Buddhist astrology and astral magic in the Tang Dynasty

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Chapter 1
Introduction

1.1. Preliminary Considerations

In the first chapter of the *Tale of Genji* 源氏物語 by Murasaki Shikibu 紫式部 (b. c.973), one of the most celebrated pieces of classical Japanese literature, we read that the emperor felt great uncertainty about whether to bestow imperial rank upon his youngest albeit most cherished son, whose mother was not of a high rank. In light of the lack of maternal support he would suffer if he were to be given an elevated rank, the emperor had decided to keep the boy at a common rank. A visiting Korean sage agreed that this was best. Later, the emperor summoned a Buddhist astrologer (*sukuyō* 宿曜), who also expressed the same opinion.[1] Thus, it was decided that the boy would be a commoner with the name of Genji. In chapter fourteen, a Buddhist astrologer monk again makes an appearance to predict the number of children Genji would have, and their respective fates.[2] The appearance of Buddhist "astrologer monks" in this story should give us pause: did such monks actually exist historically, since, contrary to our expectations, Buddhism and astrology are not normally associated with one another. If such monks existed in medieval Japan, which imported so much of its court culture from China, did they also ever exist in China? If there was a precedent for this in China, from where did the Chinese astrologer monks receive their astrological techniques and lore?

If one browses the shelves on fortune telling in a modern Japanese bookshop, one will find many books, meant for general readers, on a system of astrology called Sukuyō 宿曜 ('Constellations and Planets'), the same term found in the *Tale of Genji*. The blurbs on the covers of these popular books often connect this astrology to Kūkai 空海 (774–835), the founder of the esoteric school of Buddhism in Japan called Shingon 真言, stating that he brought this mysterious system of astrology from Tang China in 806.

Moving to China, the caves of Dunhuang serve as a repository of late-Tang and early Song documents and works of art, including a certain painting in which a luminous Tejaprabhā Buddha 熾盛光佛 is depicted seated atop an ox cart. The painting is entitled "Tejaprabhā Buddha and the Five Planets" 熾盛光佛并五星圖 (fig.1.1), and was painted

[1] Edward G. Seidensticker translates *sukuyō* 宿曜 as 'astrologer of the Indian school', but this term refers to a Buddhist astrologer monk specifically. See chapter 6.4 below.

[2] Murasaki Shikibu, *The Tale of Genji*, vol. 1, trans. Edward G. Seidensticker (New York: Alfred A. Knopf, 1977), 14–15, 273. See *Genji monogatari* 源氏物語, Iwanami Shoten edn., vol. 1, 45 & vol. 2, 106. For further discussion of this see Jeffrey Kotyk, "Kanjiken no bungaku ni okeru saihō–senseijutsu no yōso: tōzai bunka kōryū ni okeru Bukkyō no yakuwari" 漢字圏の文學における西方占星術の要素：東西文化交流における佛教の役割, *Bukkyō bungaku kenkyū* 佛教文學研究 19 (2016): 88–90.

by a certain Zhang Huaixing 張淮興 (d.u.) in year 4 of the reign era Qianning 乾寧 (897). Its five figures are anthropomorphic representations of the five visible planets.

Fig. 1.1. "Tejaprabhā Buddha and the Five Planets"[3]

[3] Stein no. Ch.liv.007, British Museum 1919,0101,0.31. © Trustees of the British Museum

This is an intriguing representation of a buddha that does not itself have a definite Indian precedent. The function of the planets represented in this fashion is not immediately clear. It begs the question of why an artist would depict the planets in this fashion within a Buddhist context.

These figures representing the planets add an additional element of mystery to this painting, since similar representations are found in Islamic art.

Fig. 1.2. Planets of the *'Aja'ib al-makhluqat* (*Wonders of Creation*)[4]

The parallels between these icons and those of the Dunhuang piece are apparent enough to identify the icons of the latter. In both representations, Saturn is depicted as a man with a dark complexion, Venus plays a lute, Mercury holds parchment, and Mars is an armed warrior. The remaining figure is therefore to be identified as Jupiter. This point should bring to mind similar associations in the Latin tradition with which we are familiar

[4] These are from an illustrated Turkish version of the *'Aja'ib al-makhluqat* (*Wonders of Creation*), the first systematic treatise on Islamic cosmography by Zakariya al-Qazwini (1203–1283), produced in 1717 by Muhammad ibn Muhammad Shakir Ruzmah-'i Nathani. See Scott B. Noegel and Brannon M. Wheeler, *The A to Z of Prophets in Islam and Judaism* (Scarecrow Press, 2010), 271. Looking at these images clockwise, Jupiter is a stately man holding a document, Mars is a warrior carrying a severed head, Venus plays a lute, Saturn is a man of a dark complexion with at least seven arms holding various items, and Mercury holds parchment over his knee. Walters manuscript W.659. Images from the Walters Art Museum. Creative Commons License.

in English. The planet Mars is associated with the Roman god of war, Venus is associated with the goddess of pleasure, and Mercury is the messenger of the gods. While these planetary deities differ in some features, and also in some cases their genders, it can still be inferred that they must share a common origin. This leads to the question how such icons ended up appearing in Buddhist art. The *'Aja'ib al-makhluqat* also depicts the orbits of Venus and Mercury, revealing the icons to be connected with astronomy. If the Chinese icons were also connected somehow to astronomy, what was their function? What would their astronomical function have to do with Buddhism?

When looking for a 'Buddhist astrology' in China, we find that Buddhism is seldom mentioned alongside astrology in the modern fields of Sinology and Buddhology. Even pre-modern sources from eminent Chinese historians scarcely mention Buddhism and astrology within the same context. The eminent politician and historian of the early Ming dynasty, Song Lian 宋濂 (1310–1381)[5] in his *Luming bian* 祿命辯 (*Discussion on Fate Calculation*)[6] offers an account of the origins of astrology (specifically the art of prognosticating individual fortunes rather than state astrology) in China in order to prove that this art was originally foreign and thus ought not to be studied.

