis of Siddham studies. He says that in Siddham, there are five letters **ṅa, ña, ṇa, na,** and **ma**. They belong to the plosive letters. At the time of *renjō*, if these (plosive) letters precede another letter, this upper letter acquires a nasal sound even if it does not possess the ***anusvāra*** sign. This phenomenon happens at the time of forming compound letters out of two, three, four or five letters. Similarly, if the eight (non-plosive) letters **ya, ra, la, va, śa, ṣa, sa,** and **ha** precede another letter, this upper letter acquires an oral stop sound even if it does not possess the ***visarga*** sign. These two types of changes are known as the *renjō* of plosive letters and non-plosive letters.[19] Motoori has also employed the *sannai* or "three stops" hypothesis of Siddham studies in his explanation. He states as follows:

> The Brāhmī letters have three types of ***anusvāra*** or nasal stop sounds, viz., guttural, lingual, and labial. Of the Siddham sounds transcribed in the Buddhist texts, those transcribed with characters like 仰 *gang*, 講 *kang*, etc., (i.e., those ending in /ng/) are called guttural nasal stop sounds, those transcribed with characters like 安 *an*, 見 *ken*, etc., (i.e., those ending in /n/) are called lingual nasal stop sounds, and those transcribed with characters like 厳 *gom*, 劍 *kem*, etc., (i.e., those ending in /m/) are called labial nasal stop sounds. ... The ***visarga*** or oral stop sounds also come in three types, guttural, lingual, and labial. Of the Siddham sounds transcribed in the Buddhist texts, those transcribed with characters like 悪 *ak*, 索 *sak*, etc., (i.e., those ending in /k/) are called guttural oral stop sounds, those transcribed with characters like 悉 *sit*, 壹 *it*, etc., (i.e., those ending in /t/) are called lingual oral stop sounds, and those transcribed with characters like 濕 *sip*, 澁 *jip*, etc., (i.e., those ending in /p/) are called labial oral stop sounds. These three types correspond to the entering tone finals. The Chinese characters whose endings turn into *ki* and *ku* in Japanese are called guttural oral stop characters, those whose endings turn into *tsu* and *chi* are called lingual oral stop characters, and those whose endings turn into *fu* are called labial oral stop characters.[20]

5. Describing the Kana Sounds

There is a description of the mechanism involved in production of the sounds represented by the kana characters in a work called *Goin Shidai* 五韻次第. Although the book carries the name of Ryōgen 良源, a monk of the tenth century, as its author, it is generally believed to be a work of the thirteenth century. Here, the first kana syllable of each group has been given in Chinese transcription. The kana sounds are described here as follows.

> The *a* sounds are produced from the throat. ... The other sounds are produced from the lips, tongue, molars, and teeth. The *ka* sounds are produced from the molars. The *wa* sounds are produced by moving the side of the mouth a little. The *sa* sounds are produced from the teeth. The *ya* sounds are produced by moving the jaw a little. The *fa* sounds are produced by putting the lips together and releasing the breath abruptly. The *ma* sounds are produced by putting the lips together a little and

releasing the breath gently. The *ra* sounds are produced by rolling the tongue. The *ta* sounds are produced by putting the tongue against the palate and then releasing the breath. The *na* sounds are produced by putting the tongue against the palate lightly and then releasing the breath through the nose.[21]

The work also carries a table stating that the *a* kana syllables are guttural sounds, the *ka* and *wa* kana syllables are velar sounds, the *sa* and *ya* kana syllables are dental sounds, the *fa* and *ma* kana syllables are labial sounds, and the *ta, ra*, and *na* kana syllables are lingual sounds.

It is generally believed that the present-day Japanese *ha* sounds evolved from archaic *pa* sounds via *fa* sounds. The sixteenth century Jesuit missionaries and the Dutch visitors up to the nineteenth century have recorded the *ha* sounds as *fa* sounds. The description of pronunciation of the *fa* sounds given above also suggests that the sounds were at least at an intermediate stage between the archaic *pa* sounds and the *fa* sounds, if not purely *pa* sounds, at that point in time. Again, the description of the *sa* sounds, and the grouping of these sounds together with the *ya* sounds as dental sounds suggest that the phonetic value of the *sa* sounds was closer to /ch/ or /ts/ in those days.

Waji Seiranshō 和字正濫鈔, written by Keichū 契沖 (A.D. 1640-1701) around A.D. 1693, also includes a description of how to pronounce the kana characters. He initiates his discussion with the Siddham letters. He says as follows:

In Siddham there are twelve vowels. Seen in the light of Japanese, these can be condensed into the five vowels *a, i, u, e*, and *o*. Next, there are the thirty-five consonants. By eliminating the homophonic and the voiced consonants their number comes down to nine, viz., *ka, sa, ta, na, fa, ma, ya, ra*, and *wa*. The five vowels are the guttural sounds. The first sound that comes out as the mouth is opened is *a*. It is always present inside the throat. The sound *a* gets transformed into *i* when the breath touches the tongue. This is the first transformation of the sound *a*. The sound *a* gets transformed into *u* when the breath touches the lips. The sound *e* is produced from the sound *i*. It is the weakened form of *i*. Here also the breath touches the tongue. The sound *o* is produced from the sound *u*. It is the weakened form of *u*. Here also the breath touches the lips. Thus, both *e* and *o* are produced from the sound *a*. The *ka* sounds are produced from a part of the throat near the back. Although they belong to the guttural category, they touch the molars. So they are also called the velars. The *sa, ta* and *na* sounds are the lingual sounds. The *sa* sounds touch the tip of the tongue. They also touch the teeth. So they are also called the dentals. The *ta* sounds are produced by scratching the middle of the tongue against the upper jaw. The *na* sounds are produced by scratching the tip of the tongue against the upper jaw. They are also produced from the nose. So the **dhāraṇīs** carry a note that they are the nasal sounds. Both the *fa* and *ma* sounds are the labial sounds. The *fa* sounds are lighter and the breath touches the inner side of the lips. The *ma* sounds are heavier and the breath touches the outer side of the lips. Thus the seven types of sounds described above are grouped into the guttural, lingual, and labial categories. Such grouping is done in the *sannai* or three stops hypothesis also. The *ya* sounds are gutturo-lingual in character. The *ra* sounds are just the linguals. Here the tongue is rolled up and the upper jaw is scratched more strongly than the *ta* and *na* sounds. The *wa* sounds are gutturo-labial in character. Here the breath touches the inner side of the lips very lightly when compared with the *fa*

sounds. The three sounds *ya, ra,* and *wa* are placed in the guttural, dental, and labial categories respectively.[22]

A comparison of Keichū's description of the *fa* sounds with that given in *Goin Shidai* reveals that the sounds had changed to a certain extent in the intervening period. He does not mention the two lips touching each other in his description.

Philological evidence shows that the sound *fa* coming in the non-initial position of a word sometimes changed into the sound *wa* during the eleventh century.[23] Myōkaku has recorded such a change in his *Shittan Yōketsu*. He says that the literal reading of the Chinese transcription 率堵波 of the Siddham word **stupa** (pagoda) is *sotofa*, but in Japan it is usually read as *sotowa*. In Japan, the words "one" and "two" are called *fitotsufa* and *futatsufa*. They are also called *fitotsuwa* and *futatsuwa*.[24] Myōkaku has written these words with katakana characters. This record attests the occasional change of the sound *fa* into *wa*.

6. Keichū's New Japanese Characters

Keichū proposed a new form of script for writing the Japanese language in his *Waji Seiranshō*, mentioned above. It was an academic exercise which, perhaps, no other Japanese ever tried. He designed his script on the basis of Siddham. The concept he described can be summed up as follows. In Siddham writing, the vowels are abbreviated into signs when they are added to the consonants. These vocalic signs are something like the water radical of the Chinese characters. Take for instance the letter **ka**. When **i** is added to it, it becomes **ki**, when **u** is added it becomes **ku**, when **e** is added it becomes **ke**, and when **o** is added it becomes **ko**. ... The vocalic signs behave like the rimes of the Chinese characters. New characters can be formed in the same manner for the other kana syllables *sa, ta, na, fa, ma, ya, ra*, and *wa*. Thus, the nine sets of kana syllables will have four forms each. So there will be thirty-six of them. The total number will come to fifty.[25]

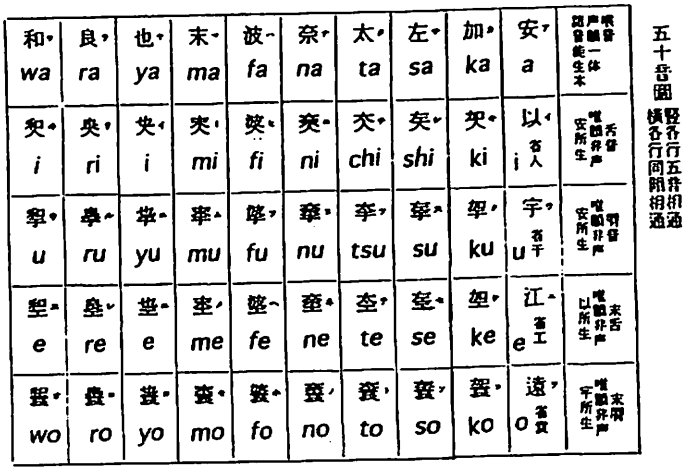
Fig. 15: Vocalic signs of Keichū

以 → 人　　宇 → 于　　江 → 工　　遠 → 袁
i　　*u*　　*e*　　*o*

As stated above, Keichū designed his kana characters on the Siddham principle of forming vocalic combinations of the consonants. In Siddham, all the vowels combine with the consonants, except for the first vowel, the short **a**. Instead of adding the vowels as such to the consonants, they are modified into signs in such combinations. In China, these vocalic signs were called *ten*, as against the term *ji* used for the vowel letters. In his proposed kana syllabary, Keichū selected five Chinese characters for the five vowels *a, i, u, e,* and *o*, and nine Chinese characters for the nine consonant kana syllables *ka, sa, ta, na, fa, ma, ya, ra,* and *wa*. Next, he modified the four *i, u, e, o* vowel characters into signs, as in the case of

Siddham. This he did by eliminating a part of the four characters. These four signs have been shown in Fig. 15. Keichū next added these signs to the nine Chinese characters to get the other kana symbols. For example, in Siddham the letter **ki** is obtained by adding the vocalic **i**-sign to the consonant **ka**. Keichū designed the kana *ki* exactly in the same way by adding the sign for the vowel *i* to the kana *ka*. Keichū designed fifty kana characters in this way and arranged them in the form of a Gojūonzu. After compiling the chart, Keichū writes that he prepared the chart on the basis of Siddham.(26) Table 16 shows Keichū's Gojūonzu of the new kana characters made in this way.

