

A Well-Reasoned Dharma: Buddhist Logic in Republican China

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Abstract

The rediscovery of Buddhist logic (Skt. *hetuvidyā*, *yinming* 因明) in early 20th century China was a key element in the Chinese Buddhist response to modernity. I argue that while Buddhist intellectuals used Buddhist logic for different purposes, their shared goal was to demonstrate that Buddhism was not only modern but also that it was and is indispensable for the modern project. The article addresses two reasons for the renewed interest in Buddhist logic. Firstly, the revival should be understood in the context of logic's newly gained authority and significance in the early part of the 20th century in China. Secondly, the rise of Buddhist logic was a product of doctrinal debates within Buddhism. With globalization and growing foreign influence, Chinese Buddhists revisited Buddhist teachings that were in the margins for centuries. These teachings, primarily from the Yogācāra schools, challenged ubiquitous views in Chinese Buddhism. Buddhist logic was not only one of the doctrines that was rediscovered, but it was also one of the most effective tools in debating the nature and future of Buddhism in modern China.

Keywords:

Buddhist Logic, *Hetuvidyā*, Yogācāra, Modern Buddhism, Modernity

理性的法 ——民國時期的佛教邏輯

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摘要

在二十世紀初，重新發現佛教邏輯（因明）是中國佛教對於現代性所做出的回應之一。本文認為，佛教知識份子雖出於不同的目的使用佛教邏輯，但他們共同的目標是要證明佛教不僅是現代的，而且是現代化進程不可少的。佛教學界出於兩個原因對佛教邏輯產生了新的興趣：第一、「邏輯」在二十世紀初的中國被賦予了新的權威和重要性，我們必須在此一歷史背景下來理解佛教邏輯的復興；第二、佛教界內部的教義辯論促成了佛教邏輯的復興。隨著全球化和外來影響的日益增長，中國佛教界開始重新審視過去幾百年間一些非主流的佛教義理。這些非主流思想，特別是源於唯識宗的思想，一直挑戰著中國佛教中的一些普遍定說。在這種背景下，佛教邏輯不僅成為被重新發現的教義，而且是現代中國在辯論有關佛教本質與未來的有效工具之一。

關鍵詞：

佛教邏輯、因明、唯識、現代佛教、現代性

This paper will focus on the Buddhist revival of *hetuvidyā* (*yinming* 因明) in early 20th century China. *Hetuvidyā* translates as “the knowledge or science of reasoning,” but often denotes “Buddhist logic” (henceforth I will refer to *hetuvidyā* as Buddhist logic).¹ The paper argues that the revival of Buddhist logic is a product of changes within Buddhism as well as of the rediscovery of logic in the early part of the 20th century in China. Both phenomena were a part of the broader attempt by Chinese intellectuals to harness the new authority of logic as a means to legitimize the Chinese intellectual tradition and to come to terms with the crisis of the late Qing and the Republican periods. For Buddhist intellectuals, Buddhist logic was a proof that Buddhism was a modern tradition and a tool for repositioning Buddhism in debates with both non-Buddhists and within different schools of Buddhism.

The paper follows the major Buddhist thinkers behind the revival of Buddhist logic and surveys their contributions. It starts by contextualizing the role of logic within the project of modernity. It then analyzes the motivation and contribution of each Buddhist thinker and, through their careers, constructs the history of the resurgence of Buddhist logic. Finally, it contextualizes the evolution of Buddhist logic within the crisis of the modern period and demonstrates that although their reasons for and methods of studying and teaching Buddhist logic were different, these intellectuals shared the conviction that Buddhist logic is central to the Buddhist project and should be viewed as one of the strategies Buddhists employed to remain relevant in an age of skepticism.

Logic as an Elite Discourse

Sadly, very little was written by scholars about the sociology (Rosental 2008, 2–3) of the cultural history of logic. Most histories of logic focus on the way logical reasoning has evolved throughout the years and on the contributions of individual thinkers.² An important and understudied question is how these forms of reasoning functioned in a socio-historical context. It is clear that the

¹ Not everybody agrees that *Hetuvidyā* can be translated as “Buddhist logic.” Some, such as contemporary *hetuvidyā* scholar Ven. Gangxiao 剛曉, insist that *hetuvidyā* has different goals and methods than logic (see his 2013 lecture notes on *hetuvidyā* <http://www.fjdh.cn/wumin/2013/03/160727213696.html>, accessed April 18, 2014).

² See, for example, Haaparanta (2009) and Kneale and Kneale (1985).

study of logic was not a value-free endeavor. As Pierre Bourdieu famously argued, knowledge is a kind of capital, and certain knowledge can be counted as cultural capital when said knowledge is accepted in a particular society as a means for social mobility and a symbol of prestige (Bourdieu 1986).

Logic and, by extension, scientific knowledge were the most coveted forms of cultural capital during the Republican period. Consequently, much was at stake in determining whether China had logic or not, and in highlighting the role of logic in the Buddhist tradition. In many ways it was (and still is) analogous to asking whether China in general—and Chinese Buddhism in particular—was an advanced civilization that could use its own intellectual resources to modernize, or if China must acknowledge her cultural weakness and borrow from Europe and perhaps India. This debate is as relevant today as it was during the Republican period.

Before moving ahead with this discussion, some may ask whether we can talk about “Buddhist” logic. To those who argue for the universality of logical principles, there is something misleading about qualifying logic with geographic or cultural adjectives, for if logic lives up to expectations and transcends cultural expressions, it cannot be qualified as “Chinese,” “Buddhist,” or “Western.” For these scholars, Buddhist or Chinese logic is by definition not logic, in the same manner that we should not take seriously the existence of Chinese science or Buddhist mathematics. Yet, I will refer to *hetūvidyā* as Buddhist logic for two reasons:

1. Chinese intellectuals refer to their own logic as Chinese logic and oftentimes to *hetūvidyā* as Buddhist logic.
2. It is quite clear that Indians and Westerners developed distinct ways to formalize patterns of reasoning. For this reason, it is justified to qualify the term logic without concerning oneself with whether the claims for universality are valid.

The Place of Logic in the Project of Modernity

The centrality of logic to modernity is not hard to construct. It was a key pillar of Western domination and set Western empires apart from prior empires. Unlike empires in the pre-modern world, Western imperialism relied on a novel worldview that combined a few guiding ideologies:

1. Capitalism, for which the central tenet is economic growth, is the ideology that profit should be reinvested to increase future profit in a

constant upward trend. To sustain this growth it was important to develop the two other pillars that supported Western domination.

2. Imperialism, the ideology that Western countries have the right to colonialize other parts of the world to bolster trade and bring “progress.”
3. The use of scientific methods to ensure the superiority of the technology they employed, systematize the colonial political structure, and study the cultures with which they forced trade.

This mixture of science, imperialism, and capitalism was interrelated and led to unprecedentedly powerful empires which ruled over territories that eventually covered the entire globe. The most successful of these new empires, the British Empire, changed the course of history (Harari 2011, 249–378).

Logic, or more broadly, reason, is at the heart of Western ethos going back at least to Plato. As Charles Taylor tells us: “The higher life [for] Plato is that ruled by reason, and reason itself is defined in terms of vision of order, in the cosmos and in the soul” (Taylor 1992, 20). This ethos was a core tenet of the “Age of Reason” or the Enlightenment. Logic was perceived by many as the means through which reason is expressed³ and the way to know the rules through which our world is operating. As famously put by the philosopher and logician Ludwig Wittgenstein, “Logic is not a body of doctrine, but a mirror-image of the world. Logic is transcendental” (Wittgenstein 1998, 78 [6.13]) Logic and mathematics were closely connected with science. Consequently, in the modern period the new style of philosophy was said by Bertrand Russell to: “[differ] from that of Locke, Berkeley, and Hume by its incorporation of mathematics and its development of a powerful logical technique” (Russell 1945, 834).

It became evident to Buddhists in the early decades of the 20th century that aligning Buddhism with scientific thinking would be most useful in times when the authority of science trumped any other form of traditional authorities.⁴ As David McMahan has shown, establishing Buddhism as a scientific religion, or even as superior to science, was a strategy that was used (and is still being used) by different traditions of Buddhist modernists (McMahan 2008). During the Republican period in China, science enjoyed a “totemic status as a marker of certain and modern knowledge” (Ritzinger 2013, 93). Consequently, articulating the Buddhist message using scientific language

³ This view is still common today. See for example Gensler (2010, 1) or Priest (2001, 1).

⁴ For more, see Ritzinger (2013) and Hammerstrom (2010).

was a way to remain relevant, and prevent marginalization through participation in the newly emerged elite discourse.

While logic in Europe has a long history and is perceived mainly as the study of the patterns or rules governing reason, in Republican China it was recognized as a means through which Westerners achieved their superiority. Logic was seen as a subset of scientific reasoning. The Sino-Japanese war convinced many among the Chinese intelligentsia that finding answers in the Confucian canon was no longer applicable to their reality. Western science was identified as a more reliable means of reaching truth and knowledge and logic was crowned as the “science of sciences” (Kurtz 2011, 8).

Yan Fu 嚴復 (1854–1921), a pioneer in introducing Western thought to China through his translations, expressed this view when he argued along those lines, claiming that the Baconian spirit of scientific inquiry was the foundation for Western power and that its practical application necessitated the “abstract sciences of mathematics and logic” (Kurtz 2011, 151). Liang Qichao 梁啟超 (1873–1929) agreed and argued that “the lack of logical thinking was the most consequential deficit in Chinese philosophy” (Kurtz 2011, 313). Earlier intellectuals of the self-strengthening movement⁵ hoped that they could appropriate science without other elements of Western worldview such as philosophy (and logic), economic policies, and the new political order. Soon, however, it became clear that the Western “secret” to power was more complicated than just learning to emulate Western technology and produce advanced weapons. It was a worldview rooted in a different way of thinking. Logic, it became evident, played a crucial role in the Western outlook.

The view that logic is central to the project of modernity was strengthened by the influence of logicism⁶ in the first decades of the 20th century.

⁵ *Ziqiang yundong* 自強運動. A dominant movement during the second half of the 19th century in China that arose in response to the military threat of Western powers after defeats in the opium wars. The movement included some of the most famous writers and intellectuals of the time, such as Li Hongzhang 李鴻章 (1823–1901), Zeng Guofan 曾國藩 (1811–1872), and Zhang Zhidong 張之洞 (1837–1909), and tried to preserve China’s Confucian worldview while strengthening its army through the acquisition of Western technology.

⁶ Logicism was a tradition that emerged from the work of logicians and mathematicians such as Gottlob Frege and Richard Dedekind and was further embraced by Bertrand Russell and Alfred Whitehead in their *Principia Mathematica*.

According to Xu Yibao, Bertrand Russell’s logicism inspired many intellectuals at the time. Logicism emphasized the centrality of the scientific method. The scientific method is rooted in mathematics, and mathematics is rooted in logic. In other words, mathematics is an extension of logic. Of course, this view was not shared by all Chinese intellectuals, but Russellian logicism was part of the zeitgeist in those days and reflected the newly acquired status of logic as a means to modernize the nation (Xu 2003).

Logic and Buddhist Logic

According to Tom Tillemans, the notion of *hetuvidyā* (or the “science of reasons”) can be seen as a subdivision of the broader category of *pramāṇa*. *Pramāṇa* (often translated in its technical sense in Chinese as *liang* 量) means “measure” and, in its extended meaning, “a means of valid cognition” / “a means of knowledge.” Tillemans warned that these English terms “are no more than approximation for a multi-faceted system in which logical theory was a major element, but certainly not the only one” (Tillemans 1999, 1–2). Theodore Stcherbatsky provided a fuller range of concerns that one can find among the Indian *Pramāṇavādins*, which include: a doctrine on the forms of syllogism (which, for Stcherbatsky, can sufficiently be labeled “logic”), theories on sense perception, theories on the reliability of knowledge, and theories about the reality—or lack thereof—of an external world as it is cognized by our senses (Stcherbatsky 2008, 1). It is important to remember this broader meaning of *pramāṇa* when we consider the reception of Buddhist logic in modern China. For many, the allure of this field of knowledge was rooted precisely in its association with what we in the West call “logic.”

For other Buddhists the concern was more internal and stemmed from their desire to save Buddhism rather than the nation (or in some cases to save both). Historically it was a period in which new concepts were introduced to China—the concept of “logic,” of course, but also “religion,” “science,” and “philosophy.” While politically religion was accepted and protected, it was inferior in its prestige to “science.” As Justin Ritzinger demonstrates, science in China was used rhetorically in a prescriptive rather than a descriptive mode. Intellectuals used the authority of scientific discoveries to assert new normative claims (Ritzinger 2013, 6–7). It was therefore of paramount importance to situate the Buddhist tradition as “logical” and as aligned with science rather than with religion or, even worse, with superstition (迷信). To be labeled “superstitious” was tantamount to being non-modern and

therefore not relevant for modern China. In this respect, the rising popularity of Buddhist logic can be seen as one of the strategies Buddhist intellectuals employed to argue that their tradition was not a relic of the past, but an important part of modern China.⁷ Being scientific and logical quickly became the opposite of being superstitious when Chinese intellectuals returned to their “past tradition of logic” by claiming that several pre-Han philosophers used logic as well.

The Rediscovery of Logic in Modern China

In the waning years of the Qing dynasty, Chinese intellectuals discovered “their logic.” It was not the case that Chinese never thought logically or that their literary products were illogical. Rather, the category of “logic” as a distinct area of study was introduced into China only in the first decade of the 20th century. Before the 20th century few intellectuals were interested in logic, as there was no room for additional methods of determining truth other than the traditional interpretations of the Confucian canon (Kurtz 2011, 8). The function of determining truth is important here, as Émile Durkheim famously observed: “impersonal reason is only another name given to collective thought” (Durkheim 1976, 446). In Republican China the source of impersonal reason and therefore truths accepted in the Chinese collective thought shifted from the Confucian classics into logic and science.

And so it was that during the 1890s, one of the most vocal proponents of “Western Studies,” Liang Qichao, defined Western logical texts as “impossible to classify” (Kurtz 2011, 5). However, a few years after that statement, the study of Chinese logic “had not only become a mandatory subject in the curricula of Chinese institutions of higher learning but was also cited more or less routinely in academic and political debate” (Ibid.). While logic was an important part of the Jesuit tradition that impacted Chinese intelligentsia during the late Ming (during first half of the 17th century) and throughout most of the Qing dynasty, logic never developed into a distinct field of study. Instead, other fields such as philology and historiography became prominent under the auspices of the Evidential Research (*kaozheng*

⁷ For more on the campaigns against superstition and about the discourse of science see Duara (1995, especially chapter 3), Nedostup (2009), Goossaert and Palmer (2011, especially chapters 2 and 3); on the importance of science during the republican period see Kwok (1965), Hammerstrom (2010), and Wang (2002).

xue 考證學) scholars.⁸ Unlike their Jesuit predecessors, Protestant missionaries who were more active during the 19th century had higher priorities than promoting logic. These priorities were often reflected in “indifference toward the field [of logic]” (Kurtz 2011, 138).

Things changed toward the end of the Qing dynasty. Kurtz writes about the emergence of logic studies in China:

In view of the sustained disinterest recounted in the previous chapters, the abrupt appearance of logic in Chinese discourses around the year 1900 seems all the more remarkable. Less than a decade after the only available text in logic left bibliographers perplexed, the discipline would be taught not only in China’s most prestigious institutions of higher learning but in colleges and normal schools throughout the country. Many of the mushrooming new periodicals carried articles on the discipline, mostly translated from Japanese, and private publishers struggled to supply readable instructions to meet the growing demand from educational institutions and increasing numbers of curious readers. Logical societies and study groups were established not only in cosmopolitan urban centers like Shanghai but also in unlikely remote inland cities, such as Guiyang and in the far southwest (Kurtz 2011, 147).

Largely thanks to Yan Fu, logic became a subject of interest. Another noteworthy development that characterized the studies of logic in the early Republican period was the attempt to identify the origins of logic in the Chinese tradition. We will see that well-known luminaries, such as Liang Qichao and Hu Shi 胡適 (1891–1962), were part of this trend, as well as Tan Sitong 譚嗣同 (1865–1989), who argued not only that there are roots for the study of logic in indigenous Chinese thought but also that European logic can be traced back to pre-Qin logicians such as Hui Shi 惠施 and Gongsun Long 公孫龍 (Kurtz 2011, 139).

Other supposed proponents for the budding science of logic in ancient China were Xunzi 荀子 (c. 310–c. 238 B.C.) and Mohism (墨家). Yet when

⁸ The Evidential Research Movement can be traced to the early Qing (1644–1911) and gained momentum during the 18th century. Evidential Research focused on precise methodology instead of particular orthodoxy in the study of the classics. They argued that precise study of linguistics, history, mathematics, and astronomy enabled scholars to better understand the intentions of past sages and offer better guidance for their own times (Spence 1991, 102–6).

Europeans first evaluated the content of their writings, they were critical. For example, Alfred Forke, one of the early Europeans who searched for logical treatises in early China, remarked that the “‘dialectic’ of these ‘Chinese sophists’ is of rudimentary kind... The Chinese mind has never risen above these rudiments and developed a complete system of logic, perhaps because it is altogether too illogical in itself” (Kurtz 2011, 278).

That did not deter Chinese intellectuals from trying to excavate logic in their own past. The first positive argument that logic indeed existed in China emerged in Japan. Kanie Yoshimaru 蟹江義丸 (1872–1904), who influenced Liang Qichao, argued for “logical value” in Xunzi’s response to the logicians in his chapter on the “Correct Use of Names.” Others in Japan, such as Kuwaki Gen’yoku 桑木巖翼 (1874–1946), quickly followed in his footsteps and recognized at least traces of logic in Xunzi’s writings, the fragmented remains of the School of Names, and the Mohist corpus.

The major figure behind the turn toward logic in the early 20th century was Yan Fu. In a letter to a friend, Yan Fu shared his confidence in the importance of logic. He said: “The insights and truths in [Mill’s Logic] are as numerous as silk thread in a cocoon... They will do away with eighty or ninety percent of China’s old patterns, and people’s minds will gain strength from their application” (Kurtz 2011, 147). Yan and other like-minded modernists had little to work with. Like the early Buddhists who imported the foreign tradition into China, the Chinese intellectuals who identified logic as crucial to the project of modernity had to translate the specialized vocabulary and standardize the different terminologies used in Western texts on logic. “The hundreds of lexical innovations Chinese and foreign translators had to create for their adaptation of logical texts attest that not even the most basic motions of the field had readily definable, let alone self-evident, equivalents in the languages of late imperial or ancient China” (Kurtz 2011, 6). Yan Fu was pivotal in bridging this linguistic and conceptual gap. For example, he identified references in the Chinese classics “to induction (*neizhou* 內籀) and deduction (*waizhou* 外籀)” and argued that they are related to the “Western science of names” (Kurtz 2011, 280). He stopped short, however, from arguing that early logic indeed existed in ancient China.

Yan Fu’s investigation of logic in China’s past was continued later by others. As we will see below, Zhang Taiyan’s 章太炎 (1869–1936) study of Buddhist logic was conducted with similar goals, as were the efforts of Hu Shi, who in 1922 submitted his doctoral dissertation at Columbia University with the title “The development of the logical method in ancient China.” Liang Qichao was another such scholar. At first he criticized Yan Fu’s translation of

logical terminology for relying on pre-Qin philosophical terminology and conflating the old concerns of the Schools of Names with language and the relations between names (*ming* 名) with attributes (*shi* 實 also translated as object, or events), or the identity (*tong* 同) and difference (*yi* 異) with the concerns of modern logic. For Liang, “this science has nothing to do with the words of the ancient Chinese sophists” (Kurtz 2011, 313). But eventually he changed his mind, and he too reached a conclusion that in order to rebuild China for the future, it must rely on its past by returning to the logicians of the Warring States Period 戰國時代 (475–221 B.C.), such as Mozi 墨子 (c. 471–c. 391 B.C).

Liang also agreed with Yan Fu and others that the deficiency of logic in Chinese history had a detrimental effect on China’s situation. Liang identified three reasons for the lack of China’s ability to develop logic:

1. The fact that Chinese were always busy with practicalities;
2. The lack of attention to grammar and rules of language;
3. The exaggerated respect for dogma that prevented open debate and argumentation.

In the first few years of the 20th century Liang had studied Western logic with the help of Japanese scholarship, comparing and contrasting it with the Mohist canon. Liang concluded that Mozi was the unrecognized Francis Bacon of China (Kurtz 2011, 326). This intellectual archeological work conducted by Yan Fu, Liang Qichao, and others focused on the indigenous Chinese writings about logic and built bridges between logic studies in the Chinese past and the modern period. What was missing in this discussion was the Indian contribution to the Buddhist tradition.

Brief History of Buddhist Logic in India and China

Describing the history of Buddhist logic in India, even briefly, is beyond the scope of this paper. Logic, or a formal presentation of an argument, has been part of Buddhist literature from its earliest days. Already in the *nikāyas*, the Buddha used familiar forms of argument in India. In the *Majjhima Nikāya*, the Buddha used the Four Logical Alternatives or *catuskoṭi* (四句). In its negative form it can be formulated as:

- S is P
- S is not P
- S both P and not P
- S is neither P nor not P.

In the *Cula-Malunkiyovada Sutta* (MN 63⁹), the Buddha argues that he never promised to commit to any of the following positions:

1. That the Tathāgata exists after death;
2. That the Tathāgata does not exist after death;
3. That the Tathāgata both exists and does not exist after death;
4. Or that the Tathāgata neither exists nor does not exist after death.

Other formal arguments are presented throughout the Pāli canon. Buddhist logic, however, became much more central to Buddhist thought after the death of the Buddha. This occurred because Buddhist logic's main function in the Indian context was to solve the question of valid knowledge. How do we know that what we know is real? Among the Buddha's followers his authority was sufficient as a source of knowledge, but with time, the Buddha was history and Buddhists were constantly challenged by rival schools. This intellectual flourishing of the Indian "hundred schools" became part of the other concerns of Buddhist logic (that Zhang Taiyan, as we will see below, highlighted), namely, to be used in a debate culture where the validity of a claim is determined by the result of effective and formal presentation of the problem using a perfectly constructed syllogism.

There are several early texts that discuss logic formally, such as Vasubandhu's *Vyākhyāyukti* (*Shigui lun* 釋軌論 *The Treaties on Explication*), which focuses on debate, or his *Vāda-vidhi* (*A Method for Argumentation*), one of the earliest works on logic. Still, the major figure often mentioned as the father of Buddhist logic was Dignāga (ca. 480–540 C.E.). Dignāga's pioneering work was later expanded and systematized by Dharmakīrti (ca. 600–670 C.E.), but the later and more mature phase of Buddhist logic would not make it to China for another 1,300 years. As far as we know, it was never disseminated: if Dharmakīrti's writings were in circulation they left no imprint. Dignāga's work, however, was translated by Xuanzang 玄奘 (602–664) and Yijing 義淨 (635–713), who were more aware of the state of Buddhism in India. Among his works of logic that exist in Chinese, two were particularly influential: the *Nyāyamukha* (Introduction to Logic. Translated by Xuanzang as *Yinming zhengli men lun ben* 因明正理門論本, T 1628 and by Yijing as *Yinming zhengli men lun* 因明正理門論, T 1629) and the *Ālambanaparīkṣā* (Examination of the Cognitive Object. Translated by Paramārtha as *Wuxiang sichen lun* 無相思塵論, T 1619, and by Xuanzang as *Guansuoyuanyuan lun* 觀所緣緣論, T 1624). His major magnum opus, *Pramāṇasamuccaya* (*Jiliang*

⁹ Bhikkhu Bodhi and Bhikkhu Nanamoli, 1995.

lun 集量論 *Compendium of Correct Cognitions*) was translated into Chinese only in the 20th century. It later became one of the most important texts in Lü Cheng's study of Buddhist logic (Lü also dedicated much effort to the study of the *Ālambanaparīkṣā*).

Why was Dignāga so important to the history of Buddhist thought? The reason lies in his pioneering role in the formulation of Buddhist logic. For Dignāga (and Dharmakīrti, who further developed the Buddhist logic tradition), Buddhist logic was more than logic, it was the study and examination of all aspects involved in determining what constitutes correct cognition, including perception, the function of language, and inferential reasoning. It was for the latter that Dignāga was most famous and with which he transformed not only Buddhist thought, but Indian philosophy in general. Richard Hayes indicated that Dignāga's major concern was the study of "the nature and limitation of information that is gained through the interpretation of signs natural (signified object) and conventional (meanings). The first was investigated through inference (*anumāna*) and the latter under a different kind of inferential process (Hayes 1988, 1).

Dignāga was not operating in a vacuum. Much more than anywhere else, Buddhism in India evolved in an ongoing dialogue, and most often debate, with other schools of philosophy. Dignāga's epistemological concerns are in large part a response to the Nyāya school's (*Zhengli xuepai* 正理學派) challenge and their epistemology¹⁰ (Siderits 2007, 208–30).

¹⁰ To the Nyāyikas, there were four valid means of correct knowledge: perception, inference, testimony, and comparison. Buddhist logicians following Dignāga reduced it to only two: perception (*pratyakṣa-pramāṇa*, *xianliang* 現量) and inference (*anumāna-pramāṇa*, *biliang* 比量) Dignāga rejected comparison and the *pramāṇa* of authority, which was accepted by earlier logicians, even Buddhists. He argued that these latter two *pramāṇas* are merely a sub-category of inference.

Dignāga argued against the Nyāyikas, who claimed that it is possible that different means of knowledge will cognize the same object. For Dignāga, each means of knowledge must have a distinct object. More specifically, perception has the real particular (which he calls *svalakṣaṇa*, *zixiang* 自相 or self-characteristic) while inference has the universal as its object (which he calls *sāmānya-lakṣaṇa*, *gongxiang* 共相 or shared characteristic). The *svalakṣaṇa* resembles the notion of dharmas' *svabhāva* as is often presented in the Abhidharma. While *svabhāva* carries ontological implications for some Abhidharma schools, *svalakṣaṇa* is all about cognition for Dignāga. Siderits gives the example of the difference between inferring that there is a fire from seeing smoke versus perceiving a fire by being next to it. For the Nyāya, the object in two cases would be the

Buddhist Logic in China

A. Early Phase

One of the reasons that Buddhist logic did not enjoy fame and glory in China was that the intellectual climate in China was radically different from that of India. The epistemological and linguistic issues that concerned Indian Buddhists were not as central in East Asia. Buddhists in China did not encounter such fierce philosophical opposition as Buddhists in India and grammarian culture was far more sophisticated in ancient India. China also did not have the vibrant debate culture that developed in India. As Siderits noted, “[Scholars of the Dignāga school] seem to have thought that the dispute over certain metaphysical issues like the existence of an external world would never be resolved to everyone’s satisfaction.” Instead, “philosophy could still contribute to liberation... if it could at least tell us what constitutes means of knowledge” (Siderits 2007, 208). In China the concern with metaphysics remained central whether it was among Buddhists or among Neo-Confucianists throughout the centuries.

Early reception of Buddhism in China occurred before the time of Asaṅga, Vasubandhu, and Dignāga in the 4th and 5th centuries. The golden age of Buddhist logic in China took place in the 7th and 8th centuries and was inspired by the texts translated by Xuanzang. Yet, a few important developments took place in the previous centuries. First, the translation of many Abhidharma texts during the 4th through 6th centuries raised many of the questions and introduced much of the vocabulary that would later appear in Buddhist logic treatises. The formation of Chinese Buddhist schools such as the (Abhidharma) Kośa school (*Jushe zong* 俱舍宗) popular during 7th and 8th centuries, and even before the Dilun (*Dilun zong* 地論宗) and Shelun (*Shelun zong* 攝論宗) schools during the 6th century paved the way for the advent of Buddhist logic in China. The latter schools especially promoted Yogācāra teaching, which was associated with Buddhist logic in East Asia, even if in India the relationship was not always clear.

According to Shen (2001, 27–8) the first Buddhist logic text translated into Chinese was *The Heart of Skillful Means* (*Fangbian xin lun* 方便心論, T 1632), a debate manual attributed to Nāgārjuna by Buddhahadra 佛陀跋陀

same, namely the fire, while for Dignāga the two would be different objects. Through perception one can perceive the fire while through inference one can cognize it. For more, see Siderits (2007, 208–30).

羅 (359–429) in the 5th century. The text did not survive, perhaps evidence of the little attention that debate manuals attracted in China. The Dilun and Shelun schools popularized Yogācāra studies. Parmārtha 眞諦 (499–569), a major contributor to the translation of Yogācāra texts into Chinese, is said to have translated another debate text titled *Rushi lun* (如實論 **Tarka-Śāstra*, T 1633) attributed to Vasubandhu.¹¹ He also translated Dignāga's *Hastavālaprakaraṇa* (*Jiejuan lun* 解捲論, T 1620), which the Tibetan tradition attributes to Āryadeva 聖天 (c. 3rd century CE). These were all tiny first steps, with few consequences. To understand the modern revival of Buddhist logic we have to review the career of Xuanzang over a century later.

B. Xuanzang, the Golden Age of Buddhist Logic in China

During the early Tang Dynasty, few Chinese monks traveled to India to learn about Buddhism first hand. Two of them were crucial to the translation process of texts from Sanskrit to Chinese: Yijing 義淨 (635–713) and Xuanzang 玄奘 (602–664). Aware of how Buddhist logic was transforming Buddhism in India, part of the texts they brought were Buddhist logic texts. But even with the peak of interest in Buddhist logic, only a tiny fraction of the wealth of Indian Buddhist logic texts made its way to China. It is said that out of the 657 texts that Xuanzang brought back to India, only 36 of them were Buddhist logic texts. Sadly, Xuanzang translated only two (*Nyāyapraveśa*, *Yinming ru zhengli lun* 因明入正理論, T 1630 of Śāṅkarasvāmin, a disciple of Dignāga and the *Nyāyamukha*, *Yinming zhengli men lunben* 因明正理門論本, T 1628 of Dignāga himself).¹² These two texts became the most influential texts in the study of Buddhist logic in China.

Curiously, he did not translate Dignāga's most important work, the *Pramāṇasamuccaya* (*Jiliang lun* 集量論). During the modern period the text was translated first by Fazun (法尊 1902–1980) and, as we will see below, it was also a subject of study by Lü Cheng. Xuanzang translated only one verse from this work and paraphrased a few others (Lusthaus 2003, 2). He may have failed to get to this difficult text or perhaps gave up on the challenge for some unknown reason. Be that as it may, there was relatively little interest in Buddhist logic among Chinese Buddhists even in the time when Buddhist logic was booming in India and when Chinese monks who traveled to India were aware of its importance there.

¹¹ See Lusthaus (2003, 51) and Shen (2001, 29–30).

¹² See Lusthaus (2003, 2) and Shen (2001, 53).

Yijing may have been more productive, but his idiosyncratic vocabulary and challenging style of translation made his translations less influential than Xuanzang's. Yet, his contribution to the translation of Buddhist logic texts is hard to overestimate. Yijing translated Dharmapāla's 護法 (530–561) commentary on Dignāga's *Ālambanaparīkṣā*. The *Ālambanaparīkṣā* became one of the most important texts within the East Asian Yogācāra tradition. The text itself is not strictly a Buddhist logic text; rather it deals with epistemology and a critique of the theory of atoms, but the commentary by Dharmapāla rephrased some of the issues around Buddhist logic's concerns (e.g., debate strategies, the construction of Dignāga's arguments in syllogistic forms, etc.).¹³ Yijing also retranslated the *Hastavālaprakaraṇa* (*Zhangxiong lun* 掌中論, T 1621), and some of Dignāga's other Buddhist logic texts: the *Upādāya-prajñapti-prakaraṇa* (*Qu yin jiashe lun* 取因假設論, T 1622) and the *Sāmānya-lakṣaṇa-parīkṣā* (*Guan zongxiang lunsong* 觀總相論頌, T 1623).

After this humble beginning, we see a deluge of commentaries—more than twenty—coming from Xuanzang and Kuiji's 窺基 (632–682) school (*cien zong* 慈恩宗). Several disciples wrote commentaries about the *Nyāyapraveśa* and the *Nyāyamukha*, including monks such as Xuanying 玄應 (d.u.), Shentai 神泰 (d.u.), and the Korean monk Woncheuk 圓測 (613–696). Kuiji, Xuanzang's notable disciple, also wrote commentaries, and his disciple Huizhao (慧沼 648–714) authored an introductory book about Buddhist logic and a commentary on the *Nyāyapraveśa*. Kuiji's commentary on the *Nyāyapraveśa* (*Yinming ru zhengli lun shu* 因明入正理論疏, T 1840), abbreviated later as the “Great Commentary” on Buddhist logic (*Yinming dashu* 因明大疏), includes an explanation of the leading Buddhist logic experts in China at that time, and is a commentary that established itself as the foundational text in East Asian Buddhist logic tradition.

With the rise of indigenous Buddhist schools such as the Huayan (華嚴宗) and Chan (禪宗) in the late 7th and early 8th centuries, Xuanzang and Kuiji's school lost its momentum among literati and in the Saṅgha. No more translations were introduced, and mainstream Buddhism in East Asia was almost completely ignorant of the revolution Dharmakīrti's thought had brought to Buddhist logic and Buddhist thought in general. Chinese Buddhism had taken a path independent from much of the major development that took place in India.

¹³ *Guansuoyuanlun shi* 觀所緣論釋, T 1625.

C. The Ming Revival

Studies of Buddhist logic persisted throughout the centuries but remained in the margins of Buddhist studies. Out of the seventeen treatises written about Buddhist logic (a small number compared with the wealth of translations and treatises written during the Tang), only one survived (Shen 2001, 211). Generally speaking, however, since Buddhist logic was linked to Yogācāra and since Yogācāra was still studied in China, Buddhist logic continued to be part of the curriculum. This all changed during the Ming dynasty (1368–1644).¹⁴

What kind of scholarship did the Ming revivalists come up with and what sparked their interest in Yogācāra and Buddhist logic? The Ming's scholarship was an attempt to reintroduce the achievements of the past rather than build new knowledge either by being innovative themselves or by studying how the tradition evolved in India. The conditions were not as ripe as they were during the Tang. At that point Buddhism in India was a matter of the past. The rich philosophical tradition of Buddhism was preserved and further developed in Tibet. Tibetan Buddhists gave much more importance to the Buddhist logic tradition (Tib. *tshad ma*) than their Chinese counterparts did. However, during the Ming Buddhist scholastic revival, Tibetan Buddhists were persecuted and began to be considered heretics. The Chinese literati bias

¹⁴ Ming Yogācāra is beyond the scope of this paper. Briefly, starting from the early 16th century Chinese Buddhists developed an interest in the study of Yogācāra and consequently also turned their attention to Buddhist logic. Sometime during the reign of Wuzong 武宗 (1506–21), Lu'an Putai 魯庵普泰 (d.u.) wrote a commentary on *Verses on the Structure of the Eight Consciousnesses* (*Bashi guiju song* 八識規矩頌) and taught Yogācāra in northern China. The text is attributed to Xuanzang and shares some conceptual similarities with the *Cheng weishi lun*. Other interested scholars soon followed, including monks such as Wuji Mingxin 無極明信 (1512–1574), a Huayan monk who was active in the south. He was a disciple of Lu'an and, like his teacher, had a deep interest in Yogācāra studies. Xuelang Hongwen 雪浪洪恩 (1545–1608), who was in turn a disciple of Wuji, was also a scholar of Huayan who was interested in Yogācāra. He wrote the *Eight Essentials of the Faxiang School* (*Xiangzong bayao* 相宗八要, X 899), one of the important Yogācāra texts of that period, which continued to be seminal into the modern period. Mingyu 明昱 (1527–1616) wrote an excellent sub-commentary on Dharmapāla's commentary on Dignāga's *Ālambana-parīkṣā* and wrote the *Explanation of the Eight Essentials of the Faxiang School* (*Xiangzong bayao jie* 相宗八要解, X 900), explaining Xuelang's earlier work.

against Tibetan religious practices led to a prohibition of the study of Tibetan and their Buddhist practices were scorned.¹⁵

Without external experts and new sources, indigenous Buddhist schools of thought influenced the Ming Buddhists' interpretation of Yogācāra and Buddhist logic. The most dominant Buddhist movement in the Ming dynasty was Chan and most of those who studied Yogācāra were affiliated with this school in one way or another. Consequently, the Yogācāra texts that they produced at the time were suffused with Chan flavor (Shengyan 1987). As summarized by Shen, "The major characteristic of the *hetuvidyā* studies during the Ming Dynasty is in the fact that all of their studies consist of superficial explanation of word-to-word translations. Their elucidation of the *hetuvidyā* inner logic was shallow and most of it consisted of elaboration about the theory through explaining examples" (Shen 2001, 216).

Interestingly, as shown by Wu Jiang, around the same time of the Buddhist revival, the Buddhists' own Confucian rivals found themselves defending their traditions against a new comer to the scene—Christian missionaries. In an attempt to respond to the Christians' well-crafted arguments, Buddhists such as Feiyin Tongrong 費隱通容 (1593–1661) used Buddhist logic syllogism to deconstruct Christian arguments about the proof for the existence of God and to demonstrate their inconsistencies. Thus, Buddhist logic was not developed or pursued by its own right, but instead used as an apologetic tool in the religious disputes of the day (Wu Jiang 2003). Buddhist logic had a similar function during the Republican revival.

The Ming revival was short lived. Christianity remained in the margins during the late imperial period and consequently the need for Buddhist logic to address Christian claims diminished. The fragile late Ming revival (Zhang 2010) did not survive the socio-political changes of the Qing. The scholastic tradition as well as Buddhist logic would have to wait a few centuries before they resurfaced with full vigor during the final years of the Qing and throughout the Republican period.

The Resurgence of Buddhist Logic in Modern China

During the 20th century, when China was undergoing one of its most radical transformations, Buddhists found themselves forced to adapt to new realities. They had to protect their tradition from campaigns to eradicate

¹⁵ See Shen (2011) and Orzech, Sørensen, and Payne (2011).

superstitions.¹⁶ Buddhists also became aware of developments within Buddhist communities in Southeast Asia and, later, Tibet, which challenged and enriched Chinese Buddhism. No less important to our story, Buddhists in China were exposed to developments in the academic study of Buddhism in the West and, primarily, Japan.

All that led to a renewed interest in the scholastic Buddhist tradition.¹⁷ Although this revival encompassed the study of the *āgamas*, the scholarship of the Madhyamaka school, the Abhidharma literature, and—most importantly for this paper—Buddhist logic, the school that attracted more scholarly attention than all the rest was the Yogācāra school. Interest in Buddhist logic can be understood as a part of the interest in Yogācāra and indeed most of the leading Buddhist intellectuals who contributed to the study of logic in modern China were also key players in Yogācāra’s revival. In the following sections I present some of these major figures and how they advanced the study of Buddhist logic in China.

If there is one event in the history of modern China that can be pinpointed as the rebirth of the Buddhist logic, it would be the shipment of more than 200 volumes of Buddhist texts from Japan back to China, and their subsequent recirculation among Chinese Buddhists and intellectuals in the final years of the 19th century. This was a gesture of friendship by the Japanese priest Nanjō Bunyū 南條文雄 (1849–1927), who sent them back to his friend, Yang Wenhui 楊文會 (1837–1911), one of the foundational figures in the Buddhist resurgence in modern China. Nanjō and Yang Wenhui met in London. At the time, Yang was a diplomat and Nanjō worked with Max Müller on translating East Asian Buddhist texts into English. The shipment of lost texts back into China was a token of appreciation for the help Yang provided Nanjō with his translation project.

The most important texts in the collection were Yogācāra texts, and among them, Kuiji’s commentaries were pivotal in fueling the Yogācāra revival of the Republic.¹⁸ For our purpose, the single most important text is Kuiji’s “Great Commentary” on the *Nyāyapraveśa*, which made the vocabulary and conceptual framework of Buddhist logic available to a new generation of intellectuals. Initially, the focus was on the texts that were available in the East Asian canon. Later, texts available in Tibetan enriched the number of texts available and broadened the scope of the intellectuals’

¹⁶ See Duara (1995) and Nedostup (2009).

¹⁷ For more, see Aviv (2008), Makeham (2014), and Chu (2006).

¹⁸ See Aviv (2008) and Makeham (2014).

understanding. This led to a booming interest in Buddhist logic. More than thirty manuscripts on Buddhist logic were published throughout the Republican period.

Yang Wenhui

Yang Wenhui's contribution to modern Chinese Buddhism encