

Yixing

The Tang period monk Yixing (一行; 673/683–727) is known as an astronomer, calendar reformer, *Yijing* (易經) specialist, and eminent Buddhist monk with expertise in Chan, Mantrayāna, and the Vinaya. In the Buddhist context he is best known for his role in translating the *Mahāvairocana-sūtra* and later writing the definitive commentary to that text. In the secular context, he is known for reforming the state calendar. As a result of these historical roles, in the late Tang there emerged a legendary image of Yixing as an adept astrologer and practitioner of astral magic, with several astrological texts attributed to him.

Sources

A number of sources on Yixing's life provide both plausible biographical information and legendary tales. The earliest datable source is a copy of his memorial stele made by →Kūkai (空海; 774–835), preserved in the *Shingon fuhō den* (真言付法傳; also titled *Ryaku fuhō den* [略付法傳]; *Kōbō Daishi zenshū* [弘法大師全集], 1911, vol. I, 63–65). Here he is described as an erudite monk with a focus on his monastic career. The *Naishō Buppō sōshō kechimyakufu* (內證佛法相承血脈譜) of 819 and the *Taizō engi* (胎藏緣起) by →Saichō (最澄; 767–822) provide accounts of his life, with the latter being more detailed (*Dengyō Daishi zenshū* [傳教大師全集], 1926, vol. I, 238–242; vol. IV, 387–393). Chapter 29 of the *Tang xinyu* (唐新語) by Liu Su (劉肅; fl. 820) lists some of his works related to calendars and astronomy, in addition to providing some brief biographical details (1035.398). One major source of Yixing's life is his biography included in the *Jiu Tang shu* (舊唐書, Old Tang History), compiled in 945 by Liu Xu (劉昫; 887–946). It is listed under the arts (*fāng jì* [方伎]; fasc. 191) section and remembers his achievements in astronomy. The sections on calendar reforms and astronomy (fasc. 32, 35) detail his work in those areas. The *Xīng Tang shu* (新唐書, New Tang History) of 1060 by Ouyang Xiu (歐陽修; 1007–1072) and Song Qi (宋祁; 998–1061) includes more materials on his calendar (fasc. 27, 28). The *Song Gaoseng zhuan* (宋高僧傳; T. 2061 [L]

732c7–733c24) of 988 by Zanning (贊寧; 920–1001) provides additional stories about his life. The *Shimen zhengtong* (釋門正統; X. 1513 [LXXV] 364b17–c22) of 1257 by Zongjian (宗鑑; d. 1206) provides a biography largely identical to that in the *Song Gaoseng zhuan* but states that he died at the age of 55 (rather than forty-five as in other sources), which results in the dates 673–727. Other later accounts of Yixing are based on the *Song Gaoseng zhuan*. Portraits of Yixing based on a Chinese original by painter Li Zhen (李真; fl. 780–805) survive in Japan (Shi, 1976).

In the early 8th century there lived another monk identically named Yixing (d.u.) from Zhulin si (竹林寺) in Hangzhou (杭州), who was proficient in geomancy. He is identified, however, as a Chan monk who served under Huilang (慧朗; 662–725). Various works in later catalogs on geomancy-related subjects attributed to “Yixing” are to be credited instead of this other Yixing (Lü, 2009, 349).

Modern scholarship on Yixing focuses on either his Buddhist career or his work in astronomy. As to major secondary sources, the monograph by Osabe Kazuo (1963) is the most detailed study to date as it surveys his religious career and discusses in detail his work with the *Yijing*, but it lacks a detailed analysis of his contribution to astronomy. Lü Jianfu (1995) covers Yixing's biography and Buddhist career. Chen (2000–2001) reconstructs Yixing's genealogy. An early study of Yixing's work in astronomy in English was undertaken by Needham and Wang Ling in volume III of *Science and Civilisation in China* (Needham & Wang, 1959, 37–38, 270–271, 282–283). Yabuuchi (1989, 32–40) outlines Yixing's work on the state calendar. Ohashi (2011) examines the mathematics in Yixing's calendar. Kotyk (2017) discusses Yixing's role in Tang Buddhist astrology. Further study of Yixing's work with the *Yijing* is necessary.