Table 16: Keichū's Gojūonzu with new kana characters



7. Concept of Alphabet

Myōkaku's understanding of the alphabetic character of the Siddham letters has been discussed in the preceding chapter. He used the u-syllabic form of the kanas to express the alphabetic property of the consonant letters. For instance, he transcribed the Siddham **ka** with kana script as *kua*, and said that by dropping /a/ the sound became *ku*. By dropping /a/ from the letter **ka** the alphabetic letter /k/ is obtained. In short, Myōkaku used the kana *ku* to express the alphabetic letter /k/.

Myōkaku employed a similar method to express the alphabetic values of the consonant kana syllables in his work *Hanon Sahō*. He expressed the value of the kana *ka* as *kua*, *ki* as *kui, ku* as *kuu, ke* as *kue,* and *ko* as *kuo.* Similarly, he expressed the value of the kana *sa* as *sua, shi* as *sui, su* as *suu, se* as *sue,* and *so* as *suo.* He also used this method to express the phonetic values of other consonant kana syllables.(27) In the examples quoted above, he used the kanas *ku* and *su* to express the alphabetic values /k/ and /s/ as in the case of the Siddham letters. In short, he used the u-syllabic form of the consonant kana characters to express their alphabetic values. This evidence shows that Myōkaku had a good understanding of the alphabetic and syllabic behavior of the Siddham consonant letters.

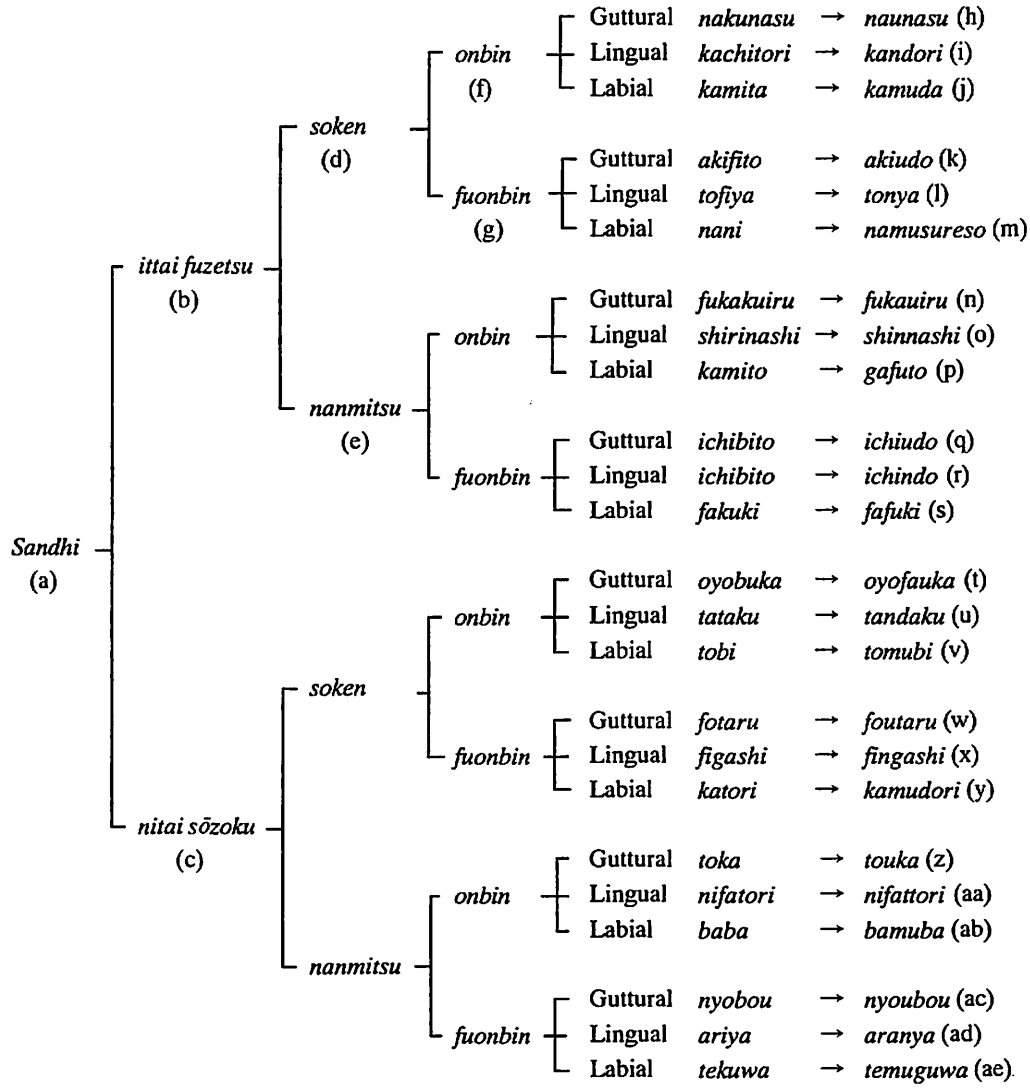
Myōkaku has given the phonetic values of *sa, shi, su, se, so* as *sua, sui, suu, sue, suo,*

and those of *ta, chi, tsu, te, to* as *tsua, tsui, tsuu, tsue, tsuo* respectively in his *Hanon Sahō*.[28] At present, the *sa*-line kana syllables have two consonants, /s/ and /sh/. Similarly, the *ta*-line kana syllables have three consonants, /t/, /ch/, and /ts/. Myōkaku has used the kana *su* to express the former, and the kana *tsu* to express the latter. This suggests two possibilities. One is that the *sa*-line kana syllables and the *ta*-line kana syllables had only one consonant each in the days of Myōkaku. Another is that he just generalised the phonetic values for the purpose of conducting his arguments.

