The Finals System of the Tang Dynasty in Northern China in

*Mahā-mayūrīvidyārājan*

（佛说大孔雀明王经）Translated By Yijing （义净）

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**Abstract:** This paper mainly addresses the finals system reflected in the Sanskrit transcription of *Mahā-mayūrīvidyārājan* (佛说大孔雀明王经), translated by Yijing (义净). Compared with *Qieyun* (切韵) system, the material reveals some phonetic changes in northern Eastern dialects in the mid-Tang dynasty. *Zhizhizhi* (支脂之) became the same, and glottal stops served as codas. *Sandeng* (三等) and *sideng* (四等) merged into one. Only a few *chongniu* (重纽) remained, and the phenomena of *tantan* (覃谈) and *chongyun* (重韵) appeared. Some differences emerged between northeastern, northwestern, and Central Plain dialects in the *yangsheng* (阳声) rhyme final and *sideng* (四等) medials.

**Keywords:** Yijing （义净); *Mahā-mayūrīvidyārājan* (佛说大孔雀明王经); Sanskrit–Chinese transcription; finals; ancient Chinese sound

1. Introduction

Historical documents have served as the main material in studies of Chinese history. In addition to rhythmic dictionaries, rhyme tables, verses, and homophones, Sino-Sanskrit phonetic contrast and transliteration represent important materials for research on Chinese ancient sounds. Thanks in large part to Sino-Sanskrit phonetic contrast and transliteration, the achievements of Chinese pronunciation in the Tang Dynasty were notably rich. Many researchers have investigated this linguistic period, including Maspero (1920), Liu Guanghe (1982/2002), Shi Xiangdong (1983), Yuchi Zhiping (1985), Coblin (1991), and Nie Hongyin (2005).

As an object of study, the transliterations of Yijing (义净) have been thoroughly investigated by two scholars, namely Coblin and Liu Guanghe. Coblin (1991) discussed the phonetic features of Yi Jing’s transliteration based on various materials such as *Jinguangming Jing* (金光明经) and *Mahā-mayūrīvidyārājan* (佛说大孔雀明王经). He referred specifically to Bernhard Karlgren, supplemented by Li Fanggui’s research regarding *chongniu* (重纽). Coblin (1991) focused on middle Chinese and corresponding Sanskrit but did not discuss relevant phonetic characteristics in detail. Liu Guanghe (1994) compared the differences in *Mahā-mayūrīvidyārājan* (佛说大孔雀明王经) translated by Bukong (不空) and Yijing (义净), pointed out characteristics of the consonants in the Luoyang (洛阳) and Chang’an (长安) dialects, and constructed a consonant table. He also identified fundamental
characteristics and differences between Bukong (不空) and Yijing (义净) in tail consonants, medials, and yierdengyun (一二等韵).

Although Yijing (义净)’s translation has received extensive attention in academic circles, it is not entirely systematic; the Yijing (义净) dialect, Bukong (不空) dialect, and Xuanzang (玄奘) dialect all belong to northern dialects of the mid-Tang dynasty. The commonalities and differences among northern dialects warrant further discussion. Drawing from previous work, we study Yijing (义净)’s translation of the Sanskrit material *Mahā-mayūrīvidyārājan* (佛说大孔雀明王经) to identify phonetic characters, relevant Chinese characters, the pronunciation of middle ancient Chinese, and a finals system of northern dialects of the Tang dynasty. On this basis, we identify disparities between Bukong (不空), Yijing (义净) and Xuanzang (玄奘) and present characteristics and differences of the finals system between the *Chang’an, Luoyang, and Fanyang (Qizhou)* dialects 范阳 (齐州).

Yijing (635–713), born in either Fan Yang or Qi Zhou, was a famous Buddhist in the Tang dynasty. He is as well-known as Xuanzang and translated many Buddhist scriptures. He became a monk in his childhood and later moved west to India to seek the Buddhist scripture, returning to China in 659 AD. He translated the Buddhist scriptures in Chang’an and then in Luoyang. He also translated *Mahā-mayūrīvidyārājan* in Luoyang. Whether written in Fanyang or Qizhou, the phonetic basis of the translation is generally considered representative of the dialect in eastern North China.

2. Finals system of northern dialects in the Tang dynasty

In this paper, the main object of study consists of Chinese mantras in the Buddhist scripture of *Mahā-mayūrīvidyārājan* (*Tibetan Tripitaka* 大正藏 985), translated by Yijing, and Sanskrit mantras in *Mahā-mayūrīvidyārājan* (*Tibetan Tripitaka* 982). We reveal Yijing’s translation process and the characteristics of finals. Several exceptions were identified due to publication mistakes and spelling errors, which were omitted in accordance with phonetic laws.

2.1 Description of Sanskrit–Chinese translation in each yunshe (韵摄)

2.1.1 果摄 a ā

The characters of *geyun* (歌韵) (e.g., “攞可娜瑳”) are generally translated as a; those of “歌珂拕驮呵柁” are generally translated as ā; and those of “哥痾娑陀诃罗阿多那䫫他” are generally translated as either a or ā. Characters in *geyun* (戈韵) (e.g., “佉跛堕锁”) are often translated as a, with isolated cases translated as ā; and “摩婆波伽莎么” are frequently translated as either a or ā.