Yixing's Life

Yixing was born as Zhang Sui (張遂) in Changle (昌樂) in Weizhou (魏州), modern Nanle (南樂) in Hebei, though some sources state his place of birth

as Julu (鉅鹿), modern Pingxiang (平鄉), Hebei. He was a great-grandson of Zhang Gongjin (張公謹; 584–632), an influential political figure during the early years of the Tang dynasty. Chen (2000–2001) investigated his genealogy, which indicates that he hailed from a prestigious clan with early connections to Dunhuang. Yixing's family background was also possibly a factor in his recruitment by the Emperor Xuanzong (玄宗; 685–762, r. 713–756) who, after the reestablishment of the Tang following Wu Zetian's (武則天; 624–705) short-lived Zhou dynasty (690–705), sought to strengthen his position by drawing on descendants of old Tang loyalists. The *Jiu Tang shu* states that in his youth he was exceptionally intelligent, reading the classics with a particular interest in astronomy, calendrical science, and traditional Chinese metaphysics (*yinyang* [陰陽] and five elements [五行] theory).

The *Taizō engi* records that when Yixing was 21, both his parents died, and he subsequently felt compelled to reject the worldly life. He met Hongjing (弘景; 634–712; also called Hengjing [恆景]) in Jingzhou (荊州), and he provided instruction and inspired Yixing to become a monk. He further received instruction from Facheng (法誠; d.u.) of Huagan si (化感寺). In 707, Yixing arrived in the eastern capital (Luoyang [洛陽]) and received full precepts. He is said to have borrowed a copy of the *Prātimokṣa* (precepts manual) and been able to recite it from memory after one reading and moreover to have been quite diligent in his practice of the Vinaya.

We are told in the *Jiu Tang shu* that Wu Sansi (武三思; d. 707), a powerful minister and relative of the Empress Wu Zetian, admired Yixing's work and requested a meeting, but Yixing fled and hid himself away. This might have been what led him to travel to Mount Song (嵩山), where he studied Chan under Puji (普寂; 651–739), also known as Dazhao Chanshi (大照禪師), who was widely recognized as the seventh patriarch of the Northern Chan school. The *Jingde chuandeng lu* (景德傳燈錄; T. 2076 [LI] 224c12) lists Yixing as one of the 46 dharma-heirs to Puji. The *Taizō engi* states that Yixing constantly cultivated “single-practice *samādhi*” (**ekavyūha-samādhi*, *yixing sanmei* [一行三昧]), which is the origin of his monastic name. As Chen points out (2000–2001, 26–30), there is evidence that Yixing was also a disciple of Shenxiu (神秀; d. 706), the master of Puji, based on the contents of a letter addressed to Zhang Yue (張說; 667–731) that is attributed to Yixing (dated 715–717), in which it

is stated that over ten years had passed since their late teacher had died (*Quan Tangwen* [全唐文]; 914.9525b–26a). The letter is an invitation to attend a gathering at Dumen si (度門寺), an institution established by Wu Zetian for Shenxiu. One of the fellow monks mentioned in the letter, Damo (達摩; d.u.), was also known as a disciple of Shenxiu.

The *Taizō engi* and the *Jiu Tang shu* report that after Emperor Ruizong (睿宗; 662–716) ascended the throne in 710, Yixing was ordered to meet with the statesman Wei Anshi (韋安石; 651–714), but Yixing excused himself on account of illness. Yixing spent the next several years wandering in more southern areas, seeking out eminent monks and constantly on the move. He later moved to Mount Dangyang (當陽山) where he studied the “Indian Vinaya” (梵律) under Wuzhen (悟真; 673–751; also called Huizhen [惠真]). It seems it was around this time that he intensively studied Vinaya works, compiling a work explaining the essentials of the Vinaya entitled *Tiaofu zang* (調伏藏) in ten fascicles (not extant). The *Jiu Tang shu* (191.5112) lists a similar text by Yixing entitled *She tiaofu zang* (攝調伏藏). He also received training under the monk Daoyi (道一; 679–754), according to an epitaph by Li Hua (李華; b. 715; *Quan Tangwen*, 319.3233a–35a).

