Japanese Journal of Religious Studies 45/1: 37–86 © 2018 Nanzan Institute for Religion and Culture dx.doi.org/10.18874/jjrs.45.1.2018.37-86

Jeffrey Kotyk

# Japanese Buddhist Astrology and Astral Magic Mikkyō and Sukuyōdō

This study investigates the sources of Japanese Buddhist astrology and astral magic while also examining their later developments, arguing that a significant amount of such arts actually originated in the Near East. Two types of Bud-dhist astrology are identified: "Mikkyō Astrology," which was primarily used to determine auspicious days for rituals in Shingon and Tendai, and Suku-yōdō, the sole Japanese tradition to practice horoscopy. The role of astral magic within these Buddhist traditions is furthermore examined, with a particular focus on the Japanese reception of icons that in large part originated from Iranian sources that had been earlier received in Tang China. Finally, this study attempts to demonstrate the larger cultural significance of Buddhist astrology in medieval Japanese society.

кеуwords: Buddhism—astrology—magic—Mikkyō—Sukuyōdō—horoscopy

Jeffrey KOTYK is Visiting Fellow at Friedrich-Alexander-Universität Erlangen-Nürnberg.

In THE FIRST chapter of the *Genji monogatari* 源氏物語 (*Tale of Genji*) by Murasaki Shikibu (ca. 973-ca. 1014), the emperor was troubled about whether to bestow an imperial rank upon his youngest—albeit most cherished—son, whose mother was not of a suitably high rank. In light of the lack of maternal support he would suffer if he were granted an elevated rank, the emperor had decided to keep the boy's status as a commoner. A visiting Korean sage agreed that this was best. Later, the emperor summoned a Buddhist astrologer, who also expressed the same opinion. It was therefore decided that the boy would be a commoner with the name of Genji (1, 45). In chapter fourteen (2, 106), a Buddhist astrologer-monk again makes an appearance to predict the number of children Genji would have and their respective fates. The term used to refer to these astrologer-monks, or their art, is *sukuyō* 宿曜 (constellations and planets).

Although these figures play a very minor role in this fictional tale, they were, in fact, a highly significant community within the Japanese aristocracy from the tenth to the fourteenth century. Various misunderstandings, however, persist in modern scholarship.<sup>1</sup> To complicate matters, if one browses the shelves of books on fortune telling (*uranai* 占い) in a modern Japanese bookshop, one will find many popular books, meant for general readers, on a system of astrology called *sukuyō*. The blurbs on the covers of these books often connect this astrology to Kūkai 空海 (774–835), the founder of the Shingon lineage in Japan, stating that he brought this system of astrology from Tang China in 806. What, if any, connection is there between these twenty-first century works on "*sukuyō*" and the *sukuyō* known to Murasaki Shikibu? What was the role of Kūkai in the transmission of astrology to Japan? This article will answer these questions by tracing the history of Buddhist astrology in Japan, in addition to discussing the various types of astral magic that accompanied it.

I argue in this study that Japanese Buddhist astrology should be understood as comprising two types. The first type should be called "Mikkyō Astrology." This tradition is an integral component within the ritual frameworks of Shingon and Tendai, being primarily based on an astrology manual comprised of mostly Indian materials, brought to Japan in the ninth century, which we will

<sup>\*</sup>This research was funded by the Robert H.N. Ho Family Foundation and administered by ACLS.

<sup>1.</sup> Athanasios DRAKAKIS (2011, 687), for example, completely misunderstands the history and features of Buddhist astrology in Japan. With respect to *sukuyō* in the *Tale of Genji*, see Котүк (2016, 88–90).

discuss below. The second type is the astrology of Sukuyōdō 宿曜道, which refers to a lineage of Buddhist astrologer-monks that emerged in the late tenth century. This latter type of astrology includes all of the material of the former, as well as an advanced system of horoscopy, whose lore and techniques are in large part traced back to the Near East (Hellenistic Egypt and Iran), rather than India, in addition to incorporating several elements derived from Daoism.<sup>2</sup> My identification of Sukuyōdō as a unique lineage of astrologers is based on the research of Момо (1975), whose work was later substantially developed by YAMASHITA (1990; 1996). Drawing on my earlier research of Chinese sources (KOTYK 2017a; 2017b), I also seek to demonstrate that the astral magic practiced by Japanese Buddhists from the early Heian period includes some hitherto unrecognized elements that originated in the Near East, rather than in India or China, that Japanese Buddhists further developed in their own unique way. One final aim of this article is to demonstrate that Buddhist astrology played an immensely influential role in medieval Japanese society and religion, and as such it ought to be taken into greater consideration in studies of medieval Japanese culture.

#### Historical Background

Indian astrology was first introduced into Chinese via the *Śārdūlakarņāvadāna*, a Buddhist scripture, which was first translated by Dharmarakşa 竺法護 between 307 and 313, titled the *Shetoujian Taizi ershiba xiu jing* 舍頭諫太子二十八宿経 (T 1301; Sutra of Prince Śārdūlakarṇa and the twenty-eight *nakṣatras*). A separate recension of the *Śārdūlakarṇāvadāna*, likely having been produced in Central Asia, was translated as the \**Mātaṅga-sūtra* (*Modengjia jing* 摩登伽経; T 1300) by Guṇabhadra 求那跋陀羅 (394–468). These texts explain native Indian astrology based on the *nakṣatras*, but this system was neither practical nor actually necessary for early Buddhists in China to implement. The *Mahāsaṃnipāta* (*Dafangdeng daji jing* 大方等大集経; T 397) includes three separate texts dealing in part with astrology, but again such astrology with its Indian parameters was never implemented in East Asia.

As I have discussed in an earlier article (KOTYK 2017a), it was only in the eighth century, when Mantrayāna was introduced into China, that Buddhists came to have a pressing need to practice astrology. The responsibility of producing an authoritative, and moreover practical, manual of astrology for determining auspicious days to carry out rituals fell to Amoghavajra  $\overline{\Lambda \cong}$  (705–774),

2. Horoscopy is the art of producing charts that show the positions of the planets at a given time and date, such as the time when a person was born (that is, a natal chart). It is from such a chart that the astrologer interprets the planetary positions according to various doctrines in order to make predictions concerning the individual's personality and fortunes in life. See NEU-GEBAUER and VAN HOESEN (1959); PINGREE (1997); BRENNAN (2017).

who compiled the *Xiuyao jing* 宿曜経 (T 1299), first in 759, followed by a revision in 764.<sup>3</sup> The *Xiuyao jing* was primarily designed for katarchic astrology, but it also teaches basic genethliacal astrology based on the nominal position of the Moon at birth, in which predictions are made concerning an individual's fate and personality. The content of the text is evidently non-Buddhist, given its prescriptions for alcohol and weapon production (Котұқ 2017с, 511–12), and moreover it likely draws upon an earlier Sui-era (581–618) Chinese translation of what appears to have been the *Gārgīya-jyotişa*, a classical Indian manual of astrology (Котұқ 2016, 105).

Amoghavajra's translation of astrology and its subsequent implementation within the Chinese sangha, which was never hampered by Buddhist monastic regulations that at least in theory prohibited the professional practice of astrology (KOTYK 2017c), later prompted widespread interest in astrology within wider Chinese society. An accessible calendar was necessary in order to practice astrology. Cao Shiwei 曹士蒍 (d.u.) first produced such a calendar between 780-783, calling his work the Futian li 符天暦, which he further updated around the year 806 (details reconstructed by TAKESAKO 2016). Popular interest in astrology during the late eighth century also encouraged the translation of non-Buddhist literature concerning horoscopy after Amoghavajra's time, most notably the Duli yusi jing 都利聿斯経 between 795-805, which was brought to China by a certain Li Miqian 李彌乾 (d.u.), said to be from Western India, under whom Cao Shiwei also studied (KOTYK 2017a, 46). Based on the extant fragments of this text, we know that it was a translation of the work of Dorotheus of Sidon (c. 75), a Hellenistic astrologer (MAK 2014). On this point, it is noteworthy that NAKAYAMA (1994, 41) suggested that Cao Shiwei was ethnically from a family from the western regions, which, if they spoke Iranian languages, would have likely meant ease of communication between him and Li Migian.

Li Miqian was indeed likely ethnically Iranian given his expertise. He also introduced into China the system of the "eleven planets," which includes the five visible planets, plus the Sun, the Moon, Rāhu, Ketu, Ziqi 紫炁 and Yuebei 月孛, as well as all their associated astrological lore (KOTYK 2017a, 46–48). Iranian horoscopy was incorporated into the Buddhist *Qiyao rangzai jue* 七曜攘災決 (T 1308; Secrets of seven-planet apotropaism). This astrology manual includes ephemerides for the five visible planets plus Rāhu and Ketu, that were either pulled from or based upon the *Futian li* calendar by Cao Shiwei (Ziqi and Yuebei were not

3. YANO (2013, 226-50) has demonstrated that the "mainland recension" of the *Xiuyao jing* in the Taishō canon is considerably different from the "Japanese recension." The latter can be traced back to the ninth century, having been brought by Japanese monks, and moreover best represents the original version of the text. The Japanese recension was also exclusively used in the medieval period, hence in this study I will cite the *Sukuyōkyō shukusatsu* 宿曜経縮刷 (2 vols), a typeset version of the Japanese recension, edited by Wakita Bunshō 脇田文紹 (1897).

used by Buddhists in Tang China or Japan).<sup>4</sup> The *Qiyao rangzai jue* also teaches astral magic as a means of counteracting unfavorable astrological prognostications, which was adapted from Indian, Chinese, and Iranian sources. Such astrology and astral magic were studied by both Buddhists and Daoists. Japanese monks who visited China during the ninth century were therefore exposed to a culture increasingly immersed in astrology, an atmosphere reflected even in the poetry of the late Tang (KOTYK 2016, 93–96).

Turning to Japan, indigeneous religious beliefs regarded some celestial bodies as deities, most notably Amaterasu, the solar goddess, although no systematic calendrical science or celestial omenology were developed prior to the introduction of Chinese culture. Hosoi (2008, 48–49) argues that this was due to the absence of systematic government in ancient Japan (Wakoku (E)). If such a state had existed, then record and time keeping would have facilitated the development of observational astronomy. There was, moreover, a lack of sailing on the deep sea, which would have required celestial navigation.

Japan received texts explaining native Chinese astrology via the Korean Peninsula prior to the introduction of Indian and Near Eastern systems of astrology. The Nihon shoki 日本書紀 (2, 179) reports that in the year 602, Gwalleuk (Kanroku 観勒), a monk from Baekje (Kudara 百濟), presented to the court "a calendar, as well as books on astronomy and geomancy, together with books on ancient Chinese astrology and divination." These materials were studied by some students at the time. In the following century, worship of Myōken 妙見 (\*Sudṛṣți), the personification of Polaris (hokushin 北辰), flourished (ARUGA 2000, 51). The Nihon ryōiki 日本霊異記, an account of Buddhist stories compiled by Kyōkai 景戒 (d.u.) around 822, reports that Shidehara Yamadera 信天原山寺 in Kawachi no Kuni 河内国 lit lamps as offerings to Myōken. The people of the Kinai 畿內 region annually made lamp offerings. During the era of Empress Abe 帝姬安部 (that is, Kōken Tennō 孝謙天皇, r. 749-758), the local devotees made offerings of lamps, as well as money and valuables, to the custodian of the temple (G 17: 90-91). As YAMASHITA (1996, 292) points out, this indicates that worship of Myöken flourished during the Nara period.<sup>5</sup> The belief in astral deities was therefore existent even before the later developments of the Heian period, to which we now turn.

4. The Futian li is listed in the Nihonkoku genzai sho mokuroku 日本国見在書目録, a catalog of books available in Japan, which was compiled by Fujiwara Sukeyo 藤原佐世 (847–898) in 891, as Tō shichiyō futenreki 唐七曜符天曆 (National Diet Library edn., 33), hence the Futian li, or at least the earlier version that deals with the seven visible planets (the Sun and Moon are included in this count), was available in Japan sometime before 891. It is unclear when it was brought to Japan.

5. His cult was prominent in Japan, but never achieved the same prominence on the mainland. As SØRENSEN (2010, 239) points out, the Japanese monk Ennin 円仁 (794–864), who visited China between 838–847, observed worship of Sudrşti, which he recorded in his travelogue, the *Nittō guhō junrei gyōki* 入唐求法巡礼行記 (1986, 3, 9, 22, 24, 35).

# Mikkyō Astrology

Japan was already positively predisposed toward astrology when the first major introduction of non-Chinese astrology into Japan occurred. Kūkai returned home in 806 with a copy of the *Xiuyao jing*, which is listed in his catalog of texts, the *Go shōrai mokuroku* 御請来目録 (T 2161, 55: 1062a23–24). Kūkai's biography, the *Kōya Daishi go kōden* 高野大師御広伝, produced by Shōken 聖賢 (1083–1147) in 1118, reports that before the Daidō 大同 reign era (806–810), calendar specialists in Japan were unaware of the concept of Sunday (z 8, no. 2: 661b14–17).<sup>6</sup> This refers to the custom of the seven-day week, an originally Greco-Egyptian concept that spread to Iran and India (YANO 2003, 384). Kūkai, therefore, ought to be credited with first introducing the seven-day week into Japan.

The first known reference to the seven-day week in China is found in a Nestorian (East Syriac) Christian (Jingjiao 景教) text, likely dating between 635-638 (T 2142, 54: 1288a24-25). A more precise explanation of the seven-day week is given in the \*Navagraha-karaņa (Jiuzhi li 九執暦), a manual of mathematical observational astronomy translated into Chinese in 718 by the court astronomer Gautama Siddhārtha 瞿曇悉達 (d.u.). It provides a method for mathematically determining the day of the week based upon the epoch of the manual, which in the modern calendar corresponds to the year 657 (SKQS 807: 934). The seven-day week was again briefly mentioned by Yixing 一行 (673-727) and Śubhakarasimha 善無畏 (637-735) in their commentary on the \*Mahāvairocana-sūtra (Dari jing shu 大日経疏), compiled between 724-727 (T 1796, 39: 618a13; КОТҮК 2018). The seven-day week was only substantially explained in Chinese with its astrological features made clear by Amoghavajra in his first draft of the Xiuyao jing in 759 (Sukuyōkyō shukusatsu 2: 22–27). Although the method for calculating the day of the week from the Navagraha-karana is cited in the revised version of the *Xiuyao jing* from 764 (Sukuyōkyō shukusatsu 1: 40–41), the ultimate influence of the Navagraha-karana was negligible despite its scientific value. Nevertheless, it is important to note here that Kūkai would have been exposed to such arithmetic and perhaps mastered it.

Observance of the seven-day week and the *nakşatra* calendar was essential for the proper timing of Mantrayāna rituals, a point to which Kūkai evidently paid attention. Kūkai's understanding of the complexities of the *Xiuyao jing* is

6. As TAKADA (1992, 38) points out, the term for Sunday in this citation is *mitsujitsu* 密日, which later appears in subsequent annotated almanacs (*guchūreki* 具注曆), and thus demonstrates that this new astrology was influential outside the Japanese Buddhist fold. The first character is a phonetic transcription of the Sogdian *myr* ("the Sun"). The Sogdian is a transcription of the corresponding Pahlavī (Middle Persian) *mihr* (Котук 2017a, 43). The use of the Sogdian loanword here points to the popularity of what was originally Iranian astrology in late-Tang China.

demonstrated by his explanation of intercalary months (*jungetsu* 潤月) and "short months" (小月) in the *Hino'o kuketsu* 檜尾口訣, a record of Kūkai's instructions by his disciple Jichie 実慧 (786–847) of Tōji 東寺 (T 2465, 78: 30c13–26). It is clear that Shingon was explicitly interested in astrology from its beginning. This was also the case with Taimitsu. Although Saichō 最澄 (767–822) does not appear to have taken an interest in astrology, the following generation of Tendai monks did. According to the Tendai monk Annen 安然 (841–915?) in his *Sho ajari Shingon mikkyō burui sōroku* 諸阿闍梨真言密教部類総録, a catalog of Mikkyō texts, copies of the *Xiuyao jing* were also brought to Japan by the Tendai monks Ennin in 847 and Enchin 円珍 (814–891) in 858.<sup>7</sup>

Ennin's biography, the *Jikaku Daishi den* 慈覚大師伝, produced by Minamoto no Fusaakira 源英明 (d. 939), relates that in the spring of 849, Ennin requested permission to commence production of a Vajradhātu Maṇḍala 金剛界曼荼羅. Ennin accordingly identified day eight of the fifth lunar month as a *kanro nichi* 甘露日, or "Day of Amṛta" (z 8, no. 2: 691b5–8). This "Day of Amṛta" derives from the *Xiuyao jing*, in which it is defined as a Sunday when the assigned *nakṣatra* of that day is Hasta 軫. On such days, it is auspicious to carry out sacred acts, such as receiving initiations (*kanjō* 灌頂), building temples, receiving precepts, studying scriptures, ordaining as a monk, and practicing the path (*Sukuyōkyō shukusatsu* 1: 33). With respect to Enchin, TAKADA (1992, 40) points out that Enchin authored some works related to the *Xiuyao jing*, including the *Sukuyōkyō gishū* 宿曜経疑集 and *Sukuyōkyō mondō* 宿曜経問答, and appears to have lectured on the *Xiuyao jing* at the age of thirty before he went to China (TAKADA 1992, 56, n. 16). *Xiuyao jing* was a common text for Shingon and Taimitsu from their respective beginnings.

The Shingon monk Shūei 宗叡 (809–884) was responsible for bringing the first manuals on horoscopy to Japan—the aforementioned *Duli yusi jing* and *Qiyao rangzai jue*—when he returned in 865. Shūei lists them in his catalog (*Shin shosha shōrai hōmontō mokuroku* 新書写請来法門等目録) as miscellaneous books (*zōjo* 雜書), while remarking that "although the above texts are not methods of Dharma (*hōmon* 法門), they are required in the world" (T 2174A, 55: 1111b20–c1). Although this indicates that horoscopy was, in fact, widely practiced in China at the time, there is nothing to suggest that Shūei himself practiced it. There is moreover no evidence indicating that any Japanese monk in the ninth century practiced horoscopy. The first accounts of it being practiced appear in the

7. T 2176, 55: 1127b27. See also Enchin's catalog, Nihon biku Enchin nittō guhō mokuroku 日本 比丘円珍入唐求法目録 (T 2172, 55: 1098b8). Ennin's catalog, the Nittō shingu shōgyō mokuroku 入唐新求聖教目録 (T 2167, 55), does not list the Xiuyao jing. The Jikaku Daishi zaitō sōshin roku 慈覚大師在唐送進録 (T 2166, 55) also does not list it. Ennin's travelogue from his time in China (Nittō guhō junrei gyōki) never mentions Buddhist astrology. Nevertheless, Ennin was familiar with the Xiuyao jing (see below). following century, which we will discuss below. Here, the point to bear in mind is that Mikkyō Astrology, based primarily on the *Xiuyao jing*, was satisfactory for determining the most auspicious days to carry out rituals (that is, hemerology).

## Mikkyō Astral Magic

Astrology was an essential component to Mikkyō from its beginning, but the belief in astrology was not necessarily fatalistic, since magical means were available to avert prognosticated disasters. The background behind this was the earlier connection in China between Buddhist astrology and the worship of astral deities. The literature of early Chinese Mantrayāna from the lifetimes of Śubhakarasimha and Amoghavajra displays strong inclinations toward belief in astrological determinism, so it is unsurprising to find that Chinese Buddhists produced various rituals during the ninth century—some blending Indian and Chinese elements—that evidently were born out of interest in, and even fear of, the heavens above.

These concerns about astrological influences encouraged the development of Buddhist cults centered on astral deities starting from the late Tang. In particular, these cults focused on the deity that modern scholars refer to as \*Tejaprabhā (Chishengguang Fo 熾盛光仏). We should first note that "Tejaprabhā" is not attested in any Sanskrit source and this name, in fact, appears to be a reverse-translation by Nanjō Bun'yū. NANJō (1883, 222) reconstructed the title of *Foshuo chishengguang daweide xiaozai jixiang tuoluoni jing* 仏説熾盛光大威徳 消災吉祥陀羅尼経 (later designated as T 963) as "Buddhabhāshita-tejaprabhā mahābalagunāpadvināsa-srī-dhāranī-sūtra." Amoghavajra is traditionally said to be the translator, but a reading of this text reveals an element of native Chinese astrology.<sup>8</sup> Moreover, there is no record of Amoghavajra having translated such a text or practiced such rituals. This perhaps explains why Kūkai seems to have been unaware of Tejaprabhā when he returned in 806.<sup>9</sup> A possibly related figure to Tejaprabhā is Tejorāśi, <sup>10</sup> The name "Tejaprabhā" is tentatively employed

8. The term *fenye* 分野 ("field allocation") appears three times in this text. This is in reference to the native Chinese system of "field allocation astrology." For further details, see PANKENIER (2013, 265–73).

9. Jōnen 靜然 in the *Gyōrin shō* 行林抄 notes that this text was brought to Japan by a Chinese merchant in 907. T 2409, 76: 84b21-22.

10. The Sanskrit of this name is reconstructed from the transcription 諦殊羅施 in Yixing's commentary on the *Mahāvairocana-sūtra* (T 1796, 39: 633c28). This figure is the fourth of five *usnīsas* of the Tathāgata (如來五頂), representing the superior qualities of the five wisdoms of the Tathāgata. Tejorāśi specifically represents the Tathāgata's light removing the darkness of beings, the *\*tejorāśyusnīsa* (光聚仏頂 or 火聚頂). This figure is depicted as a male Indian figure within the Garbhadhātu Maṇḍala (SOMEKAWA 2013, 110–11).



FIGURE 1. Tejaprabhā Maņdala in Asaba shō.

here with the understanding that it is a mistaken, albeit widely used, reconstruction in modern academia.

The primary and earliest Chinese text of the Tejaprabhā cult is titled Da shengmiao jixiang pusa shuo chuzai jiaoling falun 大聖妙吉祥菩薩説除災教令 法輪 (T 966; Disaster eliminating edifying Dharma-wheel as taught by the great and holy excellent auspicious bodhisattva), translated in the year 796 by Śīlabhadra 尸羅跋陀羅 (d.u.) from Mahānālanda Saṃghārāma 大那爛陀寺 in Magadha. This work prescribes a homa ritual, along with the production of a mandala, when the nation witnesses astrologically anomalous phenomena in the sky, such as comets appearing in the natal naksatra of the ruler. The navagraha, twelve zodiac signs and twentyeight naksatras surrounding the \*Tejaprabhā-buddhōsnīsa 熾盛光仏頂, are to be painted within the mandala. The emphasis on these astral figures highlights the deep connection between astrology and Tejaprabhā from the beginning of the cult. Image plate no. 13 of fascile 58 of the Asaba shō 阿娑縛抄, a thirteenth-century Tendai compendium of Mikkyō practice and lore, appears to be this mandala (FIGURE 1). Its inscription states that it was created in 1140, based on an earlier version from Tō-in 唐院.



FIGURE 2. Rāhu in Bonten kara zu.



FIGURE 3. Ketu in *Bonten kara zu*.

With respect to the introduction of Tejaprabhā to Japan, Ennin's catalog of items brought back from China includes a "Tejaprabhā altar diagram" (*Chisheng tan yang* 熾盛壇様) as one fascicle (T 2167, 55: 1084c8). The *Asaba shō* records that in 849, Ennin established a Tejaprabhā practice at Sōjiin 総持院 (TZ 9: 42a6–9). It furthermore states that this ritual, described at length in the *Asaba shō* (fasc. 58–59), is a secret of the school (Tendai), being precious to the nation, and not practiced at Tōji (TZ 9: 24c3–5). It appears that the long-form Tejaprabhā ritual was primarily practiced within Tendai, not Shingon.

The transmission of Tejaprabhā, as well as texts concerning astrology and astral magic, also introduced the worship of planetary deities to Japan. Such worship is a strong feature found within the Chinese Tejaprabhā cult. These deities were originally Indian, but many elements of the planetary deities in extant materials reflect the later transition to Iranian motifs that occurred from the beginning of the ninth century in China. Until recently, scholars have largely misunderstood the origin and function of these planetary deities. FAURE (2015, 97-98), for instance, states that "the origin of these figures remains obscure" and suggests that in the figure of Mars "a Tantric influence is obvious." My recent research (KOTYK 2017b), however, has examined these icons in detail and traced their origin to the Near East, hence eliminating the possibility of Tantric influences. I designate the representations normally accompanying depictions of Tejaprabhā as "Iranian-Mesopotamian," such as those seen in the famous Bonten kara zu 梵天火羅図 (TZ 7: 695): Mercury is a female scribe, Saturn is an elderly "Brahmin" riding a bull, Venus is a female pipa (biwa 琵琶) player, Mars is a red-colored four-armed warrior, Jupiter is a stately man in court attire, Rāhu is a demonic four-armed figure atop a dragon, and Ketu is a demonic four-armed figure on a bull. The dragon and bull here (see FIGURES 2 and 3) are additionally significant, given that they are based on the Iranian symbolic conception of the ascending and descending nodes of the Moon, called gozihr (that is, visually conceived as a dragon sprawling across the sky). The term itself semantically means "bearing the seed, having the origin of cattle" or "the ox" (MACKENZIE 1971, 37; 2012). The icons of the Sun and the Moon, in contrast, are Indian; the Sun is a bodhisattva-like figure atop five horses, and the Moon is a similar figure atop three geese. These figures are seen in earlier Buddhist materials stemming from the time of Śubhakarasimha (720s) and were originally based on the motifs of Āditya (or Sūrya) and Candra, respectively (Котук 2017b, 41).

The Iranian-Mesopotamian planetary icons are also frequently seen alongside Tejaprabhā Buddha in Tangut Xixia representations, which further proves that such conventions originated in China, since the Tangut sources derive from China. There appears to have been some innovation in Japan in light of the *Kuyōtō zuzō* 九曜等図像 (TZ 7: 738) produced in 1164 and stored at Kanchiin 観智院 of Tōji in Kyoto, which includes a line drawing of Tejaprabhā as a Tathāgata aflame, standing atop two lotuses, and holding a bowl and monk's staff, as well as drawings of the planetary icons. This standing representation is unknown among Chinese sources, but appears to be based on depictions of Yakushi Nyorai 薬師如来, or Bhaişajyaguru (Su 2011, 114–17). The Iranian-Mesopotamian icons, minus Ziqi and Yuebei, are also seen in Japanese *hoshi mandara* 星曼荼羅 (star mandalas), which are unique to Japan (TEN GROTEN-HUIS 1999, 116–18; TAKEDA 1995; UJIRO 2012).

The Iranian-Mesopotamian planetary icons and the magical rituals associated with them possess remarkable parallels to those described in the thirteenthcentury Latin translation of the Ghāyat al-Hakīm titled the Picatrix, demonstrating that a significant transmission of Near Eastern astral magic occurred via Iranian intermediaries during the late Tang dynasty (KOTYK 2017b). This magic, or at least part of it, was subsequently transmitted to Japan through Buddhist intermediaries. I should iterate here that these icons, although having been modified via their Iranian transmission, originally stemmed from the earlier Greco-Egyptian tradition of astral magic. The visual representation and magic of Saturn, for example, indicate that this planetary deity in East Asia can actually be traced back to the Hellenistic Kronos, rather than the Indian Sanaiścara. The most prominent example of an astral-magical text in Japan incorporating these Iranian elements is the Kuyō hiryaku 九曜秘暦. This work is comprised of text explaining the astrological features of each day of the seven-day week, while providing the accompanying mantras for each planet, and illustrations of the planetary deities in the Iranian-Mesopotamian fashion (see appended plates).<sup>11</sup> The prescribed ritual therein for Saturn is relatively long. It includes casting a metal image of a Brahmin with a bent back, and making specific black-colored offerings to it (TZ 7: 772a8-b3). Very similar rituals for Saturn are also found in the Qiyao rangzai jue and one Daoist work (Котук 2017a, 53-55). The appearance of this ritual in both Buddhist and Daoist sources seems to indicate that the cult of Saturn was particularly prominent during the late Tang, which was likely a result of the planet not only being the foremost malefic planet in classical horoscopy, but also the planet governing longevity and old age, even in the practice of magic.<sup>12</sup> On the latter point, it is unsurprising that some Daoists were particularly favorable toward Saturn, given their interest in longevity (see DZ 289, 5: 30b18c-2).

11. The material of the work seems to draw upon late Tang Buddhist texts. It is uncertain if the text was originally from China or compiled in Japan. The manuscript copied by Sōkan 僧観 in 1125 was based on an earlier copy from 940; thus, it was composed sometime before 940. For relevant studies, see NAKANO (1969) and MANABE (1982).

12. The *Picatrix* (GREER and WARNOCK 2010–2011, 154) states, "Ask Saturn in petitions concerning old age or generous men ..." The Latin (PINGREE 1976, 112) reads, "Queris enim a Saturno in peticionibus a senibus petendis vel hominibus generosis ..."





FIGURE 4. Saturn in *Genzu mandara*.

FIGURE 5. Libra in *Genzu mandara*.

This prominence of the cult of Saturn during the ninth century perhaps explains why the Iranian-Mesopotamian icon of Saturn 土曜 appears in the *Genzu mandara* 現図曼荼羅 (TZ 1: 789; SOMEKAWA 2013, 211), rather than the original Indian depiction found in the *Taizō zuzō* 胎藏図象 and *Taizō kuzuyō* 胎藏旧図様 (TZ 2: 278, 543). It is uncertain whether it was in China or Japan that the Iranian icon of Saturn was inserted into the mandala. Interestingly, the icon of Libra 秤宮 appears to be the Iranian-Mesopotamian icon of Saturn holding a scale (TZ 1: 783). Although Libra is ruled by Venus, the exaltation of Saturn is in Libra.

The influence of the Iranian transmission of astrology within East Asian Buddhism is further demonstrated by name of the zodiac sign of Aries in the *Genzu* mandara (SOMEKAWA 2013, 183): "palace of the white ram" (hakuyō kū 白羊宮). The Taizō zuzō and Taizō kuzuyō (TZ 2: 284, 559) simply label Aries as "palace of the ram" (yō kū 羊宮). The Duli yusi jing translated Aries as "palace of the white ram," which can be inferred from this term appearing in its extant versified version, the Xitian yusi jing 西天聿斯経 (SKQS 809: 436a16).

Innovation on the part of Japanese Buddhists with respect to the interpretation of the planetary icons is evident. The Iranian-Mesopotamian, as well as the zoomorphic icons (see appended plates below),<sup>13</sup> were authenticated through creative interpetations of their features. The *Byakuhō kushō* 白宝口抄 by Ryōson 亮尊, for instance, provides the following interpretation of the Iranian-Mesopotamian icon of Mercury:

Mercury is active in the northern direction. It is the essence of water. Its body completely manifests afflictions. Afflictions are like water. This manifests craving. Its form truly resembles water. Therefore, it is said that the deity's form is like that of a black snake. A snake is the essence of water. In the northern direction, the former five consciousnesses are active, which thus expresses [the icon's] wearing of a monkey hat, since the monkey is a distracted animal. Holding paper and brush has the meaning of recording the maturation of afflictions, and the fruit of buddhahood from merit. (TZ 7: 307a23–27)

The origin of the zoomorphic representation of Mercury as a snake is uncertain, but Mercury as a scribe is clearly derived from the Mesopotamian association of the planet with Nabū, the god of scribes, which in turn led to the Greeks associating the planet with Hermes. The association with the monkey here is most likely derived from the Hellenistic association between Hermes and Thoth, the sacred animal of the latter being the baboon (KOTYK 2017b, 51). As to the origin of this unique interpretation of the icons of Mercury in the *Byakuhō kushō*, the grammar and vocabulary usage of the cited passage are highly suggestive of a Japanese composition.<sup>14</sup> This points to further Japanese development of the astral magic received from China. We should also note here that it is unlikely that Buddhists in East Asia understood the real origin of these icons, apart from their transmission from the nebulous western regions. That they were interpreted for use within Buddhist practice demonstrates the ease in which even non-Indian materials could be incorporated into Mikkyō.

In addition to the planetary deities, the twenty-eight *nakşatras* are also represented in anthropomorphic forms in Japan. The deification of the *nakşatras* can be traced back to ancient Buddhism in India. In the *Taizō zuzō* and *Taizō kuzuyō*, they are uniformly depicted in the Indian fashion as seated men, with minor variations of hand gestures and held objects (TZ 2: 280–83, 545–61). Their function within this context is as mandala deities. However, motifs stemming from the Iranian transmission of astral magic into China are apparent among

13. The zoomorphic icons are an alternate set of planetary icons described in the *Qiyao rangzai jue* and depicted in the *Kuyō hiryaku*. See KOTYK (2017b, 43–46). See appended plates 10–12 below.

14. For example, using *xianran* 顯然 as a transitive verb is unusual in Chinese. Also, *xing-xiang* 行相, *qian wu shi*前五識, and *yishu* 異熟 are terms derived from Yogācāra texts in Chinese translation. Neither the *Qiyao rangzai jue*, nor any other Chinese astrological work of the ninth century, display such influences from the Yogācāra lexicon, indicating that this interpretation of the icon is Japanese in origin.



FIGURE 6. Nü/Śravaṇa (Osaka). Image from Wikimedia Commons. Creative Commons Attribution-ShareAlike License. https:// commons.wikimedia.org/wiki /File: 五星二十八宿神形图.jpg.



FIGURE 8. Niu/Abhijit.



FIGURE 7. Nü/Śravaṇa (*Nijū-hachi suku zuzō*).



FIGURE 9. Wei/Mūla.



FIGURE 10. Qi / Pūrvāṣādhā.



FIGURE 11. Shi / Pūrvabhādrapadā.



FIGURE 12. Liu / Aślesā.



FIGURE 13. Makara (TZ 2: 286).

the depictions of the *nakşatras* in a Japanese document titled *Nijū-hachi suku zuzō* 二十八宿図像 (Icons of the twenty-eight lunar stations) from Kanchiin of Tōji (TZ 7: 775–800).<sup>15</sup> These icons appear in almost identical forms in the "Painting of the Deities Forms of the Five Planets and Twenty-Eight Lunar Stations" 五星二十八宿神形図, presently in the possession of the Osaka City Museum of Fine Arts.<sup>16</sup> As an example, the icons of Nü 女星神 correspond to the *nakşatra* Śravaṇa (see FIGURES 6 and 7). The production of this painting, which was originally owned by the Song court, is attributed to Liang Lingzan 梁令瓚 (fl. 727). Later, this painting was attributed to the even earlier painter Zhang Sengyou 張僧繇, who flourished between 502 and 519 (JIN 1984, 12–13, 50). However, I have shown that such attributions are problematic from a chronological perspective (KOTYK 2017b, 66–68). These icons and the content of much of their accompanying inscriptions are furthermore both clearly of an Iranian origin. They therefore would date from the early ninth century at the earliest.

15. The original drawings might have been brought to Japan by Jōgyō 常暁 (d. 867) in 839. A document titled *Nijū-hachi suku zō* 二十八宿像 appears in his catalog of items from China. See T 2163, 55: 1070c10.

16. This painting, extant only as a single fascicle, includes the five planets, but only twelve *nakşatra* icons, with the other icons having been included in another fascicle. The inscriptions for the apparently lost icons are preserved in the Qing-era *Midian zhulin* 秘殿珠林 (sкоs 823: 677–81). The *Nijū-hachi suku zuzō* includes fourteen of the twenty-eight icons, but no inscriptions.

What is the original motif behind this goat-headed figure? These icons appear to be derived, at least in part, from zodiacal lore. This can be inferred based on the fact that the lunar station Nü in Chinese astronomy is subsumed under the zodiac sign Capricorn (see тавье 1 below). Similarly, the icon of Niu 牛 (Abhijit) also bears horns (FIGURE 8), and this lunar station is also under Capricorn. This points to a Hellenistic, rather than Indian, motif, since Capricorn in India was understood as a makara and depicted as a fish-like creature (FIGURE 13). Similarly, Wei 尾 (Mūla), depicted as an archer (FIGURE 9), and Qi 箕 (Pūrvāṣāḍhā), depicted as a man mounted on a horse (FIGURE 10), are subsumed under Sagitarrius. Another obvious example is Shi 室 (Pūrvabhādrapadā), depicted as a man atop two fish (FIGURE 11), which is subsumed under Pisces. The icon of Liu 柳 (Áśleşā), however, is a man atop a dragon (FIGURE 12), which reflects the Indian association of Āśleşā with Nāgas. Incorporation of Indian elements would be normal within an Iranian context. The Japanese document at hand clearly stems from an Iranian tradition, most likely having been introduced into East Asia during the ninth century.

The various astral deities are also discussed in various medieval Mikkyō compendiums. For instance, the *Gyōrin shō* (T 2409; Summary of the forest of practices), a compendium of Buddhist rituals and lore compiled in 1154 by Jōnen (d.u.) of Mount Hiei, cites works that describe the planetary deities, including a certain non-extant \**Brahmadeva-saptagraha-sūtra* 梵天七曜経 that describes a unique set of planetary icons in an Iranian fashion similar to those of the *Bonten kara zu* (T 2409, 76: 464b23–65a27). The mantras of the *Qiyao rangzai jue* are also cited in the *Gyōrin shō* (T 2409, 76: 226a9–11). The *Dainichi kyō sho enö shō* 大日経疏演輿鈔, notes on the commentary of the *Mahāvairocana-sūtra* by Gōhō 杲宝 (1306–1362), also cites the *Qiyao rangzai jue*, along with the *Kuyō hiyraku* and *Xiuyao jing*, in a discussion of the qualities of the planets and the astrological significances of their movements throughout the twelve zodiac signs (T 2216, 59: 59a10–16). These discussions demonstrate the continued firm belief in astrology among Mikkyō specialists well into the medieval period.

Buddhist astral magic also incorporated elements derived from Daoist texts, which to some extent was a result of interactions with Onmyōdō 陰陽道 (YAMASHITA 1996, 298). A primary characteristic of the Daoist material is its main focus on the seven stars of the Big Dipper, which are believed to govern human longevity. The incorporation of such beliefs into Buddhist practice already occurred in the late Tang, which is clear from the diagram and text in the *Foshuo beidou qixing yanming jing* 仏説北斗七星延命経 (T 1307, 21: 425b5–c28). In this work, the seven stars are associated with the twelve earthly branches (*di zhi* 地支). The star presiding over an individual's life is determined by the earthly branch of the sexagenary cycle for the year when they were born. The *Ono rokuchō* 小野六帖, by the Shingon monk Ningai 仁海 (951–1046), prescribes

this same model in its explanation of a "Ritual for Offering to the Primordial Star" (*Ganjinku sahō* 元辰供作法) under the section detailing rituals for asterisms (T 2473, 78: 98a2–3) titled "Private Remarks on Sukuyō" (*sukuyō shiki* 宿曜 私記). Ningai also cites the *Bonten kara zu* and *Qiyao rangzai jue*. The magic with which he was familiar therefore clearly consisted of Chinese, Indian, and Iranian elements, which by his time had become fully digested into the framework of Mikkyō practice. The mature system of Mikkyō astral magic was called *Hokuto hō* 北斗法 ("Ritual of the Northern Dipper"), which, despite the name, also incorporates the planetary, zodiacal, and *nakṣatra* deities. HAYAMI (1976, 97) suggests that features of astral magic identifiable with Onmyōdō are apparent in the tenth century, but that during the eleventh century the *Hokuto hō* was systematized as a specifically Mikkyō practice.

In light of the widespread belief in astral deities and astrology in Japan during the Nara and early Heian periods, it is unsurprising that such interests would lead to the formation of a community of professional astrologers capable of practicing horoscopy, arguably the most complex system of astrology.

### History of the Sukuyōdō

Although by the end of the ninth century Japan possessed the necessary texts to cast horoscopes, including Cao Shiwei's *Futian li*, it appears that the country still lacked professional astrologers. Horoscopy requires not only basic astronomical knowledge in order to produce a horoscope, but also familiarity with astrological doctrines in order to interpret it and make predictions. The role of Buddhism in the transmission of such knowledge foreshadowed the emergence of later astrologer-monks, the Sukuyōshi 宿曜師. The "Mikkyō Astrology" discussed above must be considered separate from the horoscopy practiced by the Sukuyōshi, since horoscopy was the exclusive art of the Sukuyōshi.

The first calendrical specialist with the *Futian li* in Japan was the Tendai monk Nichien 日延 (d.u.). Nichien was a disciple of the Tendai monk Ninkan 仁観 (d. 934), who also had a background in calendrical science (YAMASHITA 1990, 488–89). Sometime around the mid-tenth century, the Onmyōji Kamo no Yasunori 賀茂保憲 (917–977) voiced his concerns that the *Senmyō reki* 宣明曆 state calendar (brought to Japan in 859 and adopted from 862) had been in use for well over a century and that a new calendar probably had been adopted on the mainland. He recommended that Nichien be sent to acquire and study a new calendar. Nichien departed in 953. He arrived in the state of Wuyue 吳越 where he studied a version of the *Futian li* and ephemerides (*licheng* 立成),

which he brought back in 957.<sup>17</sup> The *Futian li* was used by the Sukuyōshi through the Heian and Kamakura periods (Момо 1969, 400–408).

Although Nichien played such a crucial role in transmitting the necessary knowledge to practice horoscopy, according to the encyclopedic early Kamakura-era *Nichū reki* 二中曆 (unknown author), Nichien is listed as a Rokumeishi 禄命師 (master of fortune telling), rather than as a Sukuyōshi (under the *ichi nōreki* 一能曆 heading; fasc. 13, 56). The first Sukuyōshi listed in the *Nichū reki* is Hōzō 法蔵 (905–969). In the year 961, Hōzō engaged in a debate with the Onmyōji Kamo no Yasunori over the asterism believed to constitute the natal asterism (*honmyō suku* 本命宿) of Murakami Tennō (926–967). This debate also dealt with the day when the appropriate ritual was to be executed (*honmyō jitsu* 本命日). As YAMASHITA points out (1990, 492), the *Ono ruihi shō* 小野類秘鈔 (sz 36: 85–86) by Kanshin 寬信 (1084–1153) and the *Byakuhō kushō* (TZ 7: 297b1–C4, 334b8–35a26) cite the written reports by Hōzō and Kamo no Yasunori. We can gain a clear understanding of their respective positions as follows.

Murakami Tennō was born on the second day (*tei gai* 丁亥) of the sixth lunar month in year four of the reign era Enchō 延長 (926). In the sexagenary cycle, this year landed on *hei jutsu* 丙戌. Kamo no Yasunori proposed that *hei jutsu* be regarded as the day when the ritual was to be executed. As to the natal asterism, he referred to the aforementioned table of the *Xiuyao jing*, in which the twentyseven *nakşatras* are assigned to each day of the lunar calendar. In this case, 6/2 corresponds to Āsleşā 柳 (*Sukuyōkyō shukusatsu* 1: 13–15). Hōzō, however, disagreed with both points. He proposed that the ritual was to be executed on the actual day of birth according to the sexagenary cycle (*tei gai*) and that the natal asterism be determined based upon the *nakşatra* in which the Moon was actually lodged at the time of birth. In the end, a third party, Yoshino Nichizō 吉野 日蔵 (d.u.), presented a judgment on the matter in three fascicles, in which the natal asterism would be determined by Hōzō's explanation, while the day of the ritual would be determined by Kamo no Yasunori's explanation. This is recorded in the *Asaba shō* (TZ 9: 457b15–19) and *Gyōrin shō* (T 2409, 76: 458c8–11).

There are two important things to note about this debate. First, in this case, Hōzō is referring to Chinese lunar stations in practice, but the astrological lore stems from the Indian *nakṣatras*. Second, Hōzō is disregarding the table in the revised version of the *Xiuyao jing* and instead relying on more accurate methods of calculating the true position of the Moon. Amoghavajra's team produced this table likely as a means of facilitating Chinese use of the Indian calendar without

17. Nichien's trip to China is detailed in a document entitled *Daizaifu jinja bunsho* 大宰府神社 文書, dated to around 1053. It was rediscovered by Takeuchi Rizō (1907–1997) in 1954 at Daizaifu Jinja 大宰府神社 in Kyushu. Nichien also carried with him works of the Tiantai school, which had been lost in China. See Такеисні (1955); Момо (1969). For details on the Tiantai texts carried by Nichien see Момо (1968); BROSE (2006, 53–56). having to employ calculations or redesigning Chinese observational astronomy to accommodate the *nakşatra* parameters, but with the result that the Moon only nominally "lodges" in the assigned *nakşatras*. Kūkai appears to have only known Amoghavajra's system. Experts in calendrical science and astronomy, however, would have noticed the discrepancies between observed positions and the table. Hōzō did not necessarily face any serious objections to his decision to employ a scientific approach, since the first version of the *Xiuyao jing* from 759 states that "the corresponding *nakşatra* is always the one in which the Moon is lodged" (*Sukuyōkyō shukusatsu* 2: 7; YAMASHITA 1990, 494). This early preference in the Sukuyōdō tradition for accurate calculations is still apparent in a later horoscope (see below).

Kanshin states, "I am unaware of the basis [of Hōzō's conclusion]. This was not received from a teacher's instruction, being something he reached via his unique views" (sz 36: 85b6–7). This points to the early innovation of Sukuyōdō and its divergence from mainstream Mikkyō. The latter it seems regarded the *Xiuyao jing* as not only a canonical text, but also one that was originally taught by Mahāvairocana (sz 36: 85b15–86a2).

Hōzō being traditionally identified as the first Sukuyōshi is also historically reasonable, given that one of the first references to Sukuyodo itself is found in Hōzō's report quoted in the Ono ruihi shō (sz 36: 86a17). The appended suffix of -do 道 is likely in emulation of the then long-established Onmyōdō. At this point, Sukuyōdō does not yet appear to exist as an identifiable lineage or community. However, shortly after Hozo's time, we see reference to "Sukuyo" in the Genji monogatari, which suggests that Sukuyōdō emerged as an identifiable community between Hōzō's death in 969 and the first or second decade of the following century. The first references to Sukuyodo and Sukuyoshi within the journals of aristocrats date to the early to mid-eleventh century (TODA 2007, 46). YAMASHITA (1990, 508) also points out that Sukuyōshi, primarily hailing from Kōfukuji 興福寺, became especially active among the aristocracy starting in the late tenth century. Sukuyōshi also officially participated in state management of the calendar between 995–1038. The monk Ninsō was likely the earliest Sukuyōshi to contribute to state calendar production starting in 995 (TAKADA 1992, 42). After 1038, Sukuyōshi continued to debate with calendrical experts at court until the thirteenth century, in particular with respect to predicting eclipses (YAMASHITA 1990, 509-11; YUASA 2007). AKAZAWA (2007, 1017) argues that there existed a tendency to exclude Sukuyoshi in calendar production and astronomy at court that was a result of said sciences becoming the professional domain of the households Kamo and Abe, which were associated with Onmyōdō.