8. Gender

Unlike Japanese words, Siddham words have three genders, viz., masculine, feminine, and neuter. Most of the Siddham scholars of Japan have treated gender very casually, perhaps because they did not face any gender related problems. Some Siddham scholars, however, tried to assign gender to Japanese words. One such scholar was the monk Senkaku 仙覚 (A.D. 1303-?). He says that the kana syllables ending in an /-a/ sound, for instance, *a, ka, sa,* etc., are masculine and the others are feminine. Since *wagaseko* (my husband) is male, the word takes the kana *ga*, and *wagimoko* (my wife) is female, it takes the kana *gi*.[29] Shōten, mentioned above, also tried to assign gender to Japanese words. He says that in Siddham there are the masculine gender and the feminine gender. The masculine gender form of the word god is **deva**, and its feminine gender form is **devī**. The kana syllables ending in an /-a/ sound express the masculine form, and the kana syllables ending in other sounds express the feminine form. In the two words *amanogawa* (heavenly river, milky way) and *amenoshita* (under heaven), *ama* is the masculine form and *ame* is the feminine form of the word heaven.[30]

Appendix 3: The sandhi model of Shōten [31]



(a) The Sanskrit grammatical category sandhi was called *renjō* in Japan. The Siddham scholars of Japan applied it to mean the euphonic changes taking place within Japanese words.

(b) In *ittai fuzetsu* euphonic change, a kana character in a word gets transformed into an oral stop or a nasal stop element.

(c) In *nitai sōzoku* euphonic change, a word acquires an oral or a nasal stop element not originally present in it under the influence of the kana character that follows immediately after.

(d) In *soken*, the euphonic change remains confined within the same class, that is, within the oral stop class or the nasal stop class.

(e) In *nanmitsu*, the euphonic change takes place between the classes, that is, from the oral stop class to the nasal stop class and vice versa.

(f) In *onbin*, the euphonic change takes place within the same category, i.e., within the guttural category or

lingual category or labial category.

(g) In *fuonbin*, the euphonic change takes place between the categories, say, from the guttural category to the lingual or the labial category, and so on.

(h) In *nakunasu*, the kana *ku* belongs to the plosive guttural category and harbours the nasal stop element /ng/, which is expressed by *u*. The sandhi reading is *naunasu*. Here, *ku* has been transformed into this guttural nasal *u*. So it is a case of *onbin*. This is within the nasal class and within the guttural category change.

(i) In *kachitori*, the kana *chi* belongs to the plosive lingual category, and harbours the nasal stop element /n/. The sandhi reading is *kandori*. Here *chi* has been transformed into this *n*. So it is a case of *onbin*. This is within the nasal class and within the lingual category change.

(j) In *kamita*, the kana *mi* belongs to the plosive labial category, and harbours the nasal stop element /m/, which is expressed by *mu*. The sandhi reading is *kamuda*. Here, *mi* has been transformed into this *mu*. So it is a case of *onbin*. This is within the nasal class and within the labial category change.

The above are cases of within-the-class and within-the category change.

(k) In *akifito*, the kana *fi* belongs to the plosive labial category, and harbours the nasal stop element /m/, which is expressed by *mu*. The sandhi reading is *akiudo*. Here *fi* has been transformed into the guttural nasal *u* and not *mu*. So it is a case of *fuonbin*. This is within the nasal class, but a between-the-categories (from labial to guttural) change.

(l) In *tofiya*, the kana *fi* belongs to the plosive labial category, and harbours the nasal stop element /m/ which is expressed by *mu*. The sandhi reading is *tonya*. Here *fi* has been transformed into lingual nasal *n* and not *mu*. So it is a case of *fuonbin*. This is within the nasal class, but a between-the-categories (from labial to lingual) change.

(m) In *nani*, the kana *ni* belongs to the plosive lingual category, and harbours the nasal stop element /n/. The sandhi reading is *namu* of *namusureso*. Here *ni* has been transformed into the labial nasal *mu* and not *n*. So it is a case of *fuonbin*. This is within the nasal class, but a between-the-categories (from lingual to labial) change.

The above three are cases of within-the-class but between-the-categories changes.

(n) Shōten assumes that the kana *ku* in *fukakuiru* is the non-plosive guttural Siddham letter **hu**. So the kana *ku* belongs to the non-plosive guttural category, and harbours the oral stop element /k/. The sandhi reading is *fukauiru*. Here *ku* has been transformed into guttural nasal *u*. So it is a case of *onbin*. This is a between-the-classes (from oral to nasal) change, but also a change within the guttural category.

(o) In *shirinashi*, the kana *ri* belongs to the non-plosive lingual category, and harbours the oral stop element /t/. The sandhi reading is *shinnashi*. Here *ri* has been transformed into lingual nasal *n*. So it is a case of *onbin*. This is a between-the-classes (from oral to nasal) change, but also a change within the lingual category.

(p) In *kamito*, the kana *mi* belongs to the plosive labial category, and harbours the nasal stop element /m/. The sandhi reading is *gafudo*. Here *mi* has been transformed into the labial oral *fu*. So it is a case of *onbin*. This is a between-the-classes (from nasal to oral) change, but also a change within the labial category.

The above are cases of between-the-classes but within-the-category changes.

(q) Shōten assumes that the kana *bi* in *ichibito* is the non-plosive labial Siddham letter **vi**. So the kana *bi* belongs to the non-plosive labial category, and harbours the oral stop element /f/ expressed by *fu*. The

sandhi reading is *ichiudo*. Here *bi* gets transformed into the guttural nasal *u* instead of *fu*. So it is a case of *fuonbin*. This is a between-the-classes (from oral to nasal) and a between-the-categories (from labial to guttural) change.