2.1.2 假摄 a ā

The characters of *mayun* (麻韵) (e.g., “茶差舍”) are generally translated as a; “酒” are generally translated as ā; “迦吒仡茶挐叉沙遮者车奢舍阇” are often translated as a, with isolated cases translated as ā; and “耶也喏夜” are generally translated as either ya or yā.
2.1.3 止摄 i ī e ai

The characters of zhiyun (支韵) (e.g., “婢避弭弥积ERVEDiì” “绕绕” “赋号” “赋号” “赋号” “赋号” “赋号”) are generally translated as i or ī; “赋号” as i (ī) or e; and “赋号” as jva, such as the translation of “jvalani” to “纣喇儞”. Characters in zhiyun (脂韵) (e.g., “比仳苾鼻器弃雉私死尸呐”) are generally translated as i or ī; ”箄thic” as e; ”施离” as i (ī) or e; and ”毘” as i (ī) or ai; and “尼利” as i (ī), e, or ai.
Characters in zhiyun (之韵) (e.g., “耻治持峙值儞史止齿始侍异哩”) are generally translated as either i or ī; and ”底里” are generally translated as i (ī) or e.

2.1.4 蟹摄 e i ī ai ay

The characters of qiyun (齐韵) (e.g., “迷米谜羝剃泥泥西细黎丽”) are generally translated as e; ”剃泥泥西细” as i (ī); ”酰” as ai; ”鸡肉睇囇” as e or i (ī); ”薜” as e or ai; and ”鞞” as e, i, or ai.
Characters in taiyun (泰韵) (e.g., “带” are generally translated as ay, such as the translation of muktaye to ”木带儞”. Characters of huiyun (灰韵) (e.g., ”杯” are generally translated as ay, as in payosṇī to “杯瑜瑟儞”. Those of jiyun (祭韵) (e.g., ”智帝” are generally translated as e, such as “逝” to je, ji, or jay; ”励” to e or ye; and ”誓曳” to je. There are no characters in haiyun (咍韵), feiyun (废韵), jiayun (佳韵), jieyun (皆韵), or guaiyun (夬韵).

2.1.5 遇摄 u ū o

Characters of yuyun (鱼韵) (e.g., “举” are generally translated as o. Those of yuyun (虞韵) (e.g., “拘俱矩区寠具刍主”) are generally translated as u (ū); ”朱” as o; ”匈” as o or au; ”输” as u (ū), o, or vā; ”树” as u or yo; and ”瘐” as yu. Viśvāmitrā are generally translated as ”毘输蜜怛罗” and śvā as ”输”, perhaps due to ancient patterns. The characters of muyun (模韵) (e.g., “晡布慕” are translated as o; ”晡布慕都杜奴苏呼卢噜嚧路” can be translated to to u (ū) or o; and ”谟” as u, o, or a. Namah is translated to “南谟” and maḥ as “谟” because ‘a’ becomes ‘o’ in front of the voiced consonant.

2.1.6 流摄 u ū

The characters of youyun (尤韵) (e.g., “富咎修” are generally translated as u (ū); those of houyun (侯韵) (e.g., “母豆喽娄”) are often translated as u. There are no characters in youyun (幽韵).

2.1.7 效摄 au o u

The characters of haoyun (豪韵) (e.g., “高 социально” are generally translated as au. Those of xiaoyun (宵韵) (e.g., “禝”) are generally translated as au or o; “烧” as au; and “摇” as u. There are no characters in yaoyun (肴韵) or xiaoyun (萧韵).

2.1.8 深摄 um

The characters of qinyun (侵韵) (e.g., “金”) are generally translated as um. Those of jiyun (缉韵) (e.g., “湿”) are generally translated as m.
The characters of *tanyun* (覃韵) (e.g., “覃”) are generally translated as um; “南” as am, ām, or an; and “毗昙” as um or am. Characters of *heyun* (合韵) (e.g., “答”) are generally translated as ap, ā(m), or ad; “答” as ab; and “纳” as av. Characters of *tanyun* (谈韵) (e.g., “甘三蓝琰烂”) are often translated as am. Those of *heyun* (合韵) (e.g., “答”) are generally translated as ap and “瞻” as av or ab. The characters of *xianyun* (咸韵) (e.g., “唎”) are frequently translated as ām. Those of *xianyun* (咸韵) (e.g., “钐”) are generally translated as ām. The characters of *yanyun* (盐韵) (e.g., “占苫檐庵”) are generally translated as ap and “瞻” as av or ab. The characters of *yanyun* (盐韵) (e.g., “占苫檐庵”) are generally translated as ap or av and “叶” as av o r uv. The characters of *yanyun* (盐韵) (e.g., “剑”) are generally translated as am(m) or um. Those of *yeyun* (业韵) (e.g., “劾箠”) are generally translated as ap or a(m). Characters of *fanyun* (凡韵) (e.g., “梵”) are often translated as ahm.