> 以星占命，奈何。曰：予嚮聞之於師，其說多本於《都利聿斯經》。「都利」蓋「都賴」也。西域康居城當都賴水上，則今所傳《聿斯經》者，婆羅門術也。李弼乾實婆羅門伎士，而羅睺計都亦胡梵之語，其術蓋出於西域無疑。
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> What of divining fate with the stars? As I have heard from my teacher, it is said to have largely originated from the *Duli yusi jing*. *Duli* perhaps is Dulai. The city of Kangju in the Western Regions is on the edge of the Dulai waters, so the *Yusi jing* now in circulation is an art of Brahmins. Li Biqian was actually a Brahmin diviner, and moreover Rāhu and Ketu are also words of the *Hu-Fan* [Central Asians and Indians]. There is no doubt that the art certainly originated in the Western Regions.

His remarks, to which we will return throughout this study, are noteworthy in that he asserts it was 'Brahmins' from the nebulous 'Western Regions' who first brought to China the type of astrology used to divine personal fortunes, which he places in the Tang dynasty between 785–805.[7] Mention of 'Brahmins' here would seem to indicate Indians,

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[5] As a historian, he is known for compiling in 1370 the *Yuan shi* 元史, the history of the Mongol Yuan dynasty (1271–1368).

[6] *Luming* 祿命 literally means "official emolument and limit of life". This concept is also known as *tuiming* 推命, i.e., "fate falculation". See Chao Wei-Pang, "The Chinese Science of Fate-Calculation," *Asian Folklore Studies* 5 (1946): 279.

[7] Ren Jiyu 任繼愈, ed, *Zhonghua chuanshi wenxuan Ming wen heng* 中華傳世文選明文衡 (Changchun: Jilin Remin Chubanshe, 1998), 151.

yet he makes no reference to Buddhism or Buddhist monks. Moreover, his speculation about this otherwise undescribed *Duli yusi jing* having a connection to Kangju in Central Asia raises some questions, given that Brahmins, Rāhu and Ketu[8] are all from India. Whatever the role of Buddhism in the transmission of astrology into China, Song Lian was unaware of it.

The primary Chinese Buddhist texts that relate to astrology include several important works from the Tang dynasty that not only deal with astrology, but also a closely associated practice of astral magic designed to interact with astral deities, such as the planets conceived of as sentient deities, which stands in stark contrast to early Chinese astrology. In these works, we also find Tejaprabhā Buddha named as a major Buddhist deity within an astrological context. Even with just a cursory glance at the materials, it is apparent that the Tejaprabhā image from Dunhuang was very likely connected with the practice of astrology and astral magic, which is why he is surrounded by the planets. It is not, however, immediately clear how Tejaprabhā arose in relation to astrology in China, and when precisely this happened.

We should note that a term approximating 'astral magic' is not found in Chinese. 'Astral magic' is a modern designation for the practice of magic as a means of interacting with or commanding the planets conceived of as gods or spirits. It was popular in Arabic occultism before it was transmitted to Europe in the Middle Ages. Richard Kieckhefer notes that "because this magic sought to change rather than merely learn one's destiny, its effect was entirely distinct from that of astrology proper, and for that reason it has been proposed that it be called 'astral' rather than 'astrological' magic."[9] For the purposes of this study, magic is understood as a practice of rituals aimed at unseen deities, in which one petitions, commands or deceives such beings for personal gain.

After a brief survey of the relevant materials, it becomes evident that there may be some truth to the popular conception of modern Japanese practitioners of Sukuyō astrology that Kūkai in the early ninth century brought to Japan from China a type of Buddhist astrology. The presence of planetary icons in the Buddhist literature, some of which share features with those in Islamic art, indicates that the astrology practiced by Buddhists in the Tang dynasty was not native to China, which agrees with Song Lian's assertion. Several centuries later in the fourteenth century, however, any memory of Buddhists practicing astrology had been forgotten, if we take Song Lian's remarks as representative.

This study seeks to explore and bring to light this forgotten role of Buddhism in the transmission and adaptation foreign astrology into China, and in the subsequent development of astral magic and cults centered on astral deities, investigating the extent

[8] Rāhu and Ketu are the ascending and descending nodes of the Moon in Indian astronomy. These will be discussed at length throughout this study below.

[9] Richard Kieckhefer, *Magic in the Middle Ages* (Cambridge: Cambridge University Press, 1989), 132.

to which this influenced the greater East Asian world in the areas of religion, literature and art.

1.2. State of the Field

At present, there is no field or subfield dedicated to the study of Buddhist astrology. The present study therefore draws on the work of numerous scholars from related fields including Buddhist Studies, Sinology, Indology and the history of science in China. Scholars have discussed Chinese Buddhism and astrology as they relate within specific texts and time periods, though there are no comprehensive studies that take into full consideration the background history of astrology and relevant developments in calendrical science and religious iconography. Buddhist Studies at present does not generally recognize a 'Buddhist astrology'. There has moreover never been any discussion to my knowledge of a 'Buddhist astral magic'. This study aims to document how both of these arose in China.

The first relevant area to survey is the role of astrology in Indian Buddhism. Raoul Birnbaum is correct in pointing out that "astrological knowledge was pervasive in the ancient Buddhist world."[10] In order to understand the Buddhist practice of astrology in India, in turn, one must have a grasp of the general history of Indian astrology. One of the leading scholars on this topic was David Pingree (1933–2005). The present study relies heavily on his publications, and seeks to build upon his work through an exploration of astrological materials in East Asia. The scope of his work was immense, as it delved into Sanskrit, Greek, Persian, Arabic and Latin works on astrology, as well as mathematical astronomy. However, Pingree did not read Chinese, and thus his publications do not extend into that direction. Pingree thoroughly documented the development of Indian astrology, especially as it relates to the Hellenistic tradition from which it heavily borrowed. His research was groundbreaking and innovative, and as a historian of mathematics his work is generally exceptional. He did not, nevertheless, discuss astrology from a Buddhological angle, and what it meant for the development of the religion.