The Insei (1086–1185) and Kamakura (1185–1333) periods were a time of great activity for Sukuyōdō, although, as Akazawa (2007, 1003) infers based on the

number of relevant figures in extant documents, it appears that there still existed a substantially greater number of Onmyōji than Sukuyōshi. TODA (2006, 29-32) notes that during the later years of the Insei period, Sukuyodo started placing particular emphasis on apotropaic rituals as a means of countering astrologically prognosticated calamities in addition to paying more attention to predictions concerning death specifically. Two primary lineages of Sukuyōdō, Chin-ryū 珍流 (variant: 珎) and San-ryū 算流, emerged and remained active through the Kamakura period (YAMASHITA 1990, 502-503). These lineages stem from two prominent Sukuyōshi who were active during the Insei period, Chinga 珍賀 (b. 1129) and Kyōsan 慶算. Chinga was the son of Chinya 珍也 (b. 1083), a Sukuyōshi of Hōryūji 法隆寺 (YANO 2013, 166). Chinga, however, was based out of Kyoto, where he built the Hokutokōrin-in 北斗降臨院 at Kiyomizudera 清水寺 sometime before the year 1165 (KANECHIKU 1999, 37). Kyōsan was from Onjōji 園城寺 and was an innovator of Sukuyō rituals. The two men knew each other. Chinga produced an astrology report for Gotoba Tennō 後鳥羽天皇 (r. 1183-1198), but his errors were later corrected by Kyōsan (TODA 2006, 32-33, 36-37). The presence of these astrologers at the highest level of Japanese society indicates the appeal of horoscopy at the time.

An important specimen from the Insei period related to Sukuyōdō, preserved in the depository of Kōzanji 高山寺 in Kyoto, is the *Sukuyō senmon shō* 宿曜 占文抄. This twenty-seven page document in its extant form is a collection of notes recopied in 1188 by the Sukuyōshi Shinsan 深算 (UJIRO 2012, 96). This document contains astrological lore drawing upon Buddhist scriptures in addition to often baffling commentary regarding how to reconcile the different lunar and solar calendrical systems prescribed in various Buddhist and non-Buddhist texts (the latter includes the *Duli yusi jing*). This text illustrates that Sukuyōdō in this period had not attempted to produce any systemized doxography or orthodox canon of texts, which stands in contrast to the established Buddhist schools. This perhaps was a result of Sukuyōshi being a secondary profession that was carried out alongside simultaneous affiliation with established Buddhist schools.

During the Kamakura period, some Sukuyōshi were active in Kamakura. One of the well-documented Sukuyōshi of this period was Chin'yo 珍誉 (b. 1167), who was also a *waka* 和歌 poet. Some of his *waka* poems are included in the *Chin'yo hōin waka* 珍誉法印和歌 (z 16, no. 1: 348–50), appended to which is Chin'yo's lineage. Chin'yo's predecessors here include his father Chin'yō 珍耀 (1148–1184) and his grandfather Chinga, the latter specified as having descended from Chin'ya. Chin'yo served the Kamakura bakufu as a Sukuyōshi between the years 1223–1246 following the Jōkyū War in 1221, when he was called upon to perform rituals directed at the seven planets (KANECHIKU 1999, 38–39). He was also skilled enough in astronomy to attempt to predict a solar eclipse in the year 1225 (YuASA 2007, 56). TODA (2007, 50) points out that accounts in the *Azuma kagami* concern-

ing rituals related to astral anomalies increase following the Jōkyū War. Chin'yo's service as a ritualist specializing in astral magic during these two decades demonstrates that the belief in the power of astral deities stemming from earlier centuries remained consistent and strong among Japanese elites.

As to the demise of Sukuyōdō, YAMASHITA (1990, 519–20) points out that the final symbolic blow to the tradition was when the aforementioned Hokutokōrin-in burned down in 1417 (ZH 3: 109a9–10). It appears that Sukuyōdō as an identifiable community vanished around this time after having existed since the late tenth century.

#### Sukuyōdō Horoscopy

We can gain a glimpse into early Sukuyōdō horoscopy by looking at the notes appended in 999 by a Japanese hand to the Qiyao rangzai jue (T 1308, 21: 452a29b9). The first comment unclearly cites the title of a text, stating that the Moon  $\exists$ (a scribal error for the graphically similar Sun  $\exists$ ) is fixed at the third degree of Kui 奎 (here the Chinese lunar station, not the nakṣatra Revatī) at the vernal equinox in the second lunar month. This is in reference to the solar table of the Qiyao rangzai jue (450c5-51a11). It further states that Aries (here the term is the hakuyō kū, or "white ram," from the Duli yusi jing) is defined from the vernal equinox, although there was now a discrepancy of more than three Chinese degrees and that a new table should be made. This is explained by the fact that a total of 275 years had elapsed between 724 (when the solar table of the Qiyao rangzai jue is stated to have been produced) and 999. By the year 999, the Sun had retreated about 3.84 degrees (3.89 Chinese degrees) due to axial precession. The fact that an update was necessary to keep the zodiac of Aries in alignment with the vernal equinox indicates use of a tropical, rather than sidereal, zodiac.<sup>18</sup> Elsewhere, in the Byakuhō kushō, the Duli yusi jing is also said to define the first month from Pisces (TZ 7: 315a20), which in the said solar table would correspond exactly thirty days prior to the seventeenth degree of Wei 危 (the first day of the solar term of Yushui 雨水).<sup>19</sup> The zodiac here is clearly aligned with the solar terms, which themselves are aligned with the equinoxes and solstices. The use of a tropical zodiac is highly significant because Indian astrology, and even the

18. The twelve zodiac signs were originally formulated in Mesopotamia relative to stars, including those constellations from which they are named. This is called a sidereal zodiac. The tropical zodiac, which was in use from late antiquity, defines the zodiac signs in relation to the vernal equinox. The tropical model became standard in Arab and European traditions. Although Indian astronomers absorbed much Hellenistic astronomy, Indians largely continued using the sidereal (*nirayaṇa*) zodiac, rather than adopting the tropical zodiac (*sāyana*). See GANSTEN (2010, 284) and EVANS (1998, 39).

19. The *Sukuyō senmon shō* also provides one definition of several, in which the first month is defined from Pisces (see fifth page of document, reproduced in UJIRO 2012, 114).