The *Taizō engi* reports that in the year 716, Yixing was staying at Mount Yuquan (玉泉山). Emperor Xuanzong commanded Zhang Qia (張洽; d.u.) – the paternal younger male cousin of Yixing's father (Chen, 2000–2001, 12) – to personally go and invite Yixing to the capital in 717. Yixing arrived in the capital and we are told in the *Jiu Tang shu* that he was often visited, presumably by the emperor, who asked about ways of securing the country and placating the people.

According to the *Taizō engi*, in autumn of 727 Yixing fell ill and started taking medicine, but it proved ineffective and the symptoms worsened. The venerable monks of the capital built an altar and both lay and monastic peoples gathered to carry out recitations for his benefit while making continual offerings. Gradually Yixing's symptoms eased to the delight of the masses. They organized a great feast with offerings, incense, and music. Yixing accompanied the emperor on a trip but suddenly died at Xinfeng (新豐) at the age of 45 or 55 (depending upon which date of birth we accept, as discussed above). Emperor Xuanzong personally composed the text for his memorial stele. Although the non-Buddhist sources primarily recall his achievements in astrology, his posthumous title of Dahui Chanshi

(大慧禪師) conferred onto him by the emperor reflects his status as an eminent monk.

Yixing in the Capital

Yixing spent the last decade of his life in the capitals Chang'an (長安) and Luoyang. In this period his religious interest seems to have primarily been in Mantrayāna (i.e. Esoteric Buddhism) under the direction of the Indian masters →Śubhakarasiṃha (善無畏; 637–735) and Vajrabodhi (金剛智; 671–741). Yixing collaborated with the former to translate the *Mahāvairocana-sūtra*. The Sanskrit source text that they translated was that carried from India by a certain Chinese monk named Wuxing (無行; b. 630) who had travelled to India and, while returning to China, died in northern India. The texts he carried were forwarded to China (Yamamoto, 2012, 88). The *Kaiyuan Shijiao lu* (開元釋教錄; T. 2154 [LV] 572a21–23) explains that Yixing and Śubhakarasiṃha found the *Mahāvairocana-sūtra* among other texts at Huayan si (華嚴寺) in Chang'an. In 724, the pair moved to Luoyang, where they were housed at Dafuxian si (大福先寺) and where they produced their translation. The original Sanskrit text is said to have included 100,000 verses. The Chinese translation excerpted the main components of the original work. The monk Baoyue (寶月; *Ratnacandra?; fl. 724) translated the words of Śubhakarasiṃha, and Yixing acted as scribe and editor. In light of this, Yixing was not strictly a translator, which perhaps indicates that Yixing was not proficient in Sanskrit.

In this respect it is worth noting that in the *Gishaku mokuroku* (義釋目錄) by →Enchin (圓珍; 814–891) there is listed a *Fanben Piluzhena chengfo jing chaoji* (梵本毗盧遮那成佛經抄記; X. 438 [XXIII] 522a21), which appears to have been notes on the Sanskrit *Mahāvairocana-sūtra*. This might have comprised some of the materials used by Yixing in writing the authoritative commentary on that sūtra, which is his most important Buddhist work. There are two extant versions of this commentary: the *Dari jing shu* (大日經疏; T. 1796) and *Dari jing yishi* (大日經義釋; X. 438). In Japan the latter is traditionally believed to be a revised version by Zhiyan (智儼; d.u.) and Wengu (溫古; fl. 723), although Shimizu (2008) disputes this. Yixing is said to have “recorded” (*ji* [記]) the commentary rather than to have written it. The text records the oral explanations of Śubhakarasiṃha (cited as *ācārya*

[阿闍梨]), though Yixing's own comments are also indicated (*si wei* [私調]), and the text furthermore cites Chinese Buddhist texts. Hence there are multiple voices throughout the work.

Japanese scholars have differing opinions on the attributed authorship of the commentary. Osabe Kazuo notes that Tang-era biographies and catalogs do not mention the commentary (1954, 41). The Japanese *Sho ajari shingon mikkyō burui sōroku* (諸阿闍梨真言密教部類總錄; T. 2176 [LV] 1114c20–1115a5) by Annen (安然; b. 841) lists nine recensions of the commentary, with only one ascribed to Yixing. Kawamura (1959) notes the presence of seemingly anachronistic elements reflective of later developments, but these might have been added to the commentary at a later time. Kameyama (2007) accepts the attribution to Yixing and Śubhakarasiṃha. Two extant prefaces and one Tang-era work mention Yixing writing an exegesis to accompany the sūtra (Mano, 2015, 218–219). The *Taizō engi* also mentions this.

The commentary cites a number of translated Chinese works. For example, the *Da zhidu lun* (大智度論; T. 1509) alone is cited in the first chapter a total of 52 times (Katō, 1979, 735). There are also many citations of Nāgārjuna's **Madhyamaka-śāstra* (*Zhong lun* [中論]; T. 1564). The commentary furthermore displays a number of elements drawn from Huayan (華嚴) philosophy and the *Buddhāvataṃsaka* (Endō, 2007). The four main points of the commentary discuss buddhahood in a single lifetime (*yisheng chengfo* [一生成佛]); the three mysteries of body, speech, and mind (*sanmi* [三密]); grading the four vehicles according to the single path (*yidao sisheng panjiao* [一道四乘判教]); and the true characteristic of the mind (*xin shixiang* [心實相]) (Keyworth, 2011, 343).

Yixing is also said to have received instruction from Vajrabodhi. One account states that Yixing sought the Vajraśekhara *abhiṣeka* from Vajrabodhi after the latter arrived in Chang'an in 719 (T. 1798 [XXXIX] 808b25–26). Further, Yixing assisted Vajrabodhi's translation work.

The *Jiu Tang shu* (91.5112) lists a work by Yixing entitled *Shishi xilu* (釋氏系錄) in one fascicle (not extant), likely indicating it was a major work. The *Datang Zhenyuan xu kaiyuan Shijiao lu* (大唐貞元續開元釋教錄; T. 2156), a text catalog by Yuanzhao (圓照; fl. 8th cent.), states it has four articles (T. 2156 [LV] 765a6–10): monastery administration (*gangwei tasi* [綱維塔寺]), aims of teaching Dharma (*shuofa zhigui* [說法旨歸]), seated meditation and

cultivation (*zuochan xiuzheng* [坐禪修證]), and the three robes (*san fafuyi* [三法服衣]), along with an appended article on procedures for the midday meal (*zhongzhai fa* [中齋法]).

Yixing the Astronomer

Yixing is known in the Tang histories for his achievements in astronomy and calendrical science. His greatest contribution to astronomy was the formulation of an innovative new calendar. The *Jiu Tang shu* (35.1293) reports that in 721 the lack of accurate eclipse predictions led the court to request Yixing to reform the state calendar. He identified a need to understand the movement of the ecliptic (the apparent path of the sun across the sky) and to take measurements in relation to it, but the problem was that the court astronomers based their measurements on the celestial equator and possessed no instrument to measure the ecliptic. Together with the military engineer Liang Lingzan (梁令瓚; d.u.), Yixing built a mechanical water-powered armillary sphere. Its construction was completed in 725. Although it eventually rusted and ceased to operate, the instrument was used by Yixing to gather critical measurements for formulating his calendar, the *Dayan li* (大衍曆). The *Tongdian* (通典), compiled in 801 by Du You (杜佑; 735–812), gives an account of Yixing and Nangong Yue (南宮說; d.u.) analyzing the astronomical observations from various locations around the year 724 (26.156c). Yixing's calendar drew on the results of these investigations while building on the work of earlier calendars that had rapidly evolved throughout the Sui and early Tang periods. His calendar had a number of innovative features including improved methods for solar eclipse prediction, calculation of planetary positions, and a device to calculate length of daytime shadows and the lengths of daytime and nighttime across differing locations and seasons. His calendar also likely incorporated some Indian elements (Ohashi, 2011, 172).