The history of astrology extends to Mesopotamia and Hellenistic Egypt. The present study is primarily interested in Hellenistic astrology. Aside from Pingree's work, there are several other scholars whose works I have consulted. An introduction to the history of astrology, *Ancient Astrology* by Barton (1994), discusses the history of Hellenistic astrology, in addition to explaining basic astronomical terms as they relate to astrology. The foremost study on Greek horoscopy, by Otto Neugebauer and Henry Bartlett Van Hoesen (1959), discusses the technical features and metholodgy behind the

[10] Raoul Birnbaum, "Introduction ot the Study of T'ang Buddhist Astrology: Research Notes on Primary Sources and Basic Principles," *SSCR Bulletin* 8 (1980): 5.

art. This technical knowledge is necessary to understand the relevant literature in Chinese translation. A monograph by Tester (1987) links together the history of astrology and technical developments, and explains developments chronologically. These studies provide the information necessary to separate Hellenistic astrology in Chinese translation from Indian and native Chinese systems. As it presently stands, scholarly treatment of Hellenistic astrology is still an undeveloped field. Brennan (2017), however, produced an instructive practical guide to Hellenistic astrology, based entirely on primary sources from the ancient period.

A related area that combines both Hellenistic and Indian astrology is Iranian astrology, elements of which ended up being incorporated into Chinese Buddhist astrology and astral magic. Pingree paid much attention to Iranian astrology. There are, however, few extant primary sources that would be relevant to the present study. I have also relied on the work of Antonio Panaino (2015), who produced a rich survey of Zoroastrian astrology and cosmology, in addition to his published papers in English (2004, 2009) on Iranian astrology and astral magic. Panaino's studies include translations of source materials from Middle Persian. By comparing these with Chinese materials we are able to identify parallels, and thereby prove that Buddhist astrology absorbed a number of Iranian elements.

Turning to the topic of Buddhist astrology in China, a few scholars have made seminal contributions. Zenba Makoto, who was active in the fifties and sixties, studied the astronomy found in Buddhist texts in Chinese translation (1952, 1956, 1957, 1968). His papers were the first of their kind, and establish a foundation for understanding Indian astronomy in Chinese translation. It seems that he never published in English. Pingree was therefore unaware of these valuable papers. Zenba's papers provide detailed information and analysis about several important texts.

Yano Michio, a historian of Indian mathematics and astronomy, has produced relevant studies with due reference to Indian sources in Chinese translation. Yano's 1986 work, *Mikkyō senseijutsu* 密教占星術 (*Esoteric Buddhist Astrology*), was a pioneering work, and one atop which the present study builds. In addition to identifying various Indian sources in astrological works in Chinese translation, Yano also carried out important philological work on manuscripts, identifying variant recensions of key Chinese texts. His 1986 work was revised and republished in 2013. Yano's other works on astrology and calendrical science (1986, 2003, 2004) are also invaluable and greatly contribute to our understanding of Buddhist astrology in China.

Bill M. Mak, a student of Yano, has published several papers on Indian astral science and the introduction of foreign astrology into China, with particular interest in what this meant in a Buddhist context. One of his important studies (2014) demonstrates that the work of the Hellenistic astrologer Dorotheus of Sidon (c. 75) was translated into Chinese around the turn of the ninth century, which stands in contrast to Yano's earlier theory that the Hellenistic astrology found in late-Tang materials was based on the work

of the Hellenistic writer Ptolemy (2nd cent.). Mak has also challenged Pingree's dates for the first major transmission into Sanskrit of Hellenistic astrology via the *Yavanajātaka* (2014). Mak's work clearly develops the earlier work of Pingree, Zenba and Yano.

The publications of these scholars are all fine contributions to the field, and they excel in their analysis of astrology and astronomy, but what remains missing is a Buddhological or Religious Studies perspective that considers the religious implications of astrology within Chinese Buddhism. On the other hand, scholars of Chinese Buddhism who have approached astrology tend to focus on religious practices and the relevant iconography without reference to the history and technical aspects of astrology. For example, a survey by Henrik H. Sørensen (2011) gives an outline of relevant astrological texts in the Chinese Buddhist canon for the collective volume *Esoteric Buddhism and the Tantras in East Asia*. His study is a starting point to delve into the topic, but it does not contest traditional author attributions, provide critical dates for texts, or examine the technical features of Buddhist astrological practice in East Asia.

The significance of astrology in esoteric Buddhism in East Asia is not widely discussed, though the relationship between Buddhism and Daoism with respect to the Buddhist appropriation of Daoist astral magic has attracted scholarly attention as a prominent example of notable religious interaction. Unfortunately, there is little discussion of Tang-era Daoist astrology itself, especially the common features it shared with contemporary Buddhist astrology.

The major discussions to date concerning astral magic in Buddhism and Daoism suffer from critical flaws. Xiao Dengfu (1991) provides an outline of Buddhist astrology in the Tang with reference to Daoist influences, but does not take into sufficient account foreign influences. He also attributes too many features in Buddhist texts to Daoist influences. Christine Mollier (2008) also explores the interaction between Daoism and Buddhism with a particular interest in the activities of the astronomer Yixing and his purported Daoist practices, but she does not critically distinguish between historical and fictional accounts of Yixing, and therefore erroneously projects into the 720s various developments that actually occurred in the following century. These two studies therefore need to be approached with caution. Osabe Kazuo (1963) in his earlier study of Yixing had, however, already pointed out that several works attributed to Yixing could not have been from Yixing's time and that, in reality, they represent popular works from the following century. Some brief remarks in a monograph on Chinese Mantrayāna by Lü Jianfu (2009) also properly address the chronology of the relevant works.

The astrological iconography in China and Japan has often caught the attention of scholars of art history, though the original source of these icons and their use in astral magic are not adequately addressed. Birnbaum (1980) carried out a brief preliminary survey of Tang Buddhist astrology with reference to the art record, though he was unaware of the extent of Iranian influences. Similarly, Angela Howard (1983) pointed out evidence of planet worship in Tang China and examined the relevant astrological icons

based on a Japanese manuscript, though she too did not identify any Iranian elements. A collection of papers by various authors, *The Worship of Stars in Japanese Religious Practice*, edited by Lucia Dolce (2007), focuses on Japanese astrology, building on this earlier research. The paper of Lilla Russell-Smith included in this volume discusses the astrological icons. Takeda Kazuaki (1995), who it seems was unaware of the earlier discussions of the icons in English, produced a Japanese language monograph explaining the features of astrological iconography in Japanese Buddhist *maṇḍala*–s. As in the other studies, there is no awareness of possible Near Eastern influences within the astrological iconography. There is also very little evident awareness of how these icons were used by practitioners of astral magic.