Those of *fayun* (乏韵) (e.g., “乏”) are generally translated as ap. Brahmagata can be translated as “梵摩伐底” due to ancient patterns. There are no characters in either *tianyun* (添韵) or *tieyun* (帖韵).

The characters of *zhenyun* (真韵) (e.g., “真”) are generally translated as in, “频邻” as in or iin.; “真” as il, and “慎” as iī. The characters of *zhiyun* (质韵) (e.g., “质必蕊密吉室悉质失室一”) are generally translated as ir, il, is, iš, it, it, ī, id, īd, rī, or ic; “叱” as ap; and “栗（嘡）” as t, ik, or g. The characters of *shuyun* (术韵) such as “律（嘡）” are generally translated as ŋ, with “卒” appearing as ut.

The characters of *zhiyun* (质韵) (e.g., “瑟”) are often translated as (t) or (ŋ). Those of *wenyun* (文韵) (e.g., “文君分”) are generally translated as uŋ, un, uñ, or um. The characters of *wuyun* (物韵) (e.g., “佛弗”) are generally translated as ud or ut. The characters of *qiyan* (迄韵) (e.g., “讫”) are frequently translated as r or r. The characters of *xinyun* (欣韵) (e.g., “近”) are generally translated as n. Those of *hunyun* (魂韵) (e.g., “奔敦孙”) are generally translated as uŋ or un and “彷” as um. The characters of *meiyun* (没韵) (e.g., “没骨突咽忽”) are generally translated as u(n), ur, uş, ut, ud, or os with “勃” as ar. There are no characters in *zhenyun* (臻韵), *henyun* (恒韵), or *zhunyun* (准韵).

The characters of *hunyun* (魂韵) (e.g., “干单旦炭但惮难珊阑兰安”) are generally translated as aāñ, aān, or an; “汉” as an or at; and “散” as an. Characters of *heyun* (合韵) (e.g., “达怛捺割渴萨轍咙噶”) are often translated as ar, ad, al, āl, a(n), a(n), at, ad, aš, as, ac, or aj; “达喇曷” as ah or ak; and “萨” to ab. Characters of *huanyun* (桓韵) (e.g., “半盘畔曼”) are generally translated as aāñ, ān, an, aŋ, or ān; “搬” as aun; and “酸” as van. Characters of *moiyun* (末韵) (e.g., “体破末”) can be translated as ar, aād, at, aτ, a(n), a(n), ac, al, āl, aj, or av. Those of *shanyun* (删韵) (e.g., “般”) are generally translated as an or ān. The characters of *shanyun* (删韵) (e.g., “察杀疤”) are often translated as a(n), ad, as. The characters of *shanyun* (删韵) (e.g., “山”) are generally translated as an. Those of *xiyun* (辖韵) (e.g.,
“刹”) are generally translated as as, it, at, or ar. Rakṣitikā was translated as “曷路剎帝迦” and köt as, “剎”. Because there are no characters in chumu (初母) when translated as in zhiyun (质韵), shuyun (术韵), or zhiyun (枳韵), Yijing used ru-sheng (入声) characters as in shanshe (山摄). The characters of yuanyun (元韵) (e.g., “建健”) are generally translated as an, an, or aṁ. The characters of yueyun (月韵) (e.g., “发伐羯葛歇”) are often translated as al, at, at, or ak, at, ar, or aj. “折” is generally jar, j, or jal. Characters of xianyun (仙韵) (e.g., “褰旃栴扇连”) are generally translated as ak, an, or aṅ, and “善缮膳演” appear as jan. Those of xueyun (薛韵) (e.g., “朅揭设”) are often translated as ar, aṅ, or ak; “折” to ak or ar; and “凔” to ir.

2.1.12 江摄

There are no characters in jiangshe (江摄) in translation.

2.1.13 寓摄 a(ā)ṅ aṁ a(ā)k ag ah

Characters of tangyun (唐韵) (e.g., “傍忙宕”) are generally translated as an, aṁ, or aṅ, all with velar sound consonants behind them. “谤” is generally translated as ān. Characters of duoyun (铎韵) (e.g., “莫博薄托铎诺恶乐𠸪”) are generally translated as ak, aṅ, or āṁ; “洛” as ak, ag, or ak; and “索” to ah or aṭ. The characters of yangyun (阳韵) (e.g., “鸯商弶”) are often translated as aṅ, aṁ, or āṁ, all of which have velar sound consonants behind them. “上” can be translated to jan and has g behind it; however, this assumption may be incorrect and translated otherwise as jaṅ. Characters of yaoyun (药韵) (e.g., “缚斫”) are generally translated as ak; “溺药” as yag or yak; “若” to yag, yav, ai, or aḥ; “铄” to ak or ar; and “嚩” to āt.

2.1.14 梗摄 yan iṅ a (ā)k

The characters of moyun (陌韵) (e.g., “宅”) are generally translated as av or ak; “槔” (maiyun 麦韵) is translated as ak, 赂韵字; and “释” (xiyun 昔韵) as āk. Characters of qingyun (青韵) (e.g., “丁”) are often translated as yaṅ and “经” as iṅ, both of which have velar sound consonants behind them. No characters appear in gengyun (庚韵), gengyun (耕韵), qingyun (清韵), or xiyun (锡韵).

2.1.15 曾摄 iṅ an ik ak

The characters of zhengyun (蒸韵) (e.g., “冰征”) are often translated as iṅ and all have velar sound consonants g behind them. The characters of shiyun (识韵) (e.g., “识力”) are generally translated as ik and “式” as iv. The characters of dengyun (登韵) (e.g., “僧登楞”) are frequently translated as saṅ or aṅ, both of which have either h, g, k, or j behind them. Characters of deyun (德韵) (e.g., “德”) are generally translated as ak.

2.1.16 通摄 uk og ok

The characters of wuyun (屋韵) (e.g., “目鹿六”) are generally translated as uk, “独” as og, and “仆”
as ok and uk. There are no characters in dongyun (东韵), zhongyun (钟韵), or zhuyun (烛韵).

2.2 Discussion of finals

In this section, we discuss the finals system in the eastern part of northern China in the early years of the Tang dynasty based on the above syllables.

2.2.1 Medial

2.2.1.1 Medial [-u-]

Round-mouth (合口) characters in middle ancient Chinese usually have v in the syllable; for example, the characters of guoshe (果摄) (e.g., “埵堕莎锁”) are generally translated as va or vā; those of zhenshe (臻摄) (e.g., “奔敦酸”) are generally translated as un or van; and “没骨” are often translated as ud. Therefore, the medial word of round-mouth characters is assumed to be [-u-].

There is no v in the syllables of some round-mouth characters; they are always labial sounds, such as the characters of guoshe (果摄) (e.g., “埵婆么”), xianshe (咸摄) (e.g., “梵乏”), zhenshe (臻摄) (e.g., “勃”), shanshe (山摄) (e.g., “搬半盘曼钵跋末”), and zhishe (止摄) (e.g., “微”). A transitional [-i-] often appears between the labial sound and the vowel in spelling; as such, the absence of v in syllables is normal.

In middle ancient Chinese, a contrast in round-mouth and open-mouth characters appears between zhenyun (真韵) and zhunyun (谆韵), hanyun (寒韵) and huanyun (桓韵), and geyun (歌韵) and geyun (戈韵). It is difficult to determine whether yanyun (严韵) and fanyun (凡韵) are antagonistic. In addition, it is impossible to judge whether jieyun (皆韵) and guaiyun (夬韵), haiyun (咍韵) and huiniyun (灰韵), henyun (痕韵) and hunyun (魂韵), and wenyun (文韵) and xinyun (欣韵) are antagonistic due to a lack of characters.

2.2.1.2 Medial [-i-]

j or y in syllables always appear in sandengyun (三等韵), such as in the following translations: “写迦耶也夜喏” as ya or yā; “誓曳𧜟” as je; “树” as yo; “瘐” as yu; “善缮膳演” as jan; “折” as jar, j, or jal; “羊” as yaṁ; “上” as jan; “尚” as jaṅ; “溺药” as yag or yak; and “若” as yag or yav. Additionally, in zhishe (止摄), zhenshe (臻摄), and zengshe (曾摄), i usually appears in sandengyun. Therefore, the medieval form of sandengyun can be reconstructed as [-i-].

No j or y exists in some syllables of sandengyun when the initial syllable is either a velar sound (见系), palatal sound (庄章系), or labial sound (帮系), as in the following examples: “遮者奢社差” as a or ā; “世” to e; “举拘俱区主刍” as u; “咎” as u; “擒乔烧” as au; “金” as um; “湿” as sm; “占苦瞥剑” as am; “文君” as un; “佛弗” as ud; “建健亵厮楅扇” as an; “发伐羯葛” as at; “弥商” as an; or “缚斫铄” as ak. K- and c- in Sanskrit sound similar to when the tongue is in a rear position, leading to a transitional medial [-i-] in the syllable. An exception is “连”, translated as raň; hence, the medial [-i-] in sandengyun
exists in ancient Chinese.

Sidengyun (四等韵) is often translated as either i, e, or ia. For example, the characters of qiyun (齐韵) are always translated as either i, e, or ai. Those of xianyun (先韵) are translated as either ain or yan; those of xieyun (屑韵) are yat or ir; and those of qingyun (青韵) are either in or yaṅ. No characters are in xiaoyun (萧韵).

In ancient Chinese, Sidengyun exists in the system of the Tang Dynasty in Northern China. (WANG/YANG)

In ancient Chinese, sandengyun and sidengyun can be translated primarily as either i or e, with a few translated as ai; accordingly, sandengyun and sidengyun can be merged.

In medieval Chinese, chongniu (重纽) should have a rolling medial [-r], such as in the translation of "欹" as kṣe, "绮" as kṣi, "器" as kṣī, and "蜜" as mṛ. Moreover, most chongniu (重纽) are missing the medial sound and are the same as the normal sandengyun and sidengyun, such that "乔" is translated as gau, "憍" as kau, "密" as mid, "金" as kum, "频" as bhin, "紧" as kin, "民" as min, "必" as pit, "毕" as pil, and "吉" as kis.