(r) Shōten assumes that the kana *bi* in *ichibito* is the non-plosive labial Siddham letter **vi**. So the kana *bi* belongs to the non-plosive labial category, and harbours the oral stop element /f/ expressed by *fu*. The sandhi reading is *ichindo*. Here *bi* gets transformed into the lingual nasal *n* instead of *fu*. So it is a case of *fuonbin*. This is a between-the-classes (from oral to nasal) and a between-the-categories (from labial to guttural) change.

(s) In *fakuki*, the kana *ku* belongs to the plosive guttural category, and harbours the nasal stop element /ng/ which is expressed by *u*. The sandhi form is *fafuki*. Here *ku* has been transformed into the labial oral *fu* instead of *u*. So it is a case of *fuonbin*. This is a between-the-classes (from nasal to oral) and a between-the-categories (from guttural to labial) change.

The above are cases of between-the-classes and between-the-categories changes.

(t) In *oyobuka*, the kana *ka* belongs to the plosive guttural category and harbours the nasal stop element /ng/, which is expressed by *u*. The sandhi form is *oyofauka*. Here the word has acquired *u* under the influence of *ka*. So it is a case of *onbin*. This is a change within the nasal class and a change within the guttural category. (Incidentally, Shōten has said nothing about the *bu* → *fa* change.)

(u) In *tataku*, the kana *ta* belongs to the plosive lingual category and harbours the nasal stop element /n/. The sandhi form is *tandaku*. Here the word has acquired *n* under the influence of *ta*. So it is a case of *onbin*. This is a change within the nasal class and a change within the lingual category.

(v) In *tobi*, the kana *bi* belongs to the plosive labial category and harbours the nasal stop element /m/, which is expressed by *mu*. The sandhi form becomes *tomubi*. Here the word has acquired *mu* under the influence of *bi*. So it is a case of *onbin*. This is a change within the nasal class and a change within the labial category.

The above are cases of within-the-class and within-the-category changes.

(w) In *fotaru*, the kana *ta* belongs to the plosive lingual category and harbours the nasal stop element /n/. The sandhi form is *foutaru*. Here the word has acquired the guttural nasal *u* under the influence of *ta* instead of acquiring *n*. So it is a case of *fuonbin*. This is a change within the nasal class, but also a between-the-categories (from lingual to guttural) change.

(x) In *figashi*, the kana *ga* belongs to the plosive guttural category and harbours the nasal stop element /ng/ which is expressed by *u*. The sandhi form is *fingashi*. Here the word has acquired the lingual nasal *n* under the influence of *ga* instead of acquiring *u*. So it is a case of *fuonbin*. This is within the nasal class, but between-the-categories (from guttural to lingual) change.

(y) In *katori*, the kana *to* belongs to the plosive lingual category and harbours the nasal stop element /n/. The sandhi form is *kamudori*. Here the word has acquired the labial nasal *mu* under the influence of *ta* instead of acquiring *n*. So it is a case of *fuonbin*. This is a change within the nasal class, but also a between-the-categories (from lingual to labial) change.

The above are cases of within-the-class but between-the-categories changes.

(z) Shōten assumes that the kana *ka* in *toka* is the Japanese form of the non-plosive guttural Siddham **ha**. So this kana *ka* belongs to the non-plosive guttural category, and harbours the oral stop element /k/,

expressed by *ku*. The sandhi reading is *touka*. Here the word has acquired the guttural nasal *u* under the influence of *ka*. So it is a case of *onbin*. This is a between-the-classes (from oral to nasal) change, but also a change within the guttural category.

(aa) In *nifatori*, the kana *to* belongs to the plosive lingual category and harbours the nasal stop element /n/. The sandhi reading is *nifattori*. Here the word has acquired the lingual oral /t/ under the influence of *ta*. So it is a case of *onbin*. This /t/ is written with the kana *tsu*, and it appears in the form of a gemination of *to*. This is a between-the-classes (from nasal to oral) change, but also a change within the lingual category.

(ab) Shōten assumes that the second kana *ba* in *baba* is the Japanese form of the non-plosive labial Siddham letter **va**. So the kana *ba* belongs to the non-plosive labial category and harbours the oral stop element /f/, expressed by *fu*. The sandhi reading is *bamuba*. Here the word has acquired the labial nasal *mu* under the influence of *baba*. So it is a case of *onbin*. This is a between-the-classes (from oral to nasal) change, but also a change within the labial category.

The above are cases of between-the-classes but within-the-category changes.

(ac) In *nyobou*, the kana *bo* belongs to the plosive labial category, and harbours the oral stop element /f/, expressed by *fu*. The sandhi reading is *nyoubou*. Here the word has acquired the guttural nasal *u* under the influence of *bo* instead of acquiring *fu*. So it is a case of *fuonbin*. This is a between-the-classes (from oral to nasal) change and also a between-the-categories (from labial to guttural) change.

(ad) In *ariya*, the kana *ya* belongs to the non-plosive guttural category, and harbours the oral stop element /k/, expressed by *ku*. The sandhi form is *aranya*. Here the word has acquired the lingual nasal *n* under the influence of *ya* instead of acquiring *ku*. So it is a case of *fuonbin*. This is a between-the-classes (from oral to nasal) change and also a between-the-categories (from guttural to lingual) change.