Astrology is intimately connected with calendrical science. The present study relies on the work of historians of Indian and Chinese sciences to explain important interactions between astronomers and astrology. With respect to the evolution and features of Indian calendars, the studies of Pingree (1982) and Yano (2003) provide all the relevant information. Calendrical science in China rapidly developed during the Sui-Tang period. This topic is covered in detail by Yabuuchi Kiyoshi (1944), who mostly relied on primary source texts from dynastic histories. His authoritative study elaborates in particular on important technical developments. One of the major calendar reformers in the Tang was the aforementioned monk Yixing, who carried out a number of important innovations that are examined by Ohashi Yukio (2011). In the late-Tang, there appeared popular calendars that were not sanctioned by the state, which was a result of widespread interest in astrology, and declining state authority. Yabuuchi (1984) was also interested in these, a topic which was earlier touched upon by Nakayama Shigeru (1964) and Momo Hiroyuki (1964). Relying on the work of these three scholars, we are able to identify the types of calendar used in various astrological materials from China and Japan.

The practice of astrology also requires knowledge of observational astronomy. The astrologers of East Asia all relied on the Chinese system. The foremost history on this topic is the pioneering work of Joseph Needham (1959). His work still generally holds good, though as a historian of science he did not discuss how Chinese developments affected astrology and religious practices. Yabuuchi also discussed the existence of Western astronomy in Tang China (1961), being one of the first scholars to identify the presence of Hellenistic sources in Chinese. This foreign astronomy was connected with the employment of Indian and Persian court astronomers in the Chinese capital throughout the mid- to late-Tang dynasty. The Indian figures who were active in the eighth century was studied by Tansen Sen (1995). The life of a Persian astronomer, who was active around the turn of the ninth century, is examined by Rong Xinjiang (1998). Both of these scholars made use of the inscriptions on the memorial steles of these astronomers. Two of these were unearthed in Xi'an, China, in 1977 (Chao 1978) and 1980 (Chen 1981). We therefore have a clear picture of who these foreign astronomers were. I will argue below that we can trace a shift from Indian to Iranian

sources of astronomy and astrology based on the chronology of their respective careers in relation to the textual record.

As a separate but related field of study, the history and technical aspects of ancient Chinese astrology and omenology are best covered by a recent comprehensive monograph on the topic by David Pankenier (2013). This subject deals primarily with native astral omenology, a practice that existed alongside foreign practices during the Tang dynasty. Buddhist astrologers integrated some elements of native Chinese astrology into their system. We must also understand the Chinese approach to astrology in order to explain why the Chinese were so receptive to foreign astrology. Edward Schafer (1977) produced a study on astrology in the Tang dynasty entitled *Pacing the Void: T'ang Approaches to the Stars*, but the author himself describes it as an exegesis, calling it a "serious attempt to capture in my mind and to re-animate in my prose the true visions of the educated or intelligent men of medieval China."[11] This work is therefore a personal reimagining of astrology in the Tang dynasty. The present study cannot rely heavily on this type of work.

Other important studies that relate to astrology in the Tang dynasty include that by Susan Whitfield (1998), who documents the prohibitions against private study and possession of astronomical texts that were nominally in effect under Chinese law during the Tang, though she demonstrates that these prohibitions were ineffective. Her findings are considered in the present study, especially with respect to the legal status of Buddhist astrology. The impact of the popularization of astrology in Tang literature is examined by Chan Man Sing (2002), who was the first to point out that several major poets of the late-Tang incorporated elements derived from foreign astrology into their poetry. This is a significant discovery as it demonstrates the increasing popularization of astrology in the late-Tang, a development which I link with earlier Buddhist interest in astrology.

The impact of Buddhist and foreign astrology in East Asian cultures after the Tang dynasty is documented by a number of scholars. These are generally divided into separate regions.

One of the richest sources of documents in this regard is Dunhuang. Many items discovered there shed light on developments in the late-Tang. One of the key documents is a horoscope (P.4071), which was initially studied by Jao Tsung-i (1984). Niu Weixing (2016) recently produced a thorough analysis of this document in terms of its astrological features and the techniques used to compile it. Other studies include that of Gao Guofan (1993), who discusses some of the methods of astrology as seen in Dunhuang texts. Yu Xin (2006) surveys astrological texts related to the seven-day week. One issue with the scholarship on these documents is that they are not adequately connected to earlier developments in the Tang. There is also almost no discussion of contemporary Buddhist interest in astrology in the early Song period (tenth and eleventh centuries).

[11] Edward Schafer, *Pacing the Void: T'ang Approaches to the Stars* (University of California Press: 1977), 2.

There are a few studies discussing the impact of astral deity cults in the surrounding cultures of China, such as the Tangut Xixia and Korea. The information provided by these studies will be used in the present study to demonstrate the ultimate significance of Tang Buddhist astrology in later centuries. Kira Samosyuk (1997/1998, 2004) has researched both the cults of astral deities in the Tangut culture, as well as the state interest in astrology. Sen (1999) has examined the tomb paintings that display astrological motifs from the twelfth century in Liao China. Publications by Sørensen (1995, 2006) discuss the Korean adoption of astrology, and the related astral cults in Korea.

The Japanese reception and development of Chinese Buddhist astrology is highly instructive, as it tells us a great deal about Chinese developments, while further demonstrating the impact of Buddhist astrology in later East Asian religious history. Japanese Buddhist astrology has received some scholarly attention, but it is not widely known even among Japanese scholars. The first academic studies of this tradition were carried out by Momo Hiroyuki (1964, 1969, 1975). He was the first scholar to draw a clear line between the activities of professional Buddhist astrologers and the use of astrology by Mikkyō 密教 institutions, i.e., those sects involved in Mantrayāna or Esoteric Buddhism.[12] He also connected Japanese practices of astrology back to traditions of the late-Tang. His work laid the foundation for future comprehensive studies by Yamashita Katsuaki (1990, 1996, 2010) who wrote the first detailed history of Japanese astrologer monks with due reference to their lineages and activities in Japan from the tenth to fourteenth centuries, though his focus has been on the Heian period. Toda Yusuke (2006, 2007, 2008) therefore has looked more closely at the activities of these astrologer monks in the Kamakura period, while taking a particular interest in the astral magic they developed based on earlier materials that they inherited from China. The findings of these scholars provide many insights about the sources which Japanese astrologers used, most of which were from China. We are able to reconstruct features of Chinese Buddhist astrology and astral magic based on these Japanese materials.

1.3. Aims of this Study

Buddhist astrology in East Asian religious history warrants a comprehensive study identifying the sources of Chinese Buddhist astrology and the historical trends that

[12] There is no present consensus concerning the terms Mantrayāna, Esoteric Buddhism and Tantric Buddhism as they relate to East Asia. For a relevant discussion see Charles D. Orzech et al., "Introduction: Esoteric Buddhism and the Tantras of East Asia: Some Methodological Considerations," in *Esoteric Buddhism and the Tantras of East Asia*, eds. Charles D. Orzech et al. (Leiden: Brill, 2011), 3–18. Buddhists in East Asia never referred to a "Tantric Tradition", but a modern scholar can still clearly draw lines between "Indian Tantra" and what we see in East Asia. I feel that "Tantric" as an adjective captures an appropriate meaning and background. In this study, these various terms are used interchangeably.

facilitated its development in light of its impact across several centuries in the areas of religion, art and literature. The prominent, albeit largely unrecognized role, of Buddhist astrology in China also challenges present understandings of the development of Chinese Buddhism that almost without exception overlook astrology.

Past scholarship has dealt with various aspects of astrology in the Tang dynasty, including some of the relevant practices, icons, texts, and calendrical science, but there has been no attempt to link all these developments together. Scholarship has also yet to point out that it was only in the Tang dynasty that Buddhist astrology flourished in China. This point will be demonstrated by examining the relevant texts and history, showing that the earliest evidence for Chinese Buddhist practice of astrology is found in the eighth century. As we will explore throughout this study, Buddhist astrology was clearly an important component of Mantrayāna in East Asia. The need within Mantrayāna to determine auspicious times for rituals was, I will argue, the initial motivating factor behind the practice of astrology by Chinese Buddhists, who in earlier centuries never had a need to observe it. This deep connection between astrology and early Chinese Mantrayāna is furthermore concretely demonstrated by the fact that Śubhakarasiṃha 善無畏 (637–735), Yixing 一行 (673–727) and Amoghavajra 不空 (705–774), three of the early patriarchs of the esoteric lineage in China, were connected to the practice of astrology. Later, Kūkai, an esoteric master par excellence, would play a significant role in transmitting astrology to Japan. Although Yixing's work in astronomy is widely recognized, these figures are seldom associated with astrology in modern scholarship.

The Buddhist astrology that we see develop in the Tang is notably based on non-Buddhist sources. It is already known that Chinese Buddhist literature draws upon Indian sources, but these texts also indicate other foreign sources, Iranian and even Hellenistic, a point that has not been deeply studied. The latter two types of astrology, however, were primarily for prognosticating the fate of an individual, rather than determining auspicious times for rituals. On this matter, we must ask if there was any sort of doctrinal justification in Buddhism for engaging in such fortune telling. Another issue that must be explored is the position of the vinaya (monastic regulations) on the matter of monks practicing divination. It will be shown that proscriptions against the practice of divination, and astrology specifically, did in fact exist within the Chinese vinaya tradition, but these rules clearly never hindered the development of Buddhist astrology.

As noted above, there is no mention in Buddhist Studies at present of any 'Buddhist astral magic'. This study takes the first step in explaining its emergence in China. The motivating factors underlying the initial interest in this magic must first be identified. It will be demonstrated that the intense Buddhist interest in astrology produced fears and concerns about undesirable prognostications and malefic astral deities. Buddhists had at their disposal various Indian and non-Indian apotropaic measures to counter these forces, and thus they produced a unique practice of astral magic combining Indian, Chinese and Iranian elements. The emergence of Tejaprabhā Buddha and other

astral deities within the Chinese Buddhist pantheon are, I will argue, connected to this magic and astrology.

If Chinese Buddhists were practicing foreign systems of astrology that originally employed non-Chinese systems of astronomy, how exactly did they, especially not being professional astronomers, navigate these substantial differences? How did they produce a functional system from several disparate systems? To address this problem, attention must be given to the contemporary Chinese developments in astronomy, calendrical science and native Chinese astrology. Astrology requires a basic knowledge of astronomy, but the more advanced techniques of astrology require complicated calculations to determine the positions of planets in the past or present. On this point, we must also ask who were the professional astronomers responsible for creating the tools necessary to feasibly practice advanced astrology, such as the tables indicating the positions of planets on past dates that we find in the late-Tang, so that non-specialists could readily practice astrology. We might also ask to what extent foreign astronomy was transmitted into China, and was Chinese astronomy ever influenced by non-Chinese systems. Did such developments have an impact on Buddhist astrology? Did any interest in astrology affect how Chinese astronomers approached their art? These questions are best answered by linking together the findings of scholars of astronomy and Buddhism. This approach has not yet been attempted to date.

One other significant problem that this study seeks to address is that of the chronology of the development of Buddhist astrology. There are many misunderstandings about when certain texts and practices emerged, much of this a result of relying on traditional attributions of texts on astral magic to Yixing. I will prove that these texts attributed to him cannot be from his time, or even possibly based on anything produced by him. More importantly, I will discuss, drawing upon the work of Osabe, what these texts tell us about the popularization of astrology, and how Buddhists readily interacted with other contemporary religions when it came to astrology. The critical chronology that I will construct will also demonstrate that it was Buddhists who first translated and practiced foreign astrology in China, which was then followed by a booming popular interest in the art. The cause behind the popularization of astrology in the late-Tang has not yet been explained. I will argue that it was the initial Buddhist interest in astrology that sparked this development, but at the same time address the contemporary legal prohibitions against the private study of astronomy, which in theory should have halted such developments.

Finally, with due consideration of all the developments in the Tang dynasty, I will document the impact that Buddhist astrology had in the larger East Asian world following the collapse of that dynasty in the early tenth century.