2.2.2 Main vowels

2.2.2.1 Difference in opening degree of yidengyun (一等韵) and erdengyun (二等韵)

Characters in guoshe (果摄) and jiashe (假摄) are all translated as either a or ā. Half the characters in guoshe (果摄) are translated as a, with the other half translated as ā. Most characters in jiashe (假摄) are translated as a. Those in hanyun (寒韵), huanyun (桓韵), shanyun (山韵), and shanyun (删韵) are all translated as either a or ā, but most are yidengyun. There are only six characters of erdengyun (二等韵), similar to tanyun (覃韵), tanyun (谈韵), xianyun (咸韵), and xianyun (衔韵). There are only two characters of erdengyun (二等韵) in the above yuns (韵). There are no characters of erdengyun (二等韵) in xiaoshe (效摄). Characters in taiyun (泰韵) and huiyun (灰韵) are translated as ay; the levant stress syllable of the Sanskrit e is ai. The Sanskrit a sounds like either [a] or [a], whereas ā sounds like either [a] or [a]. The opening degree of a is less than ā. Accordingly, in middle ancient Chinese, the vowel [a] is between a and ā. Most characters are translated as ā, which sounds like [a]. The opening degree of erdengyun is less than a or ā; no such sound exists in Sanskrit. Therefore, characters in yidengyun are usually translated as either a or ā. In middle ancient Chinese, yidengyun is always reconstructed as [a], and erdengyun is always reconstructed as [a]. Yidengyun and erdengyun have a different timbre, such that the opening degree of erdengyun is less than that of yidengyun.

Characters in xiaoshe (效摄) are always translated as au; few appear as either o or u. O and au are separate levant stress syllables of u. Yidengyun in xiaoshe (效摄) and xieshe (蟹摄) are usually translated as ai. The main vowel of danshe (右摄) is always translated as either a or ā, the same as in shanshe (山摄), xianshe (咸摄), xiaoshe (效摄), and xieshe (蟹摄). In this case, yidengyun is [a], and erdengyun is [a].

Characters in yushe (遇摄) are usually translated as either u or ū with few appearing as au or o. As
noted above, o and au are separate levant stress syllables of u; hence, *yidengyun* in *yushe* (遇摄) should be u. Characters in *liushe* (流摄) are often translated as either u or ū. *liushe* evolved in disyllabification from the ancient ages to the Middle Ages, but no ou exists in Sanskrit; therefore, *yushe* is most often translated as either u or ū. *yushe* contains a compound vowel, so its *yidengyun* is always reconstructed as [au]. The main vowel of *tongshe* (通摄) is usually translated as either u or o, such that *yidengyun* can be reconstructed as [u].

The main vowel in *zhenshe* (臻摄) is always translated as either u or i; no characters appear in *yidengyun* and *erdengyun*. The open-mouth *sandengyun* is always translated as i, whereas the remaining round-mouth characters are always translated as u; therefore, the round-mouth *yidengyun* is always reconstructed as [-u], and the open-mouth *sandengyun* is always reconstructed as [-i]. Only one character “金” in *shenshe* (深摄) is translated as um. Very few characters in *xianshe* (咸摄) (e.g., “耽昙 覃剑”) are also translated as um. For this reason, we assume that the syllable um may not exist in Chinese, which would explain why monks used *xianshe* and *shenshe* as a translation of um instead. *Xianshe* should be reconstructed as [-m], and *shenshe* should be reconstructed as [-i-m], both of which are similar to um. The open-mouth nature of *zengshe* (曾摄) and *gengshe* (梗摄) is always translated as either a or ā, identical to *dangshe* (宕摄) with low-pitched sounds translated as i. *Zengshe* and *gengshe* are combined in the Song dynasty (宋代). *Yidengyun* in *sengshe* should thus be reconstructed as [-e], and *erdengyun* in *gengshe* should be reconstructed as [-e] to differentiate *dangshe*.

There are no characters in *jiangshe* (江摄) because the sound of *erdengyun* is quite different from a or ā in Sanskrit. By contrast, *zengshe*, *gengshe*, and *dangshe* can each be translated as either a or ā. Characters in *zhishe* (止摄) are always translated as i or e; there is no difference between *zhiyun* (支韵), *zhiyun* (脂韵), or *zhiyun* (之韵). This phenomenon is the same as in *Fanqie* (反切) in the rhythmic dictionary, wherein e is the levant stress syllable of i; accordingly, the main vowel of *zhishe* should be reconstructed as [-i].