(ae) Shōten assumes that the kana *ku* in *tekuwa* is the Japanese form of the non-plosive guttural Siddham letter **hu**. So this kana *ku* belongs to the non-plosive guttural category, and harbours the oral stop element /k/. The sandhi reading is *temuguwa*. Here the word has acquired the labial nasal *mu* under the influence of *ku*. So it is a case of *fuonbin*. This is a between-the-classes (from oral to nasal) change and also a between-the-categories (from guttural to labial) change.

The above are cases of between-the-classes and between-the-categories changes.

References

(1) Arai, Hakuseki, *Dōbun Tsūkō*, Kokugogaku Taikei, V. 5, Kokusho Kankokai, Tokyo, 1975, p. 160B, 166T, 新井白石著 同文通考.

(2) Ibid., pp. 171, 177.

(3) Ibid., p. 162B.

(4) The Japanese tried two other models, the *taini* model and the *iroha* model, to arrange the kana characters. The *iroha* model is attributed to the monk Kūkai mentioned above. The *taini* model was soon abandoned. Only the Gojūonzu model and the *iroha* model have survived. The traditional practice had been to arrange the katakana characters in the Gojūonzu model, and the hiragana characters in the *iroha* model.

(5) Myōkaku, *Shittan Yōketsu*, TSDK, V. 84, pp. 529B - 530T, 明覚著 悉曇要訣.
Myōkaku, *Hanon Sahō*, Kokugogaku Taikei, V. 3, Kokusho Kankokai, Tokyo, 1975, pp. 16, 20, 明覚著 反音作法.

(6) Yamada, Yoshio, *Gojūonzu no Rekishi*, Hobunkan, 1943, Tokyo, p. 89, 山田孝雄著 五十音図の歴史.

(7) Myōkaku, *Shittan Yōketsu*, p. 529B.

(8) Tsukishima, Hiroshi, *Kokugo no Rekishi*, Tokyo Daigaku Shuppankai, Tokyo, 1992, pp. 52-67, 築島裕著 国語の歴史.

(9) The note "combine two" means that /k/ of *ko* and /om/ of *gom* should be combined together to get the sound *kom* of the letter.

(10) Myōkaku, *Shittan Yōketsu*, p. 529T - M.
Myōkaku has misspelled the word **siṃha** as **siha**. Myōkaku wants to say here that by transcribing the word **siṃha** as *sima,* the /h/ has been dropped. Since Siddham **ha** is read as *ka* in Japan, this becomes a case of the dropping of /k/.

(11) The Japanese evolved the convention of writing the gemination of consonants with the kana character *tsu*. For examples, *kitsute* → *kitte*. Myōkaku has used this convention in his works.

(12) Myōkaku, *Shittan Yōketsu*, p. 509M.

(13) Shōten, *Wago Renjōshū*, Kokugogaku Taikei, V. 3, Kokusho Kankokai, Tokyo, 1975, pp. 49, 45-46, 盛典著 倭語連声集.

(14) Shōten, pp. 47 - 48.

(15) Shōten, p. 48.

(16) Motoori, Norinaga, *Kanji Sanonkō*, Kokugogaku Taikei, V. 3, pp. 127 - 135, 本居宣長著 漢字三音考.

(17) Ibid., p. 88.
Tōon is a general term for the pronunciation of Chinese characters transmitted to Japan since the twelfth century.

(18) Ibid., pp. 89 - 90.

(19) Ibid., p. 89.

(20) Ibid., pp. 108, 111.

(21) Ryōgen, *Goin Shidai*, Kokugogaku Taikei, V. 3, pp. 5, 良源著 五韻次第.

(22) Keichū, *Waji Seiranshō*, Keichū Zenshū, V. 10, Iwanami Shoten, Tokyo, pp. 116 - 17, 1973, 契沖著 和字正濫鈔.

(23) The word swamp is called *sawa* in modern Japanese. This word appears as *safa* in *Kokin Wakashū* 古今和歌集, a collection of poems compiled around A.D. 913. The pronunciation changed from *safa* to *sawa* in the days of Myōkaku in the eleventh century. The *fa*-line kana characters in non-initial position were read as the *wa*-line kana characters. This phenomenon is known as *hagyō tenkoon* ハ行転呼音.
Okimori, Takuya, ed.: *Nihongoshi*, Ofusha, Tokyo, 1992, pp. 16 - 17, 沖森卓也編 日本語史.

(24) Myōkaku, *Shittan Yōketsu*, p. 535B.
Myōkaku has recorded the above words in katakana. In this way he has recorded a very important phonetic phenomenon of his time while explaining the reading of a Siddham word.

(25) Keichū, *Waji Seiranshō*, pp. 117 - 18.
The four *i, u, e, o* vocalic forms combines with each of the nine consonant kana syllables *ka, sa, ..., ra, wa* make thirty-six kana characters all together. These together with the nine consonant kana characters *ka, sa, ..., ra, wa* and the five vowel kana characters *a, i, u, e, o* make a total of fifty kana syllables.

(26) Ibid., pp. 117 - 20.

(27) Myōkaku: *Hanon Sahō*, p. 20.

(28) Ibid., p. 20.

(29) Tanabe, Masao, *Kokugogakushi*, Ofusha, Tokyo, 1965, pp. 44-45, 田辺正男著 国語学史.

(30) Shōten, pp. 44 - 45.

(31) Ibid., pp. 49 - 52.

Chinese and Japanese readings of linguistic terms

Note: Terms whose meanings could not be identified are shown with the mark (?).