1.4. Primary Sources

In examining the development of Buddhist astrology in the Tang, I will draw on a number of materials and sources including texts, and icons from the art record of East Asia. The primary texts in the Taishō canon 大正新脩大藏經圖像 (texts T 1299–1311), printed between 1924–1932, include the major relevant works, though variant published and unpublished versions are also consulted.[13] The majority of these were preserved exclusively in Japan. Several of the key texts therefore are only published in the Taishō. The versions that the Taishō editors consulted when preparing typeset editions are not readily available. This presents the obvious problem of having no primary sources other than Japanese recensions. Other valuable works from Japan, such as hagiographies and catalogs of works brought back from China by Japanese monks, are also consulted.

The relevant icons are found primarily in the supplementary *Taishō zuzō* 大正圖像, the Taishō canon's collection of image plates.[14] Reference is also made to manuscripts and specimens of art from Dunhuang, many of which are now digitized.[15] It does not appear that any of the available icons are true originals from Tang China. In the case of Japanese examples, they are believed to be copies of Chinese originals. These all fortunately correspond to the descriptions of the icons in Chinese texts; thus, we can generally rule out any major modifications on the part of Japanese artists.

Reference is also made to Daoist astrology in the Tang dynasty. The Ming-era Zhengtong Daoist canon 正統道藏 of 1445 contains a few relevant texts.[16] Unfortunately, these were not fully preserved as they are missing chapters. There are also obvious scribal errors in these texts. Unfortunately, there are no other known versions of these works.

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[13] I have examined the printed edition as well as the digitized versions available through CBETA Reader (v.5.2) and the SAT project (http://21dzk.l.u-Tōkyō.ac.jp/SAT/). For a discussion of the history behind modern Japanese Buddhist canons see Silvio Vita, "Printings of the Buddhist 'Canon' in Modern Japan," in *Buddhism Asia 1: Papers from the First Conference of Buddhist Studies Held in Naples in May 2001*, eds. Giovanni Verardi and Silvio Vita (Kyōto: Italian School of East Asian Studies, 2003), 217–245.

[14] These are also available online through the SAT project (http://dzkimgs.l.u-Tōkyō.ac.jp/SATi/images.php?alang=en).

[15] Scans of the materials are available online at the International Dunhuang Project (http://idp.bl.uk/).

[16] Also known as *Da Ming daozang jing* 大明道藏經. This Daoist canon has been reproduced as a modern facsimile edition by various publishers. Here the Wenwu edition (1986) will be cited. For an overview of the history of Daoist canons see Fabrizo Pregadio, ed., *The Encyclopedia of Taoism*, vol. 1 (Routledge, 2008), 28–33. Kristofer Schipper and Franciscus Verellen, eds., *The Taoist Canon: A Historical Companion to the Daozang*, vol. 1 (Chicago: The University of Chicago Press, 2004), 5–39. For a survey in Japanese see Ozaki Masaharu 尾崎正治, "Dōkyō kyōten" 道教經典, in *Dōkyō* 道教, vol. 1, ed. Fukui Kōjun 福井康順 (Tōkyō: Hirakawa Shuppansha, 1983), 75–120.

A number of secular sources are also important to this study, most importantly the secular histories of the Tang dynasty.[17] These histories provide biographies, as well as details on the evolution of astronomy and calendrical science in China. Other Tang-era works, in particular fictional or semi-historical accounts of relevant figures such as Yixing, are also consulted, such as collections of short tales, which include the *Tang xinyu* 唐新語 (*New Tales of the Tang*) by Liu Su 劉肅 (fl. 820), *Kaitian chuanxin ji* 開天傳信記 (*Kaitian Record of Accounts*), written by Zheng Qi 鄭綮 (d.899), *Minghuang zalu buyi* 明皇雜録補遺 (*Supplement to the Minghuang Assorted Records*), compiled in 855 by Zheng Chuhui 鄭處晦 (d.u.), and the *Youyang zazu* 酉陽雜俎 (*Miscellaneous Morsels from Youyang*), compiled by Duan Chengshi 段成式 (d. 863) around 860. These are preserved in the *Siku quanshu* 四庫全書 corpus of Chinese works, the editing of which was finished in the late 1770s. I have relied primarily on the Taiwanese reprint of 1983 (the *Ying yin Wen yuan ge Si ku quan shu* 景印文淵閣四庫全書, originally produced in 1782).[18] Other sources of contemporary information include inscriptions from memorial steles.

The history of Chinese calendrical science and astronomy in the Tang period is largely only explained in the dynastic histories of the Tang. However, investigation of popular calendars, which were not endorsed by the state, requires looking at other sources, such as later dynastic histories, as well as authors from later periods, some of whom were from the Ming dynasty, such as Song Lian and Liu Dingzhi 劉定之 (1409–1469). Their writings are preserved in the *Ming wen heng* 明文衡 anthology compiled by Cheng Minzheng 程敏政 (1446–1499). I have used the printed edition edited by Ren Jiyu (1998).

As many relevant materials were imported from Iran, reference also has to be made to extant works from the Near East. To understand the technical details of foreign astrology in China we must consult Hellenistic sources. The foremost figure in this regard is Dorotheus of Sidon (c. 75), who wrote a compendium of astrological lore called the *Pentateuch* (*Five Books*). Although fragments of this work are preserved in Latin, Greek and Chinese, the only fully extant recension of the text is an Arabic translation. Pingree (1976) translated the Arabic recension. The present study makes reference to Pingree's translation, but caution must be exercised given that this English translation of the Arabic is a translation of an expanded edition of a Pahlavī translation of the original Greek. Pingree was unaware of the fragments in Chinese. The additional material of Dorotheus uncovered in the present study from Daoist materials therefore offer a significant

[17] The two primary histories include the *Jiu Tang shu* 舊唐書 (*Old Book of Tang*) of 945 by Liu Xu 劉昫 (887–946), and the *Xin Tang shu* 新唐書 (*New Book of Tang*) of 1060 by Ouyang Xiu 歐陽修 (1007–1072) and Song Qi 宋祁 (998–1061).