2.2.2.2 Chongyun (重韵)

In middle ancient Chinese, *chongyun* (重韵) existed in *yidengyun*, such as in the translation of *tanyun* (谈) as am and *tanyun* (覃韵) as either am or um. Similarly, um was always translated as *qinyun* (侵韵). Examples of this pattern are rare, but similar instances appear in material from the same period. The transliteration of Saṃgha-Pāla (僧伽婆罗) displays a pattern in which *tanyun* (谈) and *tanyun* (覃韵) are each translated as either am or um. The characters translated as um are largely *tanyun* (覃韵) compared to only one character of *tanyun* (谈韵). Characters in *qinyun* (侵韵) are usually translated as im. The transliteration of Bukong (不空) displays a phenomenon wherein *tanyun* (覃韵) is translated as either am or om, *tanyun* (谈韵) as am, and *qinyun* (侵韵) as either im or um. The transliteration of Xuanzang (玄奘) also exhibits this phenomenon; *tanyun* (谈) and *tanyun* (覃韵) are each translated as am, similar to
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qinyun (侵韵) translated as [-i]. The transliteration of Bodhiruci (菩提流志) exhibited a related phenomenon where tanyun (覃) could be translated as either am, um, or om with tanyun (谈韵) translated as am; there is no qinyun (侵韵).

These patterns suggest that tanyun (覃韵) has a smaller degree of open-mouth formation than tanyun (谈韵). Tanyun (谈韵) sounds like the lips are more rounded, similar to qinyun (侵韵). In the pre-Qin period, tanyun (谈韵) and tanyun (覃韵) each belong to qinbu (侵部). Tanyun (覃韵) has stood on its own since the Wei dynasty and Jin dynasty when it became similar to tanyun (谈韵). During the Song dynasty, tanyun (谈韵) and tanyun (覃韵) became the same. Therefore, we can reconstruct tanyun (覃韵) as [-om]. Chongyun (重韵) likely indicates that the main vowel is quite different in height; for instance, the difference between yidengyun and erdengyun is the front and back position of the main vowel. Most chongyun (重韵) merge except for tanyun (谈韵) and tanyun (覃韵), as in the translations of xianyun (咸韵) and xianyun (衔韵) as am compared to shanyun (山韵) and shanyun (删韵) as an, similar to Yijing.

Therefore, we believe chongyun (重韵) reflects a phonetic phenomenon within the dialect rather than an overlap between the phonology of northern and southern dialects. Chongyun (重韵) diminished more quickly in the north than in the south, but it has been retained in some cases.

2.2.3 Consonant endings

2.2.3.1 Consonant endings [-p], [-t], [-k]

In middle ancient Chinese, entering tone rhyme endings can be divided into three categories: the labial final consonant translated as ap, ab, av, uv, or m (e.g., “摄” as yap, reconstructed as [-p]); the apical final consonant as il, ir, is, iš, it, iฑ, id, ic, ud, ut, ur, ušt, ar, ad, aš, as, ac, aj, ar, or aṭ (e.g., “卒” as ut, reconstructed as [-t]); and the velar sound final consonant to ik, ak, og, ok, ak, ag, or ah (e.g., “索” as ah, reconstructed as [-k]). The place of articulation of each entering tone is the same; only the method of pronunciation is different. Besides plosives, there are also fricative, liquid, nasal, and lateral sounds. In translation, the ending of the entering tone is only related to the articulation part at the back.

There are some exceptions in which the entering tone rhyme endings of different articulation parts are mixed, such as “答” as aḍ, “叱” as ap, “栗 (嘿)” as ik or g, “适喇曷” as ah or ak, and “萨” as ab. Other examples include “索” as aṭ, “若” as yav or ai , “铄” as ar, “啾” as āṭ, and “宅” as av. Most exceptions are blends of velar and apical sounds. Although the three rhyme endings are distinct, some characters have become [-ʔ].

2.2.3.2 Consonant endings [-m], [-n], [-ŋ]

There are three nasal endings: the labial final consonant translated as am, aṃ, or um (e.g., “耽昙” as um or am, reconstructed as [-m]); the apical final consonant as in, uṇ, uṇ, uṅ, aṅ, an, or an (e.g., “因紧” as in, reconstructed as [-n]); and the velar sound final consonant as aṅ, aṛ, or iṅ (e.g., “骘” as āṅ, ...
reconstructed as [-ŋ]).

There are exceptions of nasal endings that enter the tone rhyme endings of different mixed articulation parts, including “南占” as an; “证” as um; “谤” as ān, and “僧” as saṁ (e.g., saṁjīvani as 僧侍伐儞). The repetition may be due to the fact that nasal endings are more stable than entering tone rhyme endings.

2.3 Table of finals

The following table is based on the phonetic features described in the preceding analysis. Finals of the northern Eastern dialect in the mid-Tang dynasty are presented comprehensively and include the level tones only rather than all four tones.

### Table 1: Table of finals.

<table>
<thead>
<tr>
<th>Sanskrit pronunciation</th>
<th>Ancient rhyme</th>
<th>Characters for translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>歌[go] (戈[ua]</td>
<td>豪[au] (肴[au])</td>
<td>寒[an]桓[uan]</td>
</tr>
<tr>
<td>(戈[ua]</td>
<td>齐[iu]</td>
<td>山删[an] [uan]</td>
</tr>
<tr>
<td>侯[ou] (幽[iou])</td>
<td>负[am]</td>
<td>唐[an]桓[uan]</td>
</tr>
<tr>
<td>(吾[u])</td>
<td>矧[-an]读[am]</td>
<td>山删[an] [uan]</td>
</tr>
<tr>
<td>(江[-an])</td>
<td>代[an]</td>
<td>盐严凡[ian]</td>
</tr>
<tr>
<td>(东冬[-an]钟</td>
<td>元仙先[ien][iuen]</td>
<td>[-ian][-uan]</td>
</tr>
<tr>
<td>(支脂之微[i])</td>
<td>侵[-ian]</td>
<td>登[-ian][-uan]</td>
</tr>
<tr>
<td>(支脂之微[i])</td>
<td>(痕[-an])</td>
<td>真臻文欣(谆)</td>
</tr>
<tr>
<td>登[-ian][-uan]</td>
<td>(痕[-an])</td>
<td>魂 [-uan]</td>
</tr>
<tr>
<td>(支脂之微[i])</td>
<td>侵[-ian]</td>
<td>真臻文欣(谆)</td>
</tr>
<tr>
<td>登[-ian][-uan]</td>
<td>(痕[-an])</td>
<td>魂 [-uan]</td>
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<td>真臻文欣(谆)</td>
</tr>
<tr>
<td>登[-ian][-uan]</td>
<td>(痕[-an])</td>
<td>魂 [-uan]</td>
</tr>
</tbody>
</table>

3. Comparison of characters between Yijing (义净), Bukong (不空), and Xuanzang (玄奘)

With regard to certain aspects of characters compared among Yi Jing, Bu Kong, and Xuan Zang, the identified differences were not especially noteworthy due to having a similar finals system. The following section presents a case study of rhyme and characters between Yi Jing and Xuan Zang.

### Table 2: Shared rhyme and characters between Yijing and Xuanzang.

<table>
<thead>
<tr>
<th>Sanskrit pronunciation</th>
<th>Ancient rhyme</th>
<th>Characters for translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>唐[an][uan]</td>
<td>唐[an][uan]</td>
<td>唐[an][uan]</td>
</tr>
<tr>
<td>唐[an][uan]</td>
<td>唐[an][uan]</td>
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<tr>
<td>唐[an][uan]</td>
<td>唐[an][uan]</td>
<td>唐[an][uan]</td>
</tr>
</tbody>
</table>
Based on the above comparison, the patterns are generally the same; however, differences in rhyme and characters were notable in some cases, including the following. Consider an example of a level tone instead of shangsheng (上声), along with a falling tone and entering tone.

3.1 Qingyun (青韵)

Xuanzang translated zhengyun (蒸韵) (e.g., “殑”) as aṅ or aŋ. Moreover, zhengyun (蒸韵) (e.g., “矜兴陵”) can be translated as either im(k) or iŋ. Qingyun (青韵) (e.g., “瓶”) can be translated as veṅ. Yijing used zhengyun (蒸韵) as in 冰征 and qingyun (青韵) (e.g., “经”) translated as in(g). Qingyun (青韵) (e.g., “丁”) can be translated as yaṅ(g). Bukong translated zhengyun (蒸韵) (e.g., 冰僧应仍) as in or in. Additionally, zhengyun (蒸韵) (e.g., “殑媵陵”) can be translated as aŋ, and qingyun (青韵) (e.g., “铭冥定宁”) can be translated as i, í, e, or ai. Apart from sandengyun and sidengyun in yangyun (阳韵), Yijing also translated qingyun (青韵) (e.g., “丁”) as yaṅ, and Xuanzang translated yangyun (阳韵) as yaḥ.

Xuanzang, Yijing, and Bukong all used zhengyun (蒸韵) to translate sandengyun and sidengyun, whereas transcriptions of qingyun reflect a different situation. The main vowel translations of qingyun (青韵) are diverse, spanning i, í, ya, ai, or e. There is no medial i in sidengyun of Xuanzang; rather, monks use zhengyun (蒸韵) to translate iŋ instead of qingyun (青韵). Yet a medial i appears in sandengyun and sidengyun of Yijing and Bukong; the main vowels of sidengyun has a small degree of aperture. Moreover, in Bukong’s dialect, there is no nasal ending in qingyun (青韵); as such, monks use qingyun (青韵) translated as i, í, e, or ai.
3.2 Jueyun (觉韵)

Yijing used yaoyun (药韵) (e.g., “溺药若”) to translate yak; there is no jueyun (觉韵) in translation. Xuanzang used yaoyun (药韵) (e.g., “药缚勺”) or jueyun (觉韵) (e.g., “藐”) to translate yak. Bukong used jueyun (觉韵) (e.g., “浊濯”) to translate o or oc and yaoyun (药韵) (e.g., “药弱略”) to translate ak, ah, or yak. There is no difference between these three translations of yaoyun (药韵), but there is a distinction in jueyun (觉韵).

The phonetic system of Bukong clearly reflects a difference between jiangyun (江韵), yangyun (阳韵), and tangyun (唐韵), but it is hard to detect in Yijing’s and Xuanzang's phonology. Considering that dangshe (宕摄) and jiangshe (江摄) are combined in the Song dynasty and the Yuan dynasty, we think a difference persists between jiangyun (江韵) and the other yangyun (阳韵) and tangyun (唐韵). There is no difference between them in the pronunciation of jiangyun (江韵). Xuanzang used jueyun (觉韵) to translate yak because the sounds of jueyun (觉韵) are similar to yaoyun (药韵).

3.3 Several characters in zhishe (止摄), xieshe (蟹摄), and yushe (遇摄)

In addition, Xuanzang used part of the apical, namely sandengyun in zhishe (止摄) and xieshe (蟹摄), to translate a such as 锝、StreamReader, 稀, 厘, and 祉. Yijing did precisely the opposite, using only guoshe (果摄) and jiashe (假摄) to translate as Bukong did. Exceptions include translating 溪 as kha and 语 as ga. Besides sandengyun of mayun (麻韵) (e.g., “遮车闲‘嗜’耶”), Xuanzang used erdengyun and sandengyun of zhishe (止摄) and xieshe (蟹摄) to translate ja, ya, or yā. Yijing used mayun (麻韵) to translate in an identical manner as Bukong (e.g., “耶也呢夜”).

By comparing these characters, we can see that yuyun (鱼韵) differs from yuyun (虞韵) in XuanZang and Bukong’s dialects. Regarding individual exceptions, the opening degree of zhishe (止摄) in Xuanzang’s phonetic system seems slightly larger than that of Yijing and Bukong. The rhyme (i.e., characters) translated as ēŋ, ĕŋ, ęŋ, yak, a, ja, ya, and yā are slightly different given the disparities between the three phonetic systems in the medial i of sidengyun, nasal ending, differences between yuyun (虞韵) and yuyun (鱼韵), and degree of opening aperture.

4. Conclusion

Comparing Yijing with Xuanzang and Bukong in the same period, we believe the eastern dialects in the Tang dynasty were nearly the same as those in the northwest and Central Plains of China. The vowel system of the three was highly similar but displayed subtle differences: the nasal ending of the northwest phonology appeared to diminish, whereas entering endings of the northwest dialect and eastern dialects remained relatively stable. The Central Plains sounds were the most unclear in consonant endings; there’s no medial i exists in sidengyun in the Central Plains dialect. However, sandengyun and sidengyun were combined in the northwest and eastern dialects, each including a medial i. There are no differences
among zhiyun (支韵), zhiyun (脂韵), and zhiyun (之韵) in the three dialects, although there is an individual retroflex medial of chongniu (重纽). Most chongniu (重纽) are the same as the other ordinary words along with chongyun (重韵) of tanyun (覃韵) and tanyun (谈韵) in the northwest and eastern dialects. Chongyun (重韵) may also persist in the dialect of the Central Plains.

Reference


Jianqiang Li. 李建强. 2015 A study of the Transcriptions in Amogha-pāśa Dhāraṇī and Sumukha Dhāraṇī by Bodhiruci《菩提流志译<不空羁咒咒心经><护命法门神咒经>咒语对音研究》, Yuyan yanjiu 2015.2.


智 is the character of  

帝 is the character of  

fanqie (反切) “贞励反”， which is the character of  

There is no such fanqie in 《广韵》 and 《集韵》.


Found in Xiangdong Shi.施向东.1983” Xuanzang yizhu zhong de Fan-Han duiyin he Tangchu zhongyuan fangyin”《玄奘译著中的梵汉对音和唐初中原方音》，Yuyan yanjiu 1983.1.

Found in Jianqiang Li.李建强.2015” A study of the Transcriptions in Amogha-pāśa Dhāraṇi and Sumukha Dhāraṇi by Bodhiruci”《菩提流志译<不空羂索咒心经><护命法门神咒经>咒语对音研究》Yuyan yanjiu 2015.2,p59.

Xuanzang(玄奘) used jieyun (皆韵) (e.g.,崽) sandengyun in zhishe (止摄) and xieshe (蟹摄) to translate e. There is no jieyun (皆韵) in Yijing’s translation. Xuanzang used haiyun (咍韵) and feiyun (废韵) to translate ai or ay, but there is no haiyun (咍韵) and feiyun (废韵) in Yijing’s translation. Yijing used xianyun (先韵) (e.g.,先燕) to translate yan or ain; however, Xuanzang used xianyun (先韵) (e.g., 田颠) to translate yan with no ain. This difference is not discussed in the text.

The zhengyun of Xuanzang’s dialect is translated as yidengyun and erdengyun as explained in Xiangdong Shi.施向东 (1983).

Based on Xiangdong Shi 施向东 (1983), yaoyun 药韵 is constructed as [-ak], and jueyun 觉韵 is constructed as [-ok], which sound similar.

The northwest sound is based on Guanghe Liu 刘广和 （1982/2002）; the sound of the Central Plains is based on Xiangdong Shi 施向东 (1983).

The pronunciation of Bodhiruci 菩提流志 is the same as this paper; there is no chongyun (重韵) in the earlier pronunciation of Xuanzang(玄奘).