1 stroke			
一体不絶	*i-t'i-pu-chüeh*	*ittai fuzetsu*	a type of sandhi
2 strokes			
七音	*ch'i-yin*	*shichion*	seven sounds
二合	*erh-ho*	*nigō*	sign for compound consonant
入声	*ju-sheng*	*nyūsei*	entering tone
二体相続	*erh-t'i-hsáng-hsü*	*nitai sōzoku*	a type of sandhi
八行転呼音	*pa-hsing-chuan-hu-yin*	*hagyō tenkoon*	*ha* → *wa* sound change
3 strokes			
小韻	*hsiao-yün*	*shōin*	small rime
女声	*nü-sheng*	*josei*	feminine gender
三内	*san-nei*	*sannai*	three stops
上声	*shang-sheng*	*jōsei*	rising tone
子	*tzu*	*shi*	rime, final
4 strokes			
切	*ch'ieh*	*setsu*	spelling sign
反	*fan*	*han*	spelling sign
反切	*fan-ch'ieh*	*hansetsu*	Chinese spelling system
牙	*ya*	*ga*	velars
牙声	*ya-sheng*	*gasei*	velars
牙音	*ya-yin*	*gaon*	velars
不柔不怒声	*pu-jou-pu-nu-sheng*	*fujū fudosei*	nasal letters
不軽不重	*pu-ch'ing-pu-chung*	*fukei fuchō*	nasal letters
不音便	*pu-yin-pien*	*fuonbin*	a type of sandhi
不清不濁	*pu-ch'ing-pu-cho*	*fusei fudaku*	nasal letters
内転	*nei-chuan*	*naiten*	(?)
五音	*wu-yin*	*goon*	Siddham plosive letters
引	*yin*	*in*	sign for long vowels
5 strokes			
正歯音	*cheng-ch'ih-yin*	*seishiin*	a type of affricate sound
去声	*ch'ü-sheng*	*kyosei*	departing tone, falling tone
半字	*pan-tzu*	*hanji*	vocalic sign, consonantal ligature
半音	*pan-yin*	*hanon*	alphabetic consonant
半体	*pan-t'i*	*hantai*	consonantal ligature, half consonant
半体字	*pan-t'i-tzu*	*hantaiji*	consonantal ligature, half consonant
半体文	*pan-t'i-wen*	*hantabun*	consonantal ligature, half consonant

半歯声	*pan-ch'ih-sheng*	*hanshisei*	semi-dental
半歯音	*pan-ch'ih-yin*	*hanshion*	semi-dental
半舌声	*pan-she-sheng*	*hanzessei*	semi-lingual
半舌音	*pan-she-yin*	*hanzetsuon*	semi-lingual
加他摩多	*chia-t'uo-mo-to*	*katamata*	a type of sandhi
母	*mu*	*bo*	initial consonant
本音	*pen-yin*	*honon*	aṃ vocalic form of consonant
平声	*p'ing-sheng*	*heisei*	even tone
他	*t'uo*	*ta*	second letter of sandhi,
他音属自	*t'uo-yin-chu-tzu*	*taon zokuji*	a type of sandhi
外転	*wai-chuan*	*gaiten*	(?)

6 strokes

合	*ho*	*gō*	closed mouth pronunciation
合字連声	*ho-tzu-lien-sheng*	*gōji renjō*	vowel sandhi
自	*tzu*	*ji*	second letter of sandhi
自音成他	*tzu-yin-ch'eng-t'uo*	*jionseita*	a type of sandhi
次濁	*tz'u-cho*	*jidaku*	voiced aspirate
次怒声	*t'zu-nu-sheng*	*jidosei*	voiced aspirate
次柔声	*t'zu-jou-sheng*	*jijūsei*	unvoiced aspirate
次清	*tz'u-ch'ing*	*jisei*	unvoiced aspirate
舌	*she*	*zetsu*	linguals
舌上音	*she-shang-yin*	*zetsujōon*	a type of lingual sound
舌内	*she-nei*	*zetsunai*	lingual stop
舌声	*she-sheng*	*zessei*	linguals
舌頭音	*she-t'ou-yin*	*zettōon*	a type of lingual sound
舌音	*she-yin*	*zetsuon*	linguals
舌音歯	*she-yin-ch'ih*	*zetsuonshi*	lingual/dental
羽	*yü*	*u*	gutturals
有財釈	*yu-ts'ai-shih*	*yūzaishaku*	***bahuvrīhi samās***
多達	*to-ta*	*tatatsu*	***halanta***
多声身	*to-sheng-shen*	*taseishin*	plural

7 strokes

角	*chüeh*	*kaku*	velars
男声	*nan-sheng*	*dansei*	masculine
声	*sheng*	*sei*	consonant, singular
声身	*sheng-shen*	*seishin*	dual
体	*t'i*	*tai*	consonant, nominative case
体文	*t'i-wen*	*taimon*	consonant
体語	*t'i-yü*	*taigo*	initial consonant
体韻	*t'i-yün*	*taiin*	rhyme, rhyming
作具	*tso-chü*	*sakugu*	instrumental case

8 strokes

長	*ch'ang*	*chō*	long vowel
非男非女声	*fei-nan-fei-nü-sheng*	*hidan hijosei*	neuter gender
非柔怒声	*fei-jou-nu-sheng*	*hijūdosei*	nasal
非柔非怒	*fei-jou-fei-nu*	*hijū hido*	nasal
呼召	*hu-chao*	*koshō*	vocative case
依主釈	*i-chu-shih*	*ishushaku*	***tatpuruṣa samās***
空点	*k'ung-tien*	*kūten*	***anusvāra***
空点三内	*k'ung-tien-san-nei*	*kūten sannai*	three nasal stops
命点	*ming-tien*	*myōten*	diacritial sign for short a
所因	*so-yin*	*shoin*	ablative case
所依	*so-i*	*shoi*	locative case
所属	*so-shu*	*shozoku*	genetive case
所作業	*so-tso-yeh*	*shosagyō*	accusative case
所為	*so-wei*	*shoi*	dative case
怛達	*ta-ta*	*tattatsu*	***halanta***
和声	*ho-sheng*	*wasei*	harmonising the sounds

9 strokes

重	*chung*	*chō*	aspirated sound
重濁	*chung-cho*	*chōdaku*	voiced
重音	*chung-yin*	*chōin*	aspirated sound
重複	*chung-fu*	*jūfuku*	polysyllable
持業釈	*ch'ih-yeh-shih*	*jigyōsaku*	***karmadhārāya samās***
怒声	*nu-sheng*	*dosei*	voiced, voiced unaspirated
海畔字	*hai-pan-tzu*	*kaihanji*	letters **aṃ** and **aḥ**
相違釈	*hsiang-wei-shih*	*sōishaku*	***dvaṃda samās***
柔声	*jou-sheng*	*jūsei*	unvoiced sound
単奇	*tan-chi*	*tanki*	monosyllable
急声	*chi-sheng*	*kyūsei*	geminational sound
音便	*yin-pien*	*onbin*	euphonic change
促音便	*ts'u-yin-pien*	*soku-onbin*	geminational euphonic change
点	*tien*	*ten*	vocalic sign
奠密	*juan-mi*	*nanmitsu*	a form of sandhi

10 strokes

涅槃点	*nieh-p'an-tien*	*nehanten*	visarga
涅槃点三内	*nieh-p'an-tien-san-nei*	*nehanten sannai*	oral stop
連声	*lien-sheng*	*renjō*	sandhi, euphonic change
帯数釈	*tai-shu-shih*	*taisūshaku*	***dvigu samās***
宮	*kung*	*kyū*	labials
宮商	*kung-shang*	*kyūshō*	modulation
紐	*niu*	*chū*	character bundle, initial consonant
唇 (same as 脣 in 11 strokes)			

11 strokes			
脣	*ch'un*	*shin*	labials
脣内	*ch'un-nei*	*shinnai*	labial stop
脣声	*ch'un-sheng*	*shinsei*	labials
脣音	*ch'un-yin*	*shinon*	labials
清	*ch'ing*	*sei*	unvoiced sound
清音	*ch'ing-yin*	*seion*	unvoiced sound
清濁	*ch'ing-cho*	*seidaku*	nasal sound
第十五章	*ti-shih-wu-chang*	*daijūgoshō*	a type of sandhi
商	*shang*	*shō*	lingual
陰声	*yin-sheng*	*insei*	negative tone
12 strokes			
軽	*ch'ing*	*kei*	unaspirated sound
軽呼	*ch'ing-hu*	*keiko*	(?)
軽音	*ch'ing-yin*	*keion*	unvoiced sound
軽清	*ch'ing-ch'ing*	*keisei*	unvoiced
歯	*ch'ih*	*shi*	dentals, affricates, sibilants
歯声	*ch'ih-sheng*	*shisei*	dentals, affricates, sibilants
歯頭音	*ch'ih-t'ou-yin*	*shitōon*	a type of affricate and sibilant sound
歯音	*ch'ih-yin*	*shion*	dentals, affricates, sibilants
喉	*hou*	*kō*	gutturals
喉内	*hou-nei*	*kōnai*	guttural stop
喉声	*hou-sheng*	*kōsei*	gutturals
開	*k'ai*	*kai*	open mouth pronunciation
開合	*k'ai-ho*	*kaigō*	(?)
満字	*man-tzu*	*manji*	compound letter
遍口	*pien-k'ou*	*henkō*	non-plosive letters
結韻	*chi-yün*	*ketsuin*	rhyming final
等	*teng*	*tō*	division
畳	*tieh*	*jō*	final, rime
短	*tuan*	*tan*	short vowel
陽声	*yang-sheng*	*yōsei*	positive tone
龕顕	*ts'u-hsien*	*soken*	a type of sandhi
13 strokes			
摂	*she*	*setsu*	rime group
14 strokes			
鼻声	*pi-sheng*	*bisei*	nasal sound
鼻呼	*pi-hu*	*biko*	nasal sound
徴	*chih*	*chi*	dentals
説一	*shuo-i*	*setsuichi*	singular
説二	*shuo-erh*	*setsuni*	dual
説多	*shuo-to*	*setsuta*	plural

読若	*tu-jo*	*dokujaku*	read as (expressing the sound of a character with another)
15 strokes			
撥音便	*po-yin-pien*	*hatsu-onbin*	nasal euphonic change
16 strokes and above			
濁	*cho*	*daku*	voiced sound
濁音	*cho-yin*	*dakuon*	voiced sound
濁点	*cho-tien*	*dakuten*	voicing diacritical sign
隣近釈	*lin-chin-shih*	*rinkinshaku*	***avyayī bhāva sam ās***
韻	*yūn*	*in*	vowel, rime, final
囀	*chuan*	*ten*	inflection

Since June 2006, all new issues of *Sino-Platonic Papers* have been published electronically on the Web and are accessible to readers at no charge. Back issues are also being released periodically in e-editions, also free.

For a complete catalog of *Sino-Platonic Papers*, with links to free issues, visit the *SPP* Web site.

www.sino-platonic.org