[18] For comprehensive details on the *Siku quanshu*, see Endymion Wilkinson, *Chinese History: A New Manual*, fourth edn. (Cambridge, MA: Harvard University Press, 2015), 945–954.

contribution to understanding Dorotheus. As will be shown in this study, the Chinese material also often corresponds very closely with content in Pingree's translation.

The astral magic of the Iranian type that we find in Chinese drew upon material from Hellenistic Egypt and other Near Eastern cultures. In order to prove this point and better understand the features of this magic, we can identify parallels in ancient and medieval sources from the Near East and even Europe, thereby demonstrating that Chinese Buddhists and Daoists during the late-Tang were, in fact, part of an effectively global interest in this type of astral magic. In the case of Greco-Egyptian sources, the relevant papyri that share features with what we find in Chinese are translated from the Greek by Hans Dieter Betz (1986). Many more parallels are found when comparing the Chinese materials with the *Picatrix*, which is the Latin version of the *Ghāyat al-Ḥakīm*. This medieval Arabic manual of astral magic, compiled in the eleventh century, draws on a number of earlier sources from the ninth and tenth centuries.[19] A typeset version of the Latin translation from the thirteenth century was prepared by Pingree (1986). I have consulted this Latin edition alongside its English translation by John Michael Greer and Christopher Warnock (2010–2011).

1.5. Methodology

This study establishes a critical historical chronology for the introduction and development of Buddhist astrology in China. The chapters are therefore ordered chronologically. The texts and visual icons as they appear in the historical record, or with dating as best can be determined, are individually analyzed with due reference to contemporary historical developments that affected their production. The traditional attributions of certain works, especially those of Yixing, are subjected to a philological analysis, and demonstrated to be spurious; approximate dates are determined based on content and when they first appear in catalogs of texts by Japanese monks.

Having established such a chronology, we are then able to track developments and innovations over the course of time, answering the question of how a unique type of Buddhist astrology was produced from disparate sources. This also enables us to seek the first texts and the events that would have encouraged Buddhist interest in the practice of astrology. Explaining the challenges that the Chinese faced in translating and implementing foreign astrology over time, especially as non-specialists in astronomy, requires reference to various technical adaptations. Reference is therefore also made to the contemporary developments in Chinese calendrical science and how this field simultaneously evolved. From this we will attempt to discern an adaptive strategy underlying the implementation of foreign astronomy in China.

[19] David Pingree, "Some of the Sources of the *Ghāyat al-hakīm*," *Journal of the Warburg and Courtauld Institutes* 43 (1980): 2.

This study examines via intertextual analysis how Chinese Buddhist literature integrates largely non-Buddhist astrological material. 'Intertextuality' is a concept devised by Julia Kristeva (b. 1941), covering "the range of ways in which one 'text' may respond to, allude to, derive from, mimic, parody, or adapt another."[20] Intertextuality understands "the text as a dynamic site in which relational processes and practices are the focus of analysis instead of static structures and products." Texts contain other elements, themes and adaptations from other texts, and therefore "we understand texts not as self-contained systems but as differential and historical, as traces and tracings of otherness, since they are shaped by the repetition and transformation of other textual structures." This approach to texts takes the emphasis away from a single text, and instead focuses it on how texts relate to each other.[21] Kristeva's concept of intertextuality gained popularity from the 1970s, but generally lost its original meaning.[22] Hence, for the sake of clarity, the present study defines intertextuality according to Gérard Genette. He defines it "as a relationship of copresence between two texts or among several texts: that is to say, eidetically and typically as the actual presence of one text within another."[23]

This definition in practice corresponds to 'textual reuse', i.e., the borrowing of content from one text to be integrated into a new work. Textual reuse is presently a topic of interest in computer science, in which vast quantities of texts are automatically scanned for examples of reuse of earlier materials.[24] I have made ample use of the search functions of CBETA, SAT, WikiSource and the CTEXT project to identify examples of textual reuse in the body of Buddhist and non-Buddhist texts under investigation.

Scholars have recently taken an interest in textual reuse and intertexuality within Buddhist literature. This was a special recent topic in the *Buddhist Studies Review* (2016). Vesna Wallace notes, "As every scholar of Buddhist studies knows, intertextuality has been an important feature of Buddhist literature, which has for centuries spatially and interlinguistically transmitted and perpetually reused. The reuse, evocation, quotation, recycling, and appropriation of texts and Buddhist ideas have been a common strategy in all Buddhist literary traditions."[25] The present study aims to consider these same patterns within Chinese Buddhist texts dealing with astrology and astral magic.

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[20] "Intertextuality," in *The Concise Oxford Companion to English Literature*, eds. Dinah Birch and Katy Hooper (Oxford: Oxford University Press, 2013), 356.

[21] María Jesús Martínez Alfaro, "Intertextuality: Origins and Development of the Concept," *Atlantis* 18, no. 1/2 (1996): 268.

[22] Thomas A. Schmitz, *Modern Literary Theory and Ancient Texts: An Introduction* (Blackwell Publishing, 2007), 77.

[23] Gérard Genette, *Palimpsests: Literature in the Second Degree*, trans. Channa Newman and Claude Doubinsky (University of Nebraska Press, 1997), 1–2.

[24] Jean-Gabriel Ganascia and others, "Automatic Detection of Reuses and Citations in Literary Texts," *Literary and Linguistic Computing* 29, no. 3 (2014): 412–421.

[25] Vesna A. Wallace, "Thoughts on Originality, Reuse, and Intertextuality in Buddhist Literature Derived from Contributions to the Volume," *Buddhist Studies Review* 33, no. 1-2 (2016): 233.

Employing the stated theoretical framework requires that we know the order in which texts were produced, hence the emphasis on a critical chronology. We must first understand the original material that later Chinese Buddhist literature reuses. Having explained these earlier sources of astrology, we can then examine how they were reused in a new, specifically esoteric Buddhist, context. This process of comparing the original materials with the new forms enables us to examine what Buddhists changed, retained and omitted, which is highly instructive with respect to the motivations and beliefs of the authors, especially when the original materials were non-Buddhist. The way in which the relevant visual icons are represented in China also informs us about how these figures were imagined in the new environment.

1.6. Chapter Outlines

Chapter 2 – "Astrology and Eurasian Civilizations"

This chapter outlines the history of astrology as it relates to the present project, in particular the development of astrology in India, which underwent rapid transformations as a result of Hellenistic influences from the fifth century onward. It is anticipated that most readers from the field of Buddhist Studies will be unfamiliar with astrology, so the relevant concepts are explained and defined. The history of astrology as it relates to Buddhist precepts and monastic conventions is also discussed. The major instances of astrology being prohibited or refuted in Indian Buddhist literature are surveyed, before discussing the increasing Buddhist interest in astrology throughout the first millennium, especially in Mahāyāna and later Mantrayāna, a development that parallels similar trends among astrologers in Hindu history. This establishes the Indian background behind the astrology that was introduced into China through Buddhism. I also discuss the existence of astrological determinism in Indian Buddhist sources, which, I argue, was a major belief among Buddhists in India that was carried over into China. I observe that examples of astrology in Indian Buddhist literature seem to largely originate from texts that come from Magadha. Finally, the Chinese perspective on astrology and the legal prohibitions against the private study of astronomy are discussed. These prohibitions are relevant in that they seem to have prevented the popularization of astrology until after the mid-Tang, when they were no longer enforced.

Chapter 3 – "Early Buddhist Astrology in China: the Fourth to Seventh Centuries"

This chapter examines several translations of Indian astrological texts into Chinese between the fourth to seventh centuries. It is asked why Indian astrology was not observed in China in this period. I point out that the texts make little attempt at defining the system of Indian astrology in a way that could be feasibly implemented by Chinese readers. The main texts include two translations of the *Śārdūlakarṇāvadāna* (T 1300, T 1301), as well as the **Samādhi-ṛddhi-pāda* 三昧神足品 chapter of the *Ratnaketu-parivarta* 寶幢分, the translation of which is attributed to Dharmakṣema 曇無讖 (385–

433), the *Candragarbha-parivarta* 月藏分, translated by Narendrayaśas 那連提耶舍 (490–589) in 566, and the *Sūryagarbha-parivarta* 日藏分, also by Narendrayaśas in 585 (these are included in the *Mahāsaṃnipata-sūtra* 大集經; T 397). In addition, a large text, which I propose was likely the *Gārgīya-jyotiṣa* (not extant in Chinese), was translated in the Sui period (581–618). Although modern scholars recognize the value of the extant texts as datable examples of Indian or Central Asian texts dealing with astrology, the reality is that they had little impact on the development of Chinese astrology. There is no evidence that Buddhists in China felt any pressing need to practice Indian astrology in these centuries.

Chapter 4 – "Buddhist Astrology in the Mid-Tang: the Eighth Century"

This chapter examines the first major implementation of foreign astrology in China. The *Mahāvairocana-sūtra* 大日經 (T 848), translated in 724 by Śubhakarasiṃha and Yixing, introduces the need to determine auspicious times for the creation of a *maṇḍala*. The supplementary commentary, the *Dari jing shu* 大日經疏 (T 1796), completed sometime before Yixing's death in 727, briefly outlines Indian astrology as it was understood by Śubhakarasiṃha. Yixing's authorship of this commentary is contested most famously by Osabe Kazuo, but following the line of recent studies, I disagree, and will demonstrate that, despite a few later modifications, the core of the commentary, especially the section on Indian astrology, stems from Śubhakarasiṃha. This is important in establishing the chronological development of foreign astrology in China. This commentary does not provide sufficient details so as to be able to properly determine an auspicious time, which I argue was an impetus for Amoghavajra to compile his own astrological manual. His manual provides everything required for a Chinese reader to determine auspicious dates, in addition to explaining the basics of Indian astrology (such as predictions about individuals based on their date of birth). The manual, however, while alluding to much more complex systems of astrology, fails to provide any details. This, in addition to Mantrayāna related works affirming astrological determinism, prompted growing interest in astrology among the Chinese, first among elites and then commoners. The translation of Hellenistic astrology into Chinese around 800, although not carried out by Buddhists, was, I argue, in large part motivated by a wave of interest in astrology that was originally motivated by Buddhist concerns.

Chapter 5 – "The Sinicization of Occidental Astrology: the Ninth Century"

This chapter begins with a brief survey of foreign astrological elements in the works of the late-Tang poets Han Yu 韓愈 (768–824) and Du Mu 杜牧 (803–852), which demonstrates the extent of the popularization of astrology in the ninth century. I argue that the emergence of the Tejaprabhā and Sudṛṣṭi cults in the late-Tang was prompted by popular interest in astrology. The key astrological Buddhist text from this period reveals the extent to which Buddhists incorporated non-Buddhist elements into their astrology, in addition to displaying innovative new approaches to apotropaic magic that they developed as a response to growing concerns about the influences of the planets in human

life. The worship of planetary deities as gods within a Buddhist context, based largely on the Zoroastrian model, and likely transmitted via Syriac (Nestorian) Christians into China, was furthermore supplemented with an array of *navagraha* mantras and native Chinese lore. This magic highlights the extent to which Buddhists in China could and, in fact, did believe in astrological determinism, rather than in strict theories of karma. Several of the texts attributed to Yixing are actually from this period, yet several modern scholars have uncritically accepted their attribution to Yixing, thus anachronistically projecting ninth century developments back into the 720s. This misunderstanding is corrected here. The parallel Daoist developments will also be surveyed, such as their practice of astral magic, which has many parallels with the Buddhist system. The astrological iconography and how artists sinicized it will be studied, demonstrating that Iranian, rather than Indian, planetary icons became dominant in East Asia.

Chapter 6 – "Astrology in Post-Tang East Asia":

This chapter surveys the various influences that Tang Buddhist astrology and astral magic had in East Asia. Materials from Dunhuang are studied alongside relevant developments in Korea, Song China, Liao China, the Tangut kingdom of Xixia and Japan. Specific attention is given to the Japanese traditions of astrology, for which we have numerous sources. The ultimate legacy of Buddhism's role in the transmission of foreign astrology was forgotten in China, as exemplified in the aforementioned remarks by Song Lian. This chapter discusses the hitherto unrecognized significance of Tang Buddhist astrology, and how it impacted other cultures and time periods.

Finally, I have produced a timeline that provides an overview of relevant developments related to astrology and astral magic (see appendix 1).