The *Xin Tang shu* (27a.587) states that although other calendars were later adopted, they all emulated the *Dayan li*; thus this calendar was Yixing's most significant work on astronomy. It furthermore states (25.533) that he was the first to specifically employ number theory derived from the *Yijing* (details in fasc. 27 of the *Xin Tang shu*). Text catalogs also indicate that Yixing wrote extensively on

the *Yijing*, and Osabe (1963, 124) identifies seven non-extant texts by or attributed to Yixing: *Zhouyi lun* (周易論), *Zixia Yi zhuan* (子夏易傳), *Jingfang Yi zhuan* (京房易傳), *Yi zuan* (易纂), *Dayan lun yijue* (大衍論義決), *Dayan xuantu* (大衍玄圖), and *Dayan lun* (大衍論). A text entitled *Zixia Yi zhuan* exists, but it is unclear how it relates to what Yixing compiled. The *Jiu Tang shu* (191.5112) cites the *Dayan lun* as one of his works, perhaps indicating its contemporary significance.

The *Xin Tang shu* (27a.587) reports that Yixing died in 727, while his calendar was in draft form. The court ordered Zhang Yue (張說; 667–730) and Chen Xuanjing (陳玄景; d.u.) to edit it. The *Dayan li* came into official use from 729 until 762; its system is explained in fasc. 34 of the *Jiu Tang shu* and fasc. 27–28 of the *Xin Tang shu*. Yixing's work was later criticized by the court astronomer Gautama Zhuan (瞿曇譔; 712–776) who, in 733, together with Chen Xuanjing reported to the court that the *Dayan li* had plagiarized the **Navagraha* (*Jiuzhi li* [九執曆]), a work on Indian mathematical astronomy translated in 718 by his father Gautama Siddhārtha (瞿曇悉達; fl. c. 718). An investigation, however, concluded these allegations were false, though modern scholarship suggests Yixing in fact had probably studied some foreign science (Sen, 1995, 202–203).

In addition to his work on the state calendar, Yixing also reformed the native Chinese system of “field allocation” astrology (*fenye* [分野]), which assigns segments of the sky to ancient territories of China, establishing astral-terrestrial correspondences from which predictions are made primarily with respect to state concerns. This stands in contrast to Indian and Iranian systems of astrology, which focus on the fate of the individual. As the territory of China had expanded since ancient times, it became necessary to account for these new lands, and Yixing had a role in updating the system (Pan-kenier, 2013, 278–279).

Yixing wrote on the history of astronomy. The *Jiu Tang shu* (191.5113) reports that when Zhang Taisu (張太素) had compiled the *Hou Wei shu* (後魏書, not extant), a history of the Wei dynasty, the chapter on astronomy (*Tianwen zhi* [天文志]) was incomplete and that Yixing finished it.

The *Fantian huoluojiu yao* (梵天火羅九曜; T. 1311), an astrology manual complete with mantras and a Daoist rite for the Big Dipper, is attributed to teachings passed down (*xiushu* [修述]) from Yixing, but this work contains Sogdian loanwords and Iranian icons quite different from the Indian icons found

in the *Garbhadhātu maṇḍala* – the *maṇḍala* of the *Mahāvairocana-sūtra* – with which he would have been familiar (*Taizō zuzō* 胎藏圖象, T. 2978 [LXXXVII] 277–279)). Remarks in the preface and colophon suggest a date of around 874, which would make the attribution to Yixing anachronistic, although Mollier (2008, 141) accepts the traditional attribution to Yixing. The *Beidou qixing humo fa* (北斗七星護摩法; T. 1310) and *Xiuyao yigui* (宿曜儀軌; T. 1304) are also attributed to Yixing. Lü Jianfu (2009, 347–349) identifies anachronistic elements in the latter that indicate a composition date from well after →Amoghavajra. Osabe (1963, 256–261) also expressed his doubts, suggesting these works are specimens of popularized Esoteric Buddhism. The *Kanming yizhang jin* (看命一掌金; X. 1043), a divination manual edited in the Ming period with Buddhist themes and comprised primarily of Chinese elements, is also attributed to Yixing.

The Legendary Yixing

Yixing's eminent status led to legendary stories. The Japanese accounts state that when Yixing's mother was pregnant with him, she had a halo of white light on her forehead. After giving birth, the halo moved to the forehead of the child (*Shingon fuhō den*, 63 and *Naishō buppō sōshō kechimyakufu*, 239). Tales of Yixing as an extraordinary monk are also found in late Tang literature, demonstrating that his popular image extended outside Buddhism. The *Kaitian chuanxin ji* (開天傳信記) of Zheng Qi (鄭縈; d. 899) includes a story about the ghost of Yixing visiting Puji (1042.845–846). Yixing is referred to by the title “Heavenly Master” (*tianshi* [天師]), often used for Daoist adepts. This story also appears in the *Ming-huang zalu buyi* (明皇雜錄補遺; 1035.523), compiled in 855 by Zheng Chuhui (鄭處晦; d.u.), and the *Youyang zazu* (西陽雜俎), compiled by Duan Chengshi (段成式; d. 863) in 860 (1047.677).

The *Jiu Tang shu* (191.5112) reports that Yixing met with an erudite Daoist adept named Yin Chong (尹崇; d.u.) and borrowed from him the *Taixuan jing* (太玄經) by Yang Xiong (揚雄; 53 BCE–18 CE), an ancient divination manual. He returned home with the book and after several days revisited Yin Chong. Yin Chong admitted that the work was profound and that after many years of investigation he still was unable to entirely understand it. Yixing

stated that he had mastered its teachings and subsequently produced two works – the *Dayan xuantu* (大衍玄圖) and *Yijue* (義決) – to show to an astonished Yin Chong. Yixing was declared to be a “later born Yanzi” (i.e. Yan Hui 顏回, the foremost disciple of Confucius known for his intelligence). Yixing apparently acquired fame for himself as a result of this, but the veracity of such a laudatory story is doubtful and is likely a fictional account designed to elevate the status of Yixing's works on the *Yijing*.

Another tale relating Yixing's intellectual prowess is told in the *Jiu Tang shu* (191.5113), explaining that Yixing ended up at Guoqing si (國清寺) on Mount Tiantai (天台山) after a long search for instruction in the number theory of the *Yijing* (*dayan* [大衍]). Yixing stood outside the gate and from inside heard mathematical calculations being performed. A monk inside told his disciple, “Today there should be a disciple coming from afar in search of my arithmetic. I reckon he has arrived at the gate. Isn't there someone to let him in?” He then got out an abacus and again said to his attendant, “The disciple will arrive when the waters in front of the gate turn back and flow westward.” Yixing requested teachings and was subsequently fully instructed in the technique. Sure enough, the water outside the gate then turned back and flowed westward. This account appears to stem from Yixing's work with the *Yijing* rather than Buddhist concerns. This same story with minor variations is also told in the *Song Gaoseng zhuan* (T. 2061 [L] 732c26–733a5), although it states Yixing was in search of arithmetic (*suanshu* [算術]).

Foreign astrology was increasingly popularized in China in the early 9th century, a development which is reflected in literary and art records as Indian and Iranian elements were absorbed into the new systems of astrology in China. In tandem with these developments, an associated practice of astral magic was integrated into Buddhism and Daoism (Kotyk, 2016, 2017). Astral magic in the late Tang conceived of the planets and *nakṣatras* as sentient deities who could be appeased or deceived. In this environment, a legendary image of Yixing emerged as not only an adept astrologer but also as a sorcerer capable of summoning stellar deities. One major example of this is in the *Qiyao xingchen bie xingfa* (七曜星辰別行法; T. 1309). It relates a story of Yixing accompanying the Emperor Xuanzong on campaign and carrying out a rite to bring down the spirits presiding over the stars. Yixing makes inquiries to the gods of the 28 lunar stations (*nakṣatra*) and learns of the 30 spirits who preside over illnesses (T. 1309

[XXI] 452c5–14). Astral knowledge attributed to divine revelation is also a feature of Indian *jyotiṣa* literature such as the *Sūryasiddhānta*. This fictional account of Yixing is clearly the union of his historical roles in Mantrayāna and astronomy.

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JEFFREY KOTYK