	11月 Capricorn		12 月 Aquarius		1 月 Pisces		2月 Aries		3月 Taurus		4 月 Gemini	
	冬至	小寒	大寒	立春	雨水	驚蟄	春分	清明	穀雨	立夏	小滿	芒種
Н	Winter Solstice						Vernal Equinox					
1	斗9	牛1	女8	危2	危17	室15	奎3	婁1	胃3	昴4	畢8	參6
2	斗10	牛2	女9	危3	室1	室16	奎4	婁2	胃4	昴5	畢9	參7
3	斗11	牛3	女10	危4	室2	室17	奎5	婁3	胃5	昴6	畢10	參8
4	斗12	牛4	女11	危5	室3	壁1	奎6	婁4	胃6	昴7	畢11	參9
5	斗13	牛5	虚1	危6	室4	壁2	奎7	婁5	胃7	昴8	畢12	參10
6	斗14	牛6	虚2	危7	室5	壁3	奎8	婁6	胃8	昴9	畢13	井1
7	斗15	牛7	虚3	危8	室6	壁4	奎9	婁 <sub>7</sub>	胃9	昴10	畢14	井2
8	斗16	牛8	虚4	危9	室7	壁5	奎10	婁8	胃10	昴11	畢15	井3
9	斗17	女1	虚5	危10	室8	壁6	奎11	婁9	胃11	畢1	畢16	井4
10	斗18	女2	虚6	危11	室9	壁7	奎12	婁10	胃12	畢2	觜1	井5
11	斗19	女3	虚7	危12	室10	壁8	奎13	婁11	胃13	畢3	參1	井6
12	斗20	女4	虚8	危13	室11	壁9	奎14	婁12	胃14	畢4	參2	井7
13	半21	女5	虚9	危14	室12	壁10	奎15	婁13	昴1	畢5	參3	井8
14	半22	女6	虚10	危15	室13	奎1	奎16	胃1	昴2	畢6	參4	井9
15	半23	女7	危1	危16	室14	奎2	奎 <sub>17</sub>	胃2	昴3	畢7	參5	井10
	5月 Cancer		6月 Leo		7月 Virgo		8月 Libra		9月 Scorpio		10月 Sagittarius	
	Cancer		Leo		Virgo		Libra		Scorp	io	Sagitta	arius
	Cancer 夏至	小暑	Leo 大暑	立秋	Virgo 處暑	白露	Libra 秋分	寒露	Scorp 霜降	io 立冬	Sagitta 小雪	arius 大雪
	Cancer 夏至 Summer Solstice	小暑	Leo 大暑	立秋	Virgo 處暑	白露	Libra 秋分 Autumn Equinox	寒露	Scorp 霜降	io 立冬	Sagitta 小雪	arius 大雪
1	Cancer 夏至 Summer Solstice 井12*	小暑	b), Leo 大暑 柳10	立秋 張4	Virgo 處暑 張19	白露 翼16*	b) Libra 秋分 Autumn Equinox	寒露 角8	Scorp 霜降 氐1	io 立冬 氐16	IO/J Sagitta 小雪 尾6	rrius 大雪 箕4
1	Cancer 夏至 Summer Solstice 井12* 井13	小暑 井27 井28	b)3 Leo 大暑 柳10 柳11	立秋 張4 張5	以 Wirgo 處暑 張19 翼1	白露 翼16* 翼17	b) Libra 秋分 Autumn Equinox 軫12 軫13	寒露 角8 角9	Scorp 霜降 氏1 氏2	io 立冬 <u></u> 氐16 房1	IO/J Sagitta 小雪 尾6 尾7	rrius 大雪 箕4 箕5
1 2 3	Cancer 夏至 Summer Solstice 井12* 井13 井14	小暑 井27 井28 井29	0)1 Leo 大暑 柳10 柳11 柳12	立秋 張4 張5 張6	以 Wirgo 處暑 張19 翼1 翼2	白露 翼16* 翼17 翼18	b) Libra 秋分 Autumn Equinox 軫12 軫13 軫14	寒露 角8 角9 角10	Scorp 霜降 氐1 氐2 氐3	io 立冬 <u></u> 氐16 房1 房2	IO77 Sagitta 小雪 尾6 尾7 尾8	rrius 大雪 箕4 箕5 箕6
1 2 3 4	Cancer 夏至 Summer Solstice 井12* 井13 井14 井15	小暑 井27 井28 井29 井30	b)1           Leo           大暑           柳10           柳11           柳12           柳13	立秋 張4 張5 張7	Virgo           處暑           張19           翼1           翼2           翼3	白露 翼16* 翼17 翼18 翼19	b) Libra 秋分 Autumn Equinox 軫12 軫13 軫14 軫15	寒露 角8 角9 角10 角11	5/3           Scorp           霜降           氏1           氏2           氏3           氏4	io 立冬 氏16 房1 房3	Rong Sagitta 小雪 尾6 尾7 尾8 尾9	rrius 大雪 葉4 葉5 葉6 葉7
1 2 3 4 5	Cancer 夏至 Summer Solstice 井12* 井13 井14 井15 井16	小暑 井27 井28 井29 井30 鬼1	がご           Leo           大暑           柳10           柳11           柳12           柳13	立秋 張4 張5 張6 張7	Wirgo           處暑           張19           翼1           翼3           翼4	白露 翼16* 翼17 翼18 翼19 軫1	秋分           秋分           Autumn           Equinox           総12           総13           総14           総15           総16	寒露 角8 角9 角10 角11 角12	573           Scorp           霜降           氐1           氐2           氐3           氐4           氐5	io 立冬 <u>氐16</u> 房1 房3 房3	1073 Sagitta 小雪 尾6 尾7 尾8 尾9 尾10	rrius 大雪 箕4 箕5 箕6 箕7 箕8
1 2 3 4 5 6	Cancer           夏至           Summer           Solstice           井12*           井13           井14           井15           井16           井17	小暑 井27 井28 井29 井30 鬼1 鬼2	ホート     ホート       水暑     一       柳10     柳11       柳11     柳12       柳13     柳14       星1	立秋 張4 張5 張7 張8 張9	Wirgo           處暑           張19           翼1           翼2           翼3           翼4	白露 翼16* 翼17 翼18 翼19 軫1 軫2	が分       秋分       Autumn       Equinox       軫12       軫13       軫14       軫15       軫16       軫17	寒露 角8 角9 角10 角11 角12 角13	5,7           Scorp           霜降           長1           長2           長3           長4           長5           長6	io 立冬 氏16 房1 房3 房4 房5	1073 Sagitta 小雪 尾6 尾7 尾8 尾9 尾10 尾11	xrius 大雪 葉4 葉5 葉6 葉7 葉8 葉9
1 2 3 4 5 6 7	Cancer           夏至           Summer           Solstice           井12*           井13           井14           井15           井16           井18	小暑 井27 井28 井29 井30 鬼1 鬼2 柳1	水晶           大暑           柳10           柳11           柳12           柳13           柳14           星1           星2	立秋 張4 張5 張7 張8 張9 張10	Wirgo           處暑           張19           翼1           翼2           翼3           翼4           翼5           翼6	白露 翼16* 翼17 翼18 翼19 軫1 軫2 軫3	秋分       Autumn Equinox       軫12       軫13       軫14       軫15       軫16       軫17       軫18	寒露 角8 角9 角10 角11 角12 角13 元1	第3           Scorp           霜降           長1           長2           長3           長4           長5           長6           長7	io 立冬 氐16 房1 房2 房3 房4 房5 心1	1073 Sagitta 小雪 尾6 尾7 尾8 尾9 尾10 尾11 尾12	rrius 大雪 策4 策5 策6 策7 策8 策9
1 2 3 4 5 6 7 8	Cancer           夏至           Summer           Solstice           井12*           井13           井14           井15           井16           井17           井18           井19	小暑 井27 井28 井29 井30 鬼1 鬼2 柳1 柳2	水晶           水晶           柳10           柳11           柳12           柳13           柳14           星1           星2           星3	立秋 張4 張5 張7 張8 張9 張10 張11	Wirgo           處暑           張19           翼1           翼2           翼3           翼4           翼5           翼6           翼7	白露 翼16* 翼17 翼18 翼19 軫1 軫2 軫3 軫4	秋分           秋分           Autumn Equinox           総12           総13           総14           総15           総16           総17           総18           総19	寒露 角8 角9 角10 角11 角12 角13 亢1 元2	第3           Scorp           霜降           長1           長2           長3           長4           長5           長6           長7           長8	io 立冬 氐16 房1 房3 房3 房4 房5 心1	1073 Sagitta 小雪 尾6 尾7 尾8 尾9 尾10 尾11 尾12 尾13	rrius 大雪 策4 策5 策6 策7 策8 策9 策10 十1
1 2 3 4 5 6 7 8 9	Cancer           夏至           Summer           Solstice           井12*           井13           井14           井15           井16           井17           井18           井19           井20	小暑 井27 井28 井29 井30 鬼1 鬼2 柳1 柳2 柳3	Leo           上eo           大暑           柳10           柳11           柳12           柳13           柳14           星1           星2           星3           星4	立秋 張4 張5 張6 張7 張8 張9 張10 張11	Wirgo           處暑           張19           翼1           翼2           翼3           翼4           翼5           翼6           翼7           翼8	白露 累16* 累17 累18 累19 軫1 軫2 軫3 軫4 軫5	秋分       秋分       Autumn Equinox       軫12       軫13       軫14       軫15       軫16       軫17       軫18       軫19       角1	寒露 角8 角9 角10 角11 角12 角13 元1 元2 元3	57.7           Scorp           霜降           長1           長2           長3           長4           長5           長6           長7           長8           長9	io 立冬 <u><u></u> <u></u> <u></u> <u></u> <u></u> <u></u> <u></u> <u></u> <u></u> <u></u> <u></u> <u></u> <u></u></u>	IO/J         Sagitta         小雪         尾6         尾7         尾8         尾9         尾10         尾11         尾12         尾13         尾14	年期     大雪       大雪     (1)       第4     (1)       第5     (1)       第6     (1)       第9     (1)       第10     (1)       42
1 2 3 4 5 6 7 8 9 10	Cancer           夏至           Summer           Solstice           井12*           井13           井14           井15           井16           井17           井18           井19           井20           井21	小暑 井27 井28 井29 井30 鬼1 鬼2 柳1 柳2 柳3 柳4	Leo       大暑       柳10       柳11       柳12       柳13       柳14       星1       星2       星3       星4       星5	立秋 張4 張5 張7 張8 張9 張10 張11 張12 張13	Wirgo           處暑           張19           翼1           翼2           翼3           翼4           翼5           翼8           翼9	白露 翼16* 翼17 翼18 翼19 軫1 軫2 軫3 軫4 軫5 軫6	NJ         Libra         秋分         Autumn Equinox         軫12         軫13         軫14         軫15         軫16         軫17         軫18         軫19         角1         角2	寒露 角8 角9 角10 角11 角12 角13 元1 元2 元3 元4	Scorp     電路     電路	io 立冬 氐16 房1 房3 房3 房4 房5 心1 心2 心3	IO/J           Sagitta           小雪           尾6           尾7           尾8           尾9           尾10           尾11           尾12           尾13           尾15	rrius 大雪 策4 策5 策6 策7 策8 策9 第10 斗1 十2 十3
1 2 3 4 5 6 7 8 9 10 11	Cancer           夏至           Summer           Solstice           井12*           井13           井14           井15           井16           井17           井18           井19           井20           井21	小暑 井27 井28 井29 井30 鬼1 鬼2 柳1 棟2 柳1 柳2 柳3 柳4 柳5	Leo         大暑         柳10         柳11         柳12         柳13         柳14         星1         星3         星4         星5         星6	立秋 張4 張5 張6 張7 張8 張9 張10 張11 張12 張13	Wirgo           處暑           歲月9           粟1           粟2           粟3           粟4           粟5           粟6           粟7           粟8           粟9           粟10	白露 翼16* 翼17 翼18 翼19 軫1 軫2 軫3 軫3 軫4 軫5 軫6	NJ         Libra         秋分         Autumn         Equinox         軫12         軫13         軫14         軫15         軫16         軫17         軫18         軫19         角1         角2         角3	寒露 角8 角9 角10 角11 角12 角13 亢1 元2 元3 元4 元5	第73           Scorp           霜降           長1           長2           長3           長4           長5           長6           長7           長8           長9           長10           長10	io 立冬 低16 房1 房2 房3 房4 房5 心1 心2 心3 心4 尾1	IO/J           Sagitta           小雪           尾6           尾7           尾8           尾9           尾10           尾11           尾12           尾13           尾14           尾15           尾16	xrius       大雪       第4       第5       第6       第7       第8       第9       第10       斗1       斗2       斗3       斗4
1 2 3 4 5 6 7 8 9 10 11 11 12	Cancer         夏至         Summer         Solstice         井12*         井13         井14         井15         井16         井17         井18         井19         井20         井21         井23	小暑 井27 井28 井29 井30 鬼1 鬼2 柳1 柳2 柳3 柳4 柳5 柳6	Leo         上eo         大暑         柳10         柳11         柳12         柳13         柳14         星1         星2         星3         星4         星5         星6         星7	立秋 張4 張5 張6 張7 張8 張9 張10 張11 張12 張13 張14 張15	Wirgo           處暑           處見           强19           翼1           翼2           翼3           翼4           翼5           翼6           翼7           翼8           翼9           翼10           翼11	白露	NJ         Libra         秋分         Autumn         Equinox         軫12         軫13         軫14         軫15         軫16         軫17         軫18         軫19         角1         角2         角3         角4	寒露 角8 角9 角10 角11 角12 角13 亢1 亢2 元3 元4 元5 元6	Sraph     Scorp     電路     電路	io 立冬 長16 房1 房2 房3 房4 房5 心1 心2 心3 心4 尾1 尾2	IO/J           Sagitta           小雪           尾6           尾7           尾8           尾9           尾10           尾11           尾12           尾13           尾15           尾16           尾17	Trius       大雪       第4       第5       第6       第7       第8       第9       第10       斗1       斗2       斗3       斗4       斗5
1 2 3 4 5 6 7 8 9 10 11 11 12 13	Cancer         夏至         Summer         Solstice         井12*         井13         井14         井15         井16         井17         井18         井19         井20         井21         井23         井21         井23         井23	小暑 井27 井28 井29 井30 鬼1 鬼2 柳1 穂2 柳3 柳4 柳5 柳6 柳7	Leo         上eo         大暑         柳10         柳11         柳12         柳13         柳14         星1         星3         星4         星5         星6         星7         張1	立秋 張4 張5 張6 張7 張8 張9 張10 張11 張12 張13 張14 張15 蛋16	Wirgo           處暑           處見           張19           翼1           翼2           翼3           翼4           翼5           翼6           翼7           翼8           翼9           翼10           翼11	白露 翼16* 翼17 翼18 翼19 軫1 軫2 軫3 軫4 軫5 軫6 軫7 軫8 軫9	NJ         Libra         秋分         Autumn Equinox         軫12         軫13         軫14         軫15         軫16         軫17         軫18         軫19         角1         角2         角3         角4         角5	寒露 角8 角9 角10 角11 角12 角13 亢1 元3 元3 元4 元5 元6 元7	Sring     Scorp     電     電     電     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に      に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に     に          に     に     に     に	io 立冬 氐16 房1 房3 房3 房3 房5 心1 心2 心3 心3 心4 尾1 尾2	IO/J         Sagitta         小雪         尾6         尾7         尾8         尾9         尾10         尾11         尾12         尾13         尾14         尾15         尾16         尾17         箕1	xrius       大雪       第4       第5       第6       第7       第8       第9       第10       斗1       斗2       斗3       斗4       斗5       斗6
1 2 3 4 5 6 7 8 9 10 11 12 13 14	Cancer         夏至         Summer         Solstice         井12*         井13         井14         井15         井16         井17         井18         井20         井21         井22         井23         井24         井25	小暑 井27 井28 井29 井30 鬼1 鬼2 柳1 柳2 柳3 柳4 柳5 柳6 柳7 柳8	Leo         上eo         大暑         柳10         柳11         柳12         柳13         柳14         星1         星2         星3         星4         星5         星6         星7         張1         張2	立秋 張4 張5 張6 張7 張8 張9 張10 張11 張12 張13 張14 張15 張16 張17	Wirgo           處暑           處見           張19           翼1           翼2           翼3           翼4           翼5           翼6           翼7           翼8           翼9           翼10           翼11           翼12           翼13	白露 翼16* 翼17 翼18 翼19 軫1 軫2 軫3 軫3 軫4 軫5 軫6 軫7 軫8 軫9	入力         社ibra         秋分         Autumn         Equinox         軫12         軫13         軫14         軫15         軫16         軫17         軫18         軫19         角1         角2         角3         角4         角5         角6	寒露 角8 角9 角10 角11 角12 角13 亢1 元2 元3 元3 元4 元5 元6 元7	S. Scorp     電流     家庭の     家庭	io 立冬 低16 房1 房2 房3 房4 房5 心1 心2 心3 心4 尾11 尾2 尾1 尾1 尾1 名 名 名 名 名 尾 名 名 名 名 名 名 名 名 名 名 名 名 名	IO/J         Sagitta         小雪         尾6         尾7         尾8         尾9         尾10         尾11         尾12         尾13         尾14         尾15         尾16         尾17         箕1         箕2	xrius       大雪       策4       第5       第6       第9       第10       斗1       斗2       斗3       斗4       斗5       斗6       斗7

 TABLE 1. Lunar stations—zodiac signs—solar terms correspondences.

*Qiyao rangzai jue*, employ sidereal zodiacs, whereas late Hellenistic astrologers, most notably Ptolemy, employed a tropical zodiac. In the case of horoscopy in East Asia, it appears that the transmission of the *Duli yusi jing* was accompanied by a new zodiacal system, in which the zodiac signs were primarily defined by the equinoxes.

One problem that East Asian astrologers had to address was that Chinese observational astronomy was based on the Chinese system of twenty-eight lunar stations. These lunar stations are of varying lengths and traditionally add up to 365.25 degrees. The zodiac signs are uniformly comprised of 30 degrees each, totaling 360 degrees. It appears that when Li Miqian introduced horoscopy between 795 and 805, he also developed a system to reconcile these two systems by dividing the twenty-eight Chinese lunar stations into twelve divisions. Interestingly, these twelve divisions were made exactly equal by assigning thirty solar days (not civil days) to each, based, it seems, on the aforementioned table of solar terms preserved in the Qiyao rangzai jue. The Qiyao rangzai jue states that this table was calculated in year 12 of Kaiyuan (724), but after eighty-three years it was off by one degree. This would correspond to the year 806, which is incidentally around the year when Cao Shiwei produced additional tables for Rāhu and Ketu (KOTYK 2017a, 42). It is known that Cao Shiwei studied under Li Miqian, so the conclusion we can draw here is that Li Miqian's team adapted earlier material for use in defining the zodiac signs in China.

The exact parameters for the zodiac signs devised for use with the *Duli yusi jing* can be inferred based on the above details (see TABLE 1). The year 724 is furthermore significant because at this time the court astronomer and monk Yixing was active in the capital. However, his calendar, the *Dayan li* 大衍曆, a work in progress when he died in 727, gives slightly different parameters that include fractions. The table of solar terms of the *Qiyao rangzai jue*, however, equals 360 degrees, which is an occidental parameter, and one that was used in the *Navagraha-karaṇa* (*Xin Tang shu* 3: 692). The original creator of the original solar table itself, therefore, might have been a figure such as Gautama Siddhārtha.

Many originally Hellenistic elements are evident within East Asian horoscopy. Horoscopy was transmitted to China through Iranian, rather than Indian, intermediaries, which explains why the horoscopy of Sukuyōdō displays some Indo-Iranian features, such as the use of Rāhu and Ketu. Japanese Buddhist astrologers were effectively practicing a system of horoscopy whose roots are in large part traced back to Alexandria, although even earlier elements, such as Babylonian goal-years, are found in the Japanese tradition. Babylonian goalyears are recurring planetary periodicities or cycles of movement from which accurate predictions of future movements can be made. EVANS (1998, 315) states, "All the known goal-year texts are from the Seleucid period. Among the oldest is a text for 81 sE (231/230 BCE)." He also notes, "Although the oldest surviving examples happen to be from the third century, similar texts were probably produced much earlier." These parameters are expressly defined and furthermore employed in the construction of the ephemerides of the *Qiyao rangzai jue* (KOTYK 2017a, 45–47). In short, the first introduction of goal-years into Japan can be traced to Shūei, who in 865 returned with this text. These ephemerides, however, only appear to have been used by Sukuyōshi starting in the late tenth century.

As a key specimen of the horoscopy of Sukuyōdō, we might examine the *Sukuyō unmei kanroku* 宿曜運命勘録. This document is a horoscope and accompanying interpretation for a man born on 15 January 1113 (YANO 2013, 192). At the time it was produced, he was forty-one years old, so the document at hand can be dated to around the year 1152. Its astrological doctrines can be compared with those of another Japanese horoscope, the *Sukuyō go unroku* 宿曜御運録, which was produced around the year 1312 for an individual born in 1268 who at the time was forty-four or forty-five years old.

The horoscope of 1113 states that 165,428 days have elapsed since the epoch of the calendar that was used in the calculations, which indicates a start date of around 660. The year 660 is the epoch of the *Futian li* (MOMO 1969, 404–406). Similarly, for the year 1268, the *Sukuyō go unroku* (MOMO 1990, 142) states that 222,245 days have elapsed (equaling 608.89 modern years of 365 days), giving us the starting year of 660. The planetary positions of the *Sukuyō unmei kanroku* are listed by the degrees of Chinese lunar stations and displayed on a circular table, which I have converted into a more easily readable format using modern astrological symbols (see FIGURE 14).

The inner circle shows the twelve earthly branches. In this case, they represent the twelve Jupiter stations, which are used as functional equivalents for the twelve zodiac signs. The next circle shows the twelve zodiac signs together with their respective planetary rulers. The next circle shows the positions of the nine planets, which are placed relative to the lunar stations (presented in the next circle) in which they are positioned. East Asian astronomy is based on Chinese lunar stations, which is why the twelve zodiac signs became twelve divisions of lunar stations (the exact parameters are shown in TABLE 1 above). The outermost circle shows the twelve places, and whether they are considered auspicious, as well as the twelve earthly branches as directional markers ( $b\bar{o}$   $\Re$  indicates east). The twelve places (Greek:  $\tau \dot{\sigma} \pi o_i$ ; Latin: *loci*) are static demarcations of the ecliptic through which the stars and planets pass. The zodiac signs and planets present in these places.

For ease of reference, I have indicated the twelve places with Roman numerals in the translated table below, but it should be noted that the Chinese names of these places are also significant. This circular table is similar to that found in the *Qiyao rangzai jue* (T 1308, 21: 451b05), but the zodiac signs as they align with



FIGURE 14. Sukuyō unmei kanroku horoscope. Planets: Sun ☉, Moon ℑ, Mars ♂, Mercury ῷ, Jupiter Ϥ, Venus ♀, Saturn ħ, Rahu ℬ, Lilith (Ketu)  $\boldsymbol{\xi}$ . Zodiacs: Aries ♈, Taurus Ƴ, Gemini Ⅱ, Cancer ℑ, Leo ∂, Virgo ҭ, Libra ≏, Scorpio ሺ, Sagittarius ౫, Capricorn ‰, Aquarius ҭ, Pisces 升. Earthly branches: shi 子, gai 亥, jutsu 戌, yū 酉, shin 申, bi 未, go 午, shi 巳, shin 辰, bō 卯, in 寅, chū 丑.

\* Lilith in astrology is the lunar apogee. In East Asian Buddhist astrology, Ketu was redefined as the lunar apogee. See YANO (1986, 31); ISAHAYA and LIN (2017, 167); КОТҮК (2017а, 47–48).

the lunar stations differ, as do the names of the zodiac signs and twelve places. Itō Gikyō noted that the Chinese renderings of the place names in the *Qiyao rangzai jue* are semantically closer to the Iranian equivalents compared to the western or Latin names available to him (Irō 1980, 224).<sup>20</sup> In light of the Iranian origin of horoscopy in East Asia, it is likely that the terms of the 1113 horoscope at hand also derive from an Iranian source. The names of the twelve places in the 1113 horoscope: 1. "Lifespan" 壽命位; 2. "Wealth" 財庫位; 3. "Brothers" 兄弟位; 4. "Estate" 田宅位; 5. "Children" 男女位; 6. "Slaves" 奴僕位; 7. "Marriage" 夫妻位; 8. "Illness" 疾病位; 9. "Travel" 遷移位; 10. "Prosperity" (or "Career") 官祿位; 11. "Fortune" 福德位; and 12. "Disaster" 禍害位. These themes are largely consistent with the doctrines of Hellenistic astrology.

The exact numerical values of planetary positions are not indicated in the chart itself. These are listed separately. They use fractions and are, therefore, more precise than the ephemerides provided in the *Qiyao rangzai jue*, which indicates that Sukuyōshi employed more precise calculation methods rather than merely relying on ephemerides. The position of the Moon is furthermore not derived from the aforementioned table of the *Xiuyao jing*. This brings to mind Hōzō, who insisted on a more precise method of calculating the position of the Moon, a convention that evidently became standard in Sukuyōdō.

The scientific value of this horoscope has been pointed out in the past (NAKAYAMA 1969, 60). What interests us at present is that it was produced with astral magic in mind. Following the planetary positions, the significant features of the chart are listed, to which "prayers and offerings should be constantly made" (Z 31, no. 1: 430b5). Horoscopy in this context was a means of determining the optimal astral deities to which rituals would be directed. These key features are listed in the document as follows:

- Natal star: Alioth 本命星廉貞星. The man was born in a *shin* or *tatsu* 辰 year, which is associated with the star *Renshin* 廉貞 in the Big Dipper constellation (that is, Alioth).<sup>21</sup>

- Natal planet: Mercury 本命曜水曜. The man was born on a Wednesday, over which the planet Mercury presides.

- Natal sexagenary [deity]: deity of *Jinshin* 本命辰壬辰神. The deity presiding over the sexagenary year of birth. In this case, that of *Jinshin* 壬辰 (29<sup>th</sup> of 60 in the cycle).

20. Itō perhaps drew upon the work of MACKENZIE (1964, 526), who lists the names of the twelve places in Middle Persian with the corresponding Latin names. The Middle Persian terms are known from the *Bundahišn*, which is primarily a cosmography based on Zoroastrian scriptures.

21. This is the Daoist convention discussed earlier, which is outlined in the *Ono rokuchō* by Ningai (T 2473, 78: 98a2–3) and defined in a Chinese work (T 1307, 21: 425c20–21).

- Natal *nakṣatra*: Mūla *nakṣatra* 本命宿尾宿. The position of the Moon at birth was 4.93 degrees of the lunar station Wei 尾, but for astrological purposes, this refers in practice lore-wise to the *nakṣatra* of Mūla.

- Natal zodiac sign: Scorpio 本命宮蝎虫. The zodiac sign rising at the eastern horizon at birth (that is, the ascendant), and occupying the first place. The 1268 horoscope, however, defines the "natal zodiac sign" based on the sign in which the Moon was present, which perhaps indicates that such definitions were variable.

- Natal presiding zodiac sign: Sagittarius 本主宮人馬宮. The zodiac sign in which the Moon was present at birth. This is not listed in the 1268 horoscope. Presumably if the individual was born during the daytime, the Sun would determine this, since the Moon determines the primary triplicity rulers (*sanbō shu* 三方主) in a nocturnal horoscope (that is, for someone born at night), and the Sun determines them in a diurnal chart.<sup>22</sup>

Triplicity (Greek:  $\tau \rho i \rho \omega v o v$ ; Latin: *trigonum*) is an early astrological convention in which the twelve zodiac signs are divided into four even sets of three signs each. The three signs are positioned relative to one another to form an equilateral triangle. Each set is associated with planetary rulers, which have special significance within a chart when identified as rulers. Again, these differ based on whether the horoscope is nocturnal or diurnal (that is, whether the person was born during the day or night). Triplicity is a major concept in the astrology of Dorotheus, and thus it was very likely transmitted to China via the *Duli yusi jing*. The definition given by Dorotheus is found in an almost identical form in the Daoist *Lingtai jing* 霊台経 (DZ 288, 5), which dates to the late-Tang.<sup>23</sup> In the present horoscope, the triplicity rulers of three of the twelve places are identified as follows:

- Triplicity rulers of the natal place: Mars, Venus, Moon 本命位三方主: 火金月.

- Triplicity rulers of the place of prosperity: Jupiter, Sun, Saturn 榮祿位三方主: 木日土.

- Triplicity rulers of the place of fortune: Moon, Venus, Mars 福德位三方主: 月金火.

The first refers to the rulers of the ascendant. The second is derived from the zodiac sign occupying the tenth place, which concerns prosperity (here Leo).

22. See BRENNAN (2017, 496). This definition is also given in the appended notes in the *Qiyao rangzai jue* (T 21, 1308: 452b5–6). Also, the Daoist *Lingtai jing* states, "For any diurnal birth, look to the zodiac sign in which the Sun is present to determine this. For a nocturnal birth, look to the zodiac sign in which the Moon is present to determine this. It is then regarded as the ruler." DZ 288, 5: 22C10–11.

23. See PINGREE (1976, 161-62); DZ 288, 5: 22c6-8. The zodiac signs are indicated with the earthly branches (*dizhi* 地支), representing the twelve Jupiter stations as functional equivalents for the twelve zodiac signs.

The third is derived from the zodiac sign occupying the eleventh place, which concerns fortune (here Virgo). The underlying motive behind listing these planets is evidently to identify those governing fortune and longevity, so as to properly direct one's prayers. This suggests a source other than material derived from Dorotheus, whose extant work does not involve magic.

The horoscope at hand then provides some quite instructive prose regarding the perception of astrology within a Buddhist framework. The astrologer who composed this was evidently concerned about reconciling the idea of karma with astrological determinism:

When people receive life, although social status and fortune are within the scope of karmic causes, the changes of misfortune and prosperity are also within the grasp of the *nakṣatras* and planets. Who of those born in the same year are without agreeable and disagreeable [experiences]? Those born with a favorable zodiac sign and planets have their support for fortune, while those under an unfavorable zodiac sign and planets bring about their own catastrophes. However, ordinary people are unaware [of this].

(Z 31, no. 1: 430b7, no. 10)

The astrologer who composed this recognizes that favorable and unfavorable experiences in life should be attributed to past karma, but at the same time suggests that the astrological circumstances of one's birth also ought to be considered.

The rest of the document is a commentary on the horoscope at hand divided into five sections. Section one (*ten shō* 天性) deals with predictions concerning the inherent personality and fortune of the client in question. ISHIDA (1950) noted that this section directly cites by name *Yusi jing* 聿斯経. Although direct correspondence between the citations of the *Yusi jing* and Dorotheus are difficult to identify, some of the basic ideas are found to be common. For instance, the conjunction of Venus and Mercury:

The *Yusi jing* states, "Venus and Mercury in the same zodiac sign makes one benevolent, together possessing learning and craftsmanship, producing writings." (z 31, no. 1: 431a13–14)

Dorotheus (PINGREE 1976, 223) explains that Venus with Mercury makes a man "adorned with culture and words, loquacious in poetry because he will compose pleasing [and] beautiful words."

Section two ( $y\bar{o}$  fuku ? $\overline{\mbox{\ensuremath{\mathbb{R}}}$ a) of the horoscopic commentary deals primarily with predictions related to the economic prosperity of the client in life. This perhaps points to one of the underlying motivations behind the emergence of astrologer-monks in Japan: forecasting financial and material success in a person's life, which is to say, offering counsel on mundane, rather than strictly religious, matters.

This section cites the Xiuyao jing (Sukuyōkyō shukusatsu 1: 6-7) and Sūryagarbha-parivarta 日蔵分 of the Mahāsaṃnipata-sūtra (T 397, 113: 278c13-14), although it seems these are abridged notes rather than full citations, which perhaps indicates that the astrologer wrote his interpretation using abbreviated notes rather than the original texts. This section also cites the Duli yusi jing when referring to the aspects of the planets. Aspect (Latin: aspectus; sight, look) is defined as a geometrical relationship between two planets on a horoscopic chart that is thought to signify something. The planets are conceived of as "seeing" each other, a conception that was directly translated into Chinese.<sup>24</sup> This relationship is determined by the degrees or space separating the two planets. Ptolemy formally recognized four types of aspect (Tetrabiblos, Book 1.13, 73-75): opposition (180°), trine (120°), quartile (90°), and sextile (60°), but a less precise way of conceiving of aspect using only "sign-based" configurations was also employed in the Hellenistic tradition. In the horoscope at hand, trine, for instance, would be identified when three zodiac signs of space separated two planets. The Japanese horoscope at hand appears to employ the simpler "sign-based" system of configurations. As an example of aspect in the present horoscope, the configuration between Jupiter and Saturn is explained as follows:

Also, [the *Yusi jing*] states, "When Saturn and Jupiter are in *trine*, and [Jupiter] is in a strong position, he will have much wealth, possessing fields, buildings and productive enterprises. ..." (Z 31, no. 1: 432a1–2)

This appears to have a direct parallel in Dorotheus: "If Saturn aspects Jupiter from *trine* while Jupiter is in a good place, then it indicates an abundance of property and land and trees and buildings and mosques" (PINGREE 1976, 212). The integrity of technical horoscopic lore was clearly kept relatively intact in its transmission eastward across Asia.

As in the Hellenistic tradition, here emphasis is placed on triplicity. Dorotheus states, "I tell you that everything which is decided or indicated is from the lords of the triplicities" (PINGREE 1976, 162). In a similar fashion, the astrologer here offers the following commentary:

As to fortunes, the fortunes of early, middle, and later years are all determined via the triplicity rulers. The triplicity rulers of the place of prosperity are Jupiter, the Sun, and Saturn. [The first ruler] Jupiter is in an auspicious position. ... When young, you will have been favored by a great man. It was auspicious and bountiful. Although the second ruler, the Solar Deity, is in a powerless position, it is opposite Jupiter. Although not overly much, your fortune is one of flourishing years and ease. The third ruler, Saturn, is in an auspicious position and behind the Sun, perhaps indicating prosperity and thriving? However, Saturn is

24. In the Lingtai jing, "aspect" as a verb is translated as jian 見. See DZ 288, 5: 25c6.

in the same zodiac sign as Rāhu, and opposite to Ketu. When the time comes, there could be hindrances. (z 31, no. 1: 432a15-b5)

Here the astrologer interprets the general level of prosperity that the client might expect throughout life based on the planetary rulers associated with Leo, which in the chart occupies the tenth place (the place of rank and prosperity). This method of dividing life into three periods based on the three planets of the ruling triplicity is also attested in the early Arabic tradition of astrology, which itself was established atop the earlier Iranian tradition. The ethnically Persian 'Umar al-Tabarī (ca. 815), also known by his Latinized name of Omar Tiberiades, gives the following explanation:

Look at the Lords of the triplicity of the luminary whose authority or power it is. For you are looking at the first age from the first Lord of the triplicity of the Sun, and [the condition] of the second age from the second Lord of the triplicity of the Sun, and [the condition] of the third one from the third Lord of the triplicity of the Sun—in the day.... Likewise look in the night from the Lords of the triplicity of the Moon, just as you look for the Sun. (DYKES 2010, 49)

'Umar al-Tabarī around the year 800 translated the Pahlavī translation of Dorotheus into Arabic (PINGREE 1989b, 229). 'Umar al-Tabarī's own work, which relied heavily on Dorotheus, is titled *Kitāb al-Mawālīd* (*Book on Nativities*). It was translated into Latin by John of Seville as *De nativitatibus* in the twelfth century. The Latin translation was often quoted by European astrologers (HOLDEN 2006, 111–12). It is indeed noteworthy that the influence of Dorotheus extended to *both* ends of the Eurasian continent, his work influencing astrologers of numerous cultures and languages.

Section three of the horoscopic commentary discusses the forecasted lifespan of the client. Ten methods for predicting lifespan are cited, but the astrologer settles on suggesting that "rulers of the vital signs" (myōkū shu 命宮主) are Venus and Mercury. This seems to refer to Gemini (ruled by Mercury) occupying the eighth place (the "place of illness"), and Libra (ruled by Venus) occupying the twelfth place (the "place of disaster"). These are said to both be in auspicious and strong positions, hence a long lifespan is signaled, but this is complicated by the position of Rāhu, which is in a trine configuration to the first place (the "place of lifespan"). It also aspects the "Moon zodiac" (getsu kū 月宮). The significance of the zodiac sign that houses the Moon is presumably related to the concept, as defined in the Lingtai jing, that the "the sign in which the Moon is present is the bodily sign (shen gong 身宮)" (DZ 288, 5: 23b8-9). GREENBAUM (2015, 305) notes that in Hellenistic astrology "the Moon is associated with the body, and the Sun with the mind, the soul and spirit." This association between the Moon and the body is evidently Hellenistic in origin, and moreover well preserved in the East Asian tradition.

Section four of the horoscopic commentary deals with "various fortunes" (*sho un* 諸運), which is subdivided into three subsections: disciples, slaves, and friends. The subsection on disciples indirectly reveals that the client is a monk. It explains that the ruler of the fifth place is an auspicious planet in a good position, therefore the client will have many disciples. Normally, the fifth place signifies matters related to children (*danjo* 男女), but as the astrologer notes, in "Dharma households" (*hōke* 法家), disciples are regarded as sons.

Section five of the horoscopic commentary deals with developments in the life of the client from the ages of forty-one to fifty-seven. The present year is noted as *jin-shin*  $\pm \oplus$  (1152), when the client is stated to be forty-one years of age. The "great annual zodiac ruler" is identified as Saturn. The ruler for age forty-two is Jupiter, forty-seven is the Sun, and forty-nine is Venus. It is from this sequence that we can infer the astrologer is using the originally Hellenistic system of annual profections, most likely derived from Dorotheus (PINGREE 1976, 245):

When a native is born, the lord of the year is the lord of the house [ascendant] in which the native was born. Thus count from the ascendant a year for each sign until you reach the year which you desire; the lord of that house is the lord of the year.<sup>25</sup>

This specific planet will rule over the year and therefore be regarded as especially prominent for twelve months. It appears, however, that the astrologer erred in the assignment of the planetary ruler, since the assigned ruler is ahead one year in the present case (age forty-one should be Jupiter, not Saturn). Nevertheless, it is noteworthy here that the integrity of this concept endured within Sukuyōdō, which itself demonstrates that this tradition retained the doctrines of the *Duli yusi jing*. There was, however, an alternative way of reckoning annual rulers, which is defined in the appended notes of the document.<sup>26</sup> The *Sukuyō go unroku* in contrast uses this alternative way of determining the planet ruling over the year of the individual in question: the client's forty-fifth year is associated with Jupiter, and his forty-sixth with Rāhu (MOMO 1990, 148–49). The difference in technique for determining the annual planetary ruler may reflect the lineages or even the personal preferences of the astrologers.

25. The same definition is provided in the *Xingxue dacheng* 星学大成 from sixteenth-century China: "From age one, start from the ascendant sign and go backward [counterclockwise] one sign every one year. The crossover [to a new sign] happens at the birthday" (SKQS 809: 426). Therein this specific convention is called "Lesser Bound of Annual Profections."

26. *z* 31, no. 1: 437a7–10. Here the planet presiding over the year employs the *navagraha*. Rāhu: ages 1 and 10. Saturn: ages 2 and 11. Mercury: ages 3 and 12. Venus: ages 4 and 13. Sun: ages 5 and 14. Mars: ages 6 and 15. Ketu: ages 7 and 16. Moon: ages 8 and 17. Jupiter: ages 9 and 18. This same system is explained in further detail in the *Byakuhō kushō* (TZ 7: 314b25–15a1).

One last noteworthy feature of the 1113 horoscope is its reference to the decans. Decans are "simply the thirds of the zodiacal signs, that is, sections of the ecliptic of 10° lengths. Historically the decans go back to Egyptian lists of thirty-six constellations which were drawn up many centuries before the introduction of the zodiac" (NEUGEBAUER and VAN HOESEN 1959, 5). One system of the decans assigns planets to each decan, the ordering of which is Chaldean, that is, Babylonian (GREENBAUM 2015, 228). Such a model is explained by Firmicus Maternus, an astrologer who lived in the mid-fourth century CE and wrote a Latin work on astrology titled Mathesis (the decans are defined in II.IV, "De Decanis"). This "Chaldean" ordering of the planets follows the assumed distances of the planets relative to the Earth from a geocentric perspective: Saturn, Jupiter, Mars, Sun, Venus, Mercury, Moon. In the Japanese horoscopes, decans are indicated by the character 度 ("degree"). We know that the 1113 horoscope at hand is referring to the decans based on the classical definitions provided by Firmicus. For example, "Venus is positioned in its own degrees" (Z 31, no. 1: 431a15). If we look at the horoscopic chart, Venus is located in the first third of Aquarius. Firmicus states, "Aquarii primus decanus Veneris est, secundus Mercurii, tertius Lunae" (Mathesis 1: 45). The first decan of Aquarius is ruled by Venus.

The *Sukuyō go unroku* uses the same vocabulary as the *Sukuyō unmei kanroku*, but it does not actually refer to the standard decans. For example, it states that "Mercury is in its own degrees," but Mercury is in Leo and the decans of Leo are Saturn, Jupiter, and Mars. Similarly, twice it states that "Venus is in the degrees of Jupiter" (MOMO 1990, 146–47), but Venus is in Virgo and the decans of Virgo are the Sun, Venus, and Mercury.

What can we learn from Sukuyōdō horoscopy? It is a blend of Buddhist, Daoist, Iranian, and Hellenistic concepts, representing a thoroughly developed system of astrology inherited from late-Tang China. The astrologer who produced the 1113 horoscope felt a need to defer to traditional texts, rather than relying on personal interpretation, indicating a preference for canonical authority. He relied most often on the non-Buddhist *Duli yusi jing*, only occasionally citing canonical Buddhist texts. This brings to mind the remarks of MOMO (1975, 1, 17), who stated that Sukuyōdō actually relied primarily on *Duli yusi jing*, rather than the *Xiuyao jing*, despite the common misunderstanding of some modern scholars who assume that Sukuyō must be derived from *Xiuyao jing* and, therefore, is primarily based on said text.

#### Conclusion

This study has demonstrated the importance of horoscopy in Japanese society and Buddhism during the Heian and Kamakura periods. Despite the significance of Iranian influences in the relevant materials, there is no evidence to suggest that Buddhists themselves were aware of their original providence. In fact, Li Miqian, the astrologer who brought the *Duli yusi jing* to China between 795 and 805, is identified as having come from Western India. The purported author of the *Qiyao rangzai jue*, Jinjuzha, is also said to have come from Western India. Some Japanese Buddhists believed that the *Xiuyao jing* was originally taught by Mahāvairocana, which was eventually handed down to Amoghavajra and then to Kūkai. The other works under consideration were simply believed to have come from a generic Indian source. Horoscopy was not originally regarded as specifically Buddhist in China, but in the late-tenth century it was Buddhist monks in Japan who became professional astrologers capable of casting horoscopes and interpreting them. It is therefore warranted to regard horoscopy in medieval Japan as a "Buddhist art."

This study has suggested that Japanese Buddhist astrology should be divided into two types: Mikkyō Astrology and Sukuyōdō. The former, which was introduced in the early ninth century by Kūkai and Tendai monks, primarily dealt with hemerology as a means of determining auspicious dates for the execution of rituals. The latter dealt with horoscopy, which was far more sophisticated, requiring calendrical science and a wide body of astrological lore. The plentiful elements of horoscopic doctrines that can be traced back to the ancient Hellenistic tradition are noteworthy, and point to a largely unrecognized line of knowledge transmission from the Near East through China to Japan. It stands to reason that medieval Japan might have received other such bodies of knowledge that have yet to be identified, such as in medicine and music.

Mikkyō traditions and Sukuyōdō both practiced astral magic, some elements of which stem from Iranian, rather than Indian, sources. The precise differences between their traditions is a topic that might be explored in a future study, but it is expressly clear that Sukuyōdō not only produced horoscopes for the purposes of prognostication but also to identify astrologically unfavorable configurations in a birth chart that might be addressed via worship of specific planets that were regarded as sentient deities. Astrology in this context was not fatalistic.

Finally, modern Japanese "Sukuyō" is actually unconnected with the medieval Sukuyōdō tradition. This point is obvious from the fact that popular Sukuyō books generally deal only with the *Xiuyao jing* and not horoscopy. It is still nevertheless intriguing that a Buddhist form of astrology was revived in the twentieth century and turned into a system available on the popular market. A study of the roots and development of modern Sukuyō would be a worthwhile investigation.

#### REFERENCES

\* Chinese and Japanese reign years and eras are converted into modern years based on the *Tōhō nenpyō* 東方年表 (Kyoto: Heirakuji Shoten, 2013).

\*For determining modern dates from traditional Japanese and Chinese dates, I have made use of the tools of http://moon.confusionindex.com/pc /calendar/27/.

#### ABBREVIATIONS

- DZ Daozang 道蔵. 36 vols. Beijing: Wenwu Chubanshe, 1988.
- G Gunsho ruijū 群書類従. 18 vols. Ed. Hanawa Hokiichi 塙保己一. Tokyo: Keizai Zasshisha, 1898–1902.
- SKQS Siku quanshu 四庫全書. Ying yin Wen yuan ge Siku quanshu 景印文淵閣四 庫全書. 1,500 vols. Taipei: Taiwan Shangwu Yinshuguan, 1983.
  - sz Shingonshū zensho 真言宗全書. 44 vols. Ed. Shingonshū Zensho Kankōkai 真言宗全書刊行会. Kōyasan: Shingonshū Zensho Kankōkai, 1933–1939.
  - T Taishō shinshū daizōkyō 大正新脩大蔵経. 100 vols. Takakusu Junjirō 高楠順次郎 and Watanabe Kaigyoku 渡辺海旭 et al., eds. Tokyo: Taishō Issaikyō Kankōkai, 1924–1934. Digitized in CBETA (v. 5.2) and SAT Daizōkyō Text Database (http://21dzk.l.u-tokyo.ac.jp/SAT/satdb2015 .php).
  - TZ Taishō zuzō 大正図像. 12 vols. Takakusu Junjirō and Ono Genmyō 小野玄妙, eds. Tokyo: Daizō Shuppan Kabushiki Kaisha, 1932–1934. Digitized in sAT Taishōzō Image DB (http://dzkimgs.l.u-tokyo.ac.jp /SATi/images.php).
    - z Zoku gunshoruijū 続群書類従. 37 vols. Ed. Hanawa Hokiichi. Tokyo: Zoku Gunshoruijū Kanseikai, 1923–1943.
  - ZH Zoku gunshoruijū hoi 続群書類従補遺. 4 vols. Ed. Hanawa Hokiichi. Tokyo: Zoku Gunshoruijū Kanseikai, 1928–1930.

### PRIMARY SOURCES

Asaba shō 阿娑縛抄. TZ 8: 743-1106, 9: 1-946. Bonten kara zu 梵天火羅図. TZ 7: 693-704. Byakuhō kushō 白宝口抄. TZ 6: 343-516, 7: 1-384. Chengxing lingtai biyao jing 秤星霊台秘要経. DZ 289, 30. Chin'yo hōin waka 珍誉法印和歌. Z 16, no. 1: 348-50. Dafangdeng daji jing 大方等大集経 (Mahāsaṃnipāta). T 397, 13. Dainichi kyō sho enʿo shō 大日経疏演輿鈔. T 2216, 59. Dari jing shu 大日経疏. T 1796, 39. Da shengmiao jixiang pusa shuo chuzai jiaoling falun 大聖妙吉祥菩薩說除災 教令法輪. T 966, 19.

Foshuo beidou qixing yanming jing 仏說北斗七星延命経. T 1307, 21.

Genji monogatari 源氏物語. By Murasaki Shikibu 紫式部. 5 vols. Tokyo: Iwanami Shoten, 1958–1963.

- Go shōrai mokuroku 御請来目録. T 2161, 55.
- Gyōrin shō 行林抄. By Jōnen 靜然. T 2409, 76.

*Hino'o kuketsu* 檜尾口訣. T 2465, 78.

Jikaku Daishi den 慈覚大師伝. z 8-2: 683-99.

Jikaku Daishi zaitō sōshin roku 慈覚大師在唐送進録. T 2166, 55.

Jiu Tang shu 旧唐書. 16 vols. Comp. Liu Xu 劉昫. Beijing: Zhonghua Shuju, 1975.

Jiuzhi li 九執暦 (\*Navagraha-karaṇa). SKQS 807: 933-43.

Kanmon gyoki 看聞御記. By Fushiminomiya Sadafusa 伏見宮貞成. ZH 3-4.

Kōya Daishi go kōden 高野大師御広伝. z 8, no. 2: 607-66.

Kuyō hiryaku 九曜秘暦. TZ 7: 769-73.

- *Kuyō hiryaku* 九曜秘暦. The Metropolian Museum of Art, New York (item# 1975.268.4). https://www.metmuseum.org/art/collection/search/45616.
- Kuyōtō zuzō 九曜等図像. TZ 7: 737-47.
- Lingtai jing 霊台経. DZ 288, 5.
- Mahāsāṃghika-vinaya 摩訶僧祇律. T 1425, 22.

Mathesis. By Firmicus Maternus. Iulii Firmici Materni Mathesos libri VIII. 2 vols. W. Kroll, F. Skutsch, and K. Ziegler, eds. Leipzig: Teubner, 1897–1913.

Midian zhulin 秘殿珠林. SKQS 823: 443-752.

Modengjia jing 摩登伽経. T 1300, 21.

*Nichū reki* 二中暦. 13 fasc. Handwritten manuscript. National Diet Library (#830–35). *Nihon biku Enchin nittō guhō mokuroku* 日本比丘円珍入唐求法目録. T 2172, 55.

Nihonkoku genzai sho mokuroku 日本国見在書目録. By Fujiwara Sukeyo 藤原佐世.

Manuscript from Tenpō 天保 6 (1835). National Diet Library (025.22–N685–H). doi.org/10.11501/2540620

Nihon ryōiki 日本霊異記. G 17: 18-125.

Nihon shoki 日本書紀. 2 vols. Tokyo: Iwanami Shoten, 1965-1967.

*Nijū-hachi suku zuzō* 二十八宿図像. TZ 7: 776-800.

- Nittō guhō junrei gyōki 入唐求法巡礼行記. Shanghai: Shanghai Guji Chubanshe, 1986.
- Nittō shingu shōgyō mokuroku 入唐新求聖教目録. T 55, 2167.

Ono rokuchō 小野六帖. T 2473, 78.

Ono ruihi shō 小野類秘鈔. sz 36: 3-92.

Qiyao rangzai jue 七曜攘災決. T 1308, 21.

Rumen chong lizhe zhong kanyu wanxiao lu 儒門崇理折衷堪輿完孝録. DZ 1471, 35.

Shetoujian Taizi ershiba xiu jing 舍頭諫太子二十八宿経. T 1301, 21.

Shin shosha shōrai hōmontō mokuroku 新書写請来法門等目録. T 2174a, 55.

Sho ajari Shingon mikkyō burui sōroku 諸阿闍梨真言密教部類総録. T 2176, 55.

Sukuyō go-unroku 宿曜御運録. Reproduced in Момо (1990, 142-51).

- Sukuyōkyō shukusatsu 宿曜経縮刷. 2 vols. Ed. Wakita Bunshō 脇田文紹. Nagoya: Wakita Bunshō, 1897.
- Sukuyō senmon shō 宿曜占文抄. Reproduced in UJIRO (2012, 112-20).
- Sukuyō unmei kanroku 宿曜運命勘録. z 31, no. 1: 429-38. Also reproduced in MOMO (1990, 131-42).
- Taizō kuzuyō 胎蔵旧図様. TZ 2: 477-566.
- Taizō zuzō 胎蔵図象. TZ 2: 191-328.
- *Tetrabiblos.* Trans. Frank Egleston Robbins. Loeb Classical Library. Cambridge: Harvard University Press, 1940.

Xingming suyuan 星命溯源. skqs 809: 45-103.

Xingxue dacheng 星学大成. SKQS 809: 285-870.

Xin Tang shu 新唐書. 20 vols. Beijing: Zhonghua Shuju, 1975.

- Xitian yusi jing 西天聿斯経. skqs 809.
- Xiuyao jing 宿曜経. T 1299, 21.
- Xiuyao yigui 宿曜儀軌. T 1304, 21.

#### SECONDARY SOURCES

#### Акаzawa Haruhito 赤澤春彦

2007 Kamakura-ki no sukuyōshi: Chōtei, bakufu, kuge, buke shakai to sukuyōshi 鎌倉期の宿曜師—朝廷, 幕府, 公家・武家社会と宿曜師. *Chūō Daigaku Daigakuin kenkyū nenpō* 37: 1001–20.

### Aruga Takumi 有賀 匠

2000 Hoshi mandara to Myōken Bosatsu no zuzōgaku-teki kenkyū 星曼荼羅と 妙見菩薩の図像学的研究. *Mikkyō bunka* 204: 25-63. doi.org/10.11168/jeb1947.2000.25

### BRENNAN, Chris

2017 *Hellenistic Astrology: The Study of Fate and Fortune*. Denver: Amor Fati Publications.

### BROSE, Benjamin

2006 Crossing thousands of *li* of waves: The return of China's lost Tiantai texts. *Journal of the International Association of Buddhist Studies* 29: 21–62.

## DRAKAKIS, Athanasios

2011 Onmyödö and esoteric Buddhism. In *Esoteric Buddhism and the Tantras of East Asia*, Charles D. Orzech, Henrik Sørensen, and Richard K. Payne, eds., 683–90. Leiden: Brill. doi.org/10.1163/ej.9789004184916.i-1200.275

### DYKES, Benjamin N.

2010 *Persian Nativities II: 'Umar al-Tabarī and Abū Bakr.* Minneapolis: The Cazimi Press.

#### Evans, James

1998 *The History and Practice of Ancient Astronomy*. Oxford: Oxford University Press.

#### FAURE, Bernard

2015 *Gods of Medieval Japan, Volume 1: The Fluid Pantheon.* Honolulu: University of Hawaiʻi Press. doi.org/10.21313/hawaii/9780824839338.003.0003

#### GANSTEN, Martin

2010 Astrology and astronomy (Jyotişa). In Brill's Encyclopedia of Hinduism, vol. 2, Knut A. Jacobsen, Helene Basu, Angelika Malinar, and Vasudha Narayanan, eds., 281–94. Leiden: Brill. doi.org/10.1163/1234-5678\_beh\_com\_2060010

#### GIEBEL, Rolf W.

- 2005 *Vairocanābhisaņbodhi Sūtra*. Berkeley: Numata Center for Buddhist Translation and Research.
- GREENBAUM, Dorian Gieseler
  - 2015 *The Daimon in Hellenistic Astrology: Origins and Influence*. Leiden: Brill. doi.org/10.1163/9789004306219
- GREENBAUM, Dorian Gieseler, and Alexander Jones
  - 2017 P.Berl. 9825: An elaborate horoscope for 319 CE and its significance for Greek astronomical and astrological practice. ISAW Papers 12. http://dlib .nyu.edu/awdl/isaw/isaw-papers/12/.
- GREER, John Michael, and Christopher WARNOCK, trans.
  - 2010–2011 The Picatrix Liber Rubeus Edition. Phoenix, AZ: Adocentyn Press.
- TEN GROTENHUIS, Elizabeth
  - 1999 *Japanese Mandalas: Representations of Sacred Geography.* Honolulu: University of Hawaiʻi Press.

#### HAYAMI Tasuku 速水 侑

- 1976 Heian kizoku shakai to Bukkyō 平安貴族社会と仏教. Tokyo: Yoshikawa Kōbunkan.
- HOLDEN, James H.

2006 A History of Horoscopic Astrology. American Federation of Astrologers.

- HosoI Hiroshi 細井浩志
  - 2008 Chūgoku tenmon shisō dōnyū izen no Wakoku no tentaikan ni kansuru oboegaki: Tentai shinkō to koyomi 中国天文思想導入以前の倭国の天体観 に関する覚書—天体信仰と暦. *Momoyama Gakuin Daigaku sōgō kenkyūjō kiyō* 34: 45–62.

HUNGER, Hermann, and David Edwin PINGREE

1999 Astral Sciences in Mesopotamia. Leiden: Brill.

## ISAHAYA, Yoichi, and LIN Jyuh Fuh

2017 Entangled representation of heaven: A Chinese divination text from a tenth-century Dunhuang fragment (P. 4071). *Historia Scientiarum* 26: 153–71.

## ISHIDA Mikinosuke 石田幹之助

- 1950 Tori-isshi-kyō to sono itsubun 都利聿斯経とその佚文. In *Tōyō ronsō: Haneda Hakushi shōju kinen* 東洋史論叢—羽田博士頌寿記念, 49–62. Kyoto: Tōyōshi Kenkyūkai.
- 1979 Chōan no haru 長安の春. Tokyo: Kōdansha.

# ITō Gikyō 伊藤義教

1980 Perushia bunka tōraikō ペルシア文化渡来考. Tokyo: Iwanami Shoten.

# JIN Weinuo 金 維諾

1984 *Zhongguo meishu quanji huihua-bian 2: Sui-Tang Wudai huihua* 中国美術 全集繪畫編2—隋唐五代繪畫. Beijing: Renmin Meishu Chubanshe.

# KANECHIKU Nobuyuki 兼築信行

1999 Chin'yo to sono seikei 珍誉とその世系. Kokubungaku kenkyū 129: 34-46.

### Kano Kazuo

2015 Vairocanābhisambodhi. In *Brill's Encyclopedia of Buddhism*, vol. I, ed. Jonathan A. Silk, 382–89. Leiden: Brill.

### KOMINE Yumiko 小峰有美子

1982 Sukuyō kyō nijūshichi suku senseihō 宿曜経二十七宿占星法. Tokyo: Tōyō Shoin.

# Котук, Jeffrey

- 2016 Kanjiken no bungaku ni okeru saihō-senseijutsu no yōso: Tōzai bunka kōryū ni okeru Bukkyō no yakuwari 漢字圏の文学における西方占星術の 要素—東西文化交流における仏教の役割. Bukkyō bungaku kenkyū 19: 85-110.
- 2017a Iranian elements in late-Tang Buddhist astrology. Asia Major 30: 25-58.
- 2017b Astrological iconography of planetary deities in Tang China: Near Eastern and Indian icons in Chinese Buddhism. *Journal of Chinese Buddhist Studies* 30: 33–88.
- 2017c Can monks practice astrology? Astrology and the vinaya in China. In *Rules of Engagement: Medieval Traditions of Buddhist Monastic Regulation*, Susan Andrews, Jinhua Chen, and Cuilan Liu, eds., 503–17. Hamburg: Hamburg University Press.
- Early tantric hemerology in Chinese Buddhism: Timing of rituals according to Subhakarasimha and Yixing. *Canadian Journal of Buddhist Studies* 13: 1–29.

# MACKENZIE, D. N.

1964Zoroastrian astrology in the Bundahišn. Bulletin of the School of Oriental<br/>and African Studies 27: 511–29. doi.org/10.1017/s0041977x0011835x

- 1971 *A Concise Pahlavi Dictionary*. London: Oxford University Press. doi.org/10.4324/9780203462515
- 2012 GÖZIHR. *Encyclopædia Iranica*, online edition, 2012. Available at www .iranicaonline.org/articles/gozihr (accessed 11 July 2017).

Mak, Bill M.

- 2014 *Yusi Jing*: A treatise of "Western" astral science in Chinese and its versified version *Xitian yusi jing. sCIAMVS* 15: 105–69.
- MANABE Shunshō 真鍋俊照
  - 1982 Karazu no zuzō to seiritsu 火羅図の図像と成立. Indogaku Bukkyōgaku kenkyū 30: 324–29. doi.org/10.4259/ibk.30.831
- Момо Hiroyuki 桃 裕行
  - 1964 Futenreki ni tsuite 符天暦について. Kagakushi kenkyū 71: 118-19.
  - 1968 Nichien no Tendai kyōseki no sōchi 日延の天台教籍の送致. In Taigai kankei to shakai keizai: Mori Katsumi hakushi kanreki kinen ronbun shū 対外関係と社会経済—森克己博士還暦記念論文集, 101-13. Tokyo: Hanawa Shobō.
  - 1969 Nichien no Futen reki seirai 日延の符天暦齋来. In *Ritsuryō kokka to kizoku shakai* 律令国家と貴族社会, ed. Takeuchi Rizō 竹内理三, 395-420. Tokyo: Yoshikawa Kōbunkan.
  - 1975 Sukuyō-dō to sukuyō kanmon 宿曜道と宿曜勘文. Risshō shigaku 39: 1-20.
  - 1990 Sukuyō kanmon shū 宿曜勘文集. In *Momo Hiroyuki chosakushū* 桃裕行 著作集, vol. 8, no. 2, *Rekihō no kenkyū* 暦法の研究, ed. Tsuchida Naoshige 土田直鎮, 131-62. Kyoto: Shibunkaku.

MURAYAMA Shūichi 村山修一

1981 Nihon Onmyōdō shi sōsetsu 日本陰陽道史総説. Tokyo: Hanawa Shobō.

NAKAMURA Shōhachi 中村璋八

- 1970 Waga kuni ni okeru "Gogyō taigi" no juyō ni tsuite 我が国に於ける「五行 大義」の受容について. *Komazawa Daigaku bungakubu kenkyū kiyō* 28: 10-23.
- NAKANO Sangen 中野玄三
  - 1969 Kanchi'in shozō Kuyō hiryaku ni tsuite 観智院所蔵九曜秘暦について. *Tōkyō Kokuritsu Hakubutsukan kenkyūshi* 218: 13-24.
- Nакачама Shigeru 中山 茂
  - 1964 Futenreki no tenmongakuteki ichi 符天暦の天文学史的位置. *Kagakushi kenkyū* 71: 120–22.
  - 1969 *A History of Japanese Astronomy: Chinese Background and Western Impact.* Cambridge: Harvard University Press.
  - 1994 Futenreki no nazo 符天暦の謎. Sūgakushi kenkyū 141: 41-43.

NANJŌ Bunyū 南条文雄

1883 A Catalogue of the Chinese Translation of the Buddhist Tripitaka: The Sacred Canon of the Buddhists in China and Japan. Oxford: Clarendon.

NEUGEBAUER, Otto, and Henry Bartlett VAN HOESEN

- 1959 Greek Horoscopes. Philadelphia: American Philosophical Society.
- NEUGEBAUER, Otto, and David PINGREE
  - 1970 The Pañcasiddhāntikā of Varāhamihira. København: Munksgaard.

# Pankenier, David

2013 Astrology and Cosmology in Early China: Conforming Earth to Heaven. Cambridge: Cambridge University Press. doi.org/10.1017/cb09781139017466

# PINGREE, David

- 1976 Dorothei Sidonii Carmen astrologicum: Interpretationem arabicam in linguam anglicam versam una cum Dorothei fragmentis et graecis et latinis. Leipzig: Teubner.
- 1989a Indian planetary images and the tradition of astral magic. *Journal of the Warburg and Courtauld Institutes* 52: 1–13. doi.org/10.2307/751535
- 1989b Classical and Byzantine astrology in Sassanian Persia. *Dumbarton Oaks Papers* 44: 227–39. doi.org/10.2307/1291610
- 1997 *From Astral Omens to Astrology: From Babylon to Bīkāner*. Rome: Ist. Italiano per l'Africa e l'Oriente.
- RUSSELL-SMITH, Lilla
  - 2007 Stars and planets in Chinese and Central Asian Buddhist art from the ninth to the fifteenth centuries. In *The Worship of Stars in Japanese Religious Practice*, ed. Lucia Dolce, 99–124. Bristol: Culture and Cosmos.

# SAEKI Arikiyo 佐伯有清

1986 Jikaku Daishi den no kenkyū 慈覚大師伝の研究. Tokyo: Yoshikawa Kōbunkan.

# Saitō Enshin

1992 *Jikaku Daishi Den: The Biography of Jikaku Daishi*. Tokyo: Sankibō Busshorin.

# SOMEKAWA Eisuke 染川英輔

2013 Mandara zuten 曼荼羅図典. Tokyo: Daihōrinkaku.

# Sørensen, Henrik H.

2010 Astrology and the worship of planets in esoteric Buddhism of the Tang. In *Esoteric Buddhism and the Tantras in East Asia*, Charles D. Orzech, Henrik Sørensen, and Richard K. Payne, eds., 230–44. Leiden: Brill. doi.org/10.1163/ej.9789004184916.i-1200.78

# Su Jiaying 蘇 佳瑩

2011 Nihon ni okeru shijōkō butsu zuzō no kōsatsu 日本における熾盛光仏図像の考察. Bijutsushi ronshū 11: 109-36.

Такада Yoshihito 高田義人

1992 Rekike Kamo-shi no keisei. 暦家賀茂氏の形成. Kokushigaku 147: 33-62.

# Такеда Kazuaki 武田和昭

- 1993 Tōji Hōbodai'in kyūzō hoshi mandara to zanketsu ni tsuite 東寺宝菩提院 旧蔵星曼荼羅図残闕について. *Mikkyō bunka* 183: 1-26. doi.org/10.11168/jeb1947.1993.183\_1
- 1995 Hoshi mandara no kenkyū 星曼荼羅の研究. Kyoto: Hozokan.

# Такезако Shinobu 竹迫 忍

- 2016 Futen rekihō no kenkyū 符天暦法の復元. Sūgakushi kenkyū 223: 1-33.
- TAKEUCHI Rizō 竹内理三
  - 1955 Nyū Goetsu sō Nichien den 入吳越僧日延伝. Nihon rekishi 82: 58-63.

# TODA Yūsuke 戸田雄介

- 2006 Sukuyō-dō no inseiki: Chinga to Kyōsan o chūshin ni 宿曜道の院政期— 珍賀と慶算を中心に. Bukkyō Daigaku daigakuin kiyō 34: 27-40.
- 2007 Kamakura bakufu no sukuyō-shi: Toku ni chin'yo ni tsuite 鎌倉幕府の 宿曜師―特に珍誉について. *Bukkyō Daigaku daigakuin kiyō* 35: 45-59.
- 2008 Sukuyō-dō saiki ni tsuite no ichi kōsatsu: Hokuto hon haiku to hokuto hō 宿曜道祭祀についての一考察—北斗本拝供と北斗法. Bukkyō Daigaku daigakuin kiyō 36: 33-48.

# UJIRO Takafumi 宇代貴文

2012 Enkeishiki hokuto mandara kō: Kōzanji zō "Sukuyōsenmonshō" o megutte 円形式北斗曼荼羅考—高山寺蔵 『宿曜占文抄』 をめぐって. *Bijutsushi ronshū* 12: 91–120.

# WAKAHARA Yukitsune 若原敬経

- 1908 Shukuyōgyō uranai shinden 宿曜経占眞伝. Kyoto: Kichūdō.
- YABUUCHI Kiyoshi 藪內 清
  - 1961 Tōdai ni okeru saihō tenmongaku ni kansuru ni, san no mondai 唐代に おける西方天文学に関する二、三の問題. In *Tsukamoto Hakushi jōju kinen* 塚本博士頌寿記念, 883–94. Kyoto: Tsukamoto Hakushi Jōju Kinenkai.
  - 1982 Tō Sō Shii no Futenreki ni tsuite 唐曹士蔿の符天暦について. *Biburia Tenri Toshokan hō* 78: 2–18.
  - 1989 Zōtei Zuitō rekihō shi no kenkyū 增訂隋唐暦法史の研究. Kyoto: Rinsen Shoten.
  - 1990 Chūgoku no tenmon rekihō 中国の天文暦法. Tokyo: Heibonsha.

# YAMASHITA Katsuaki 山下克明

- 1988 Heian jidai ni okeru mikkyō seishinku no seiritsu to dōkyō 平安時代に おける密教星辰供の成立と道教. *Nihonshi kenkyū* 312: 37-61.
- 1990 Sukuyō-dō no keisei to tenkai 宿曜道の形成と展開. In *Kōki sekkan jidaishi no kenkyū* 後期摂関時代史の研究, ed. Kodaigaku Kyōkai 古代学協会, 481–527. Tokyo: Yoshikawa Kōbunkan.
- 1996 Heian jidai no shūkyō bunka to onmyōdō 平安時代の宗教文化と陰陽道. Tokyo: Iwata Shoin.

YANO Michio 矢野道雄

- 1986 The *Chi'yao jang-tsai-chüeh* and its Ephemerides. *Centaurus* 29: 28–35. doi.org/10.1111/j.1600-0498.1986.tb00878.x
- 2003 Calendar, astrology, and astronomy. In *The Blackwell Guide to Hinduism*,
   ed. Gavin Flood, 376–92. Oxford: Blackwell Publishing.
   doi.org/10.1002/9780470998694.ch19
- 2013 Mikkyō senseijutsu 密教占星術. Tokyo: Tōyō Shoin.

Yuasa Yoshimi 湯浅吉美

2007 "Azuma kagami" ni mieru nisshoku kiji no kenshō: Higashiguni buge shakai ni okeru nisshoku no atsukai 『吾妻鏡』に見える日蝕記事の検証— 東国武家社会における日蝕の扱い. Saitama Gakuen Daigaku kiyō ningengakubu hen 7: 53-66.

# APPENDED PLATES

Planetary deities in *Kuyō hiryaku* 九曜秘暦, by Sōkan 宗観 (fl. 1125). The Metropolian Museum of Art, New York. (Images are declared as Public Domain. www.metmuseum.org/art/collection/search/45616.)



1. Iranian-Mesopotamian Sun.



2. Iranian-Mesopotamian Moon.



3. Iranian-Mesopotamian Mars.



4. Iranian-Mesopotamian Mercury.



5. Iranian-Mesopotamian Jupiter.



6. Iranian-Mesopotamian Venus.



7. Iranian-Mesopotamian Saturn.



8. Iranian Rāhu.



9. Iranian Ketu.



10. Zoomorphic Jupiter Moon Sun.



11. Zoomorphic Saturn Mars.



12. Zoomorphic Mercury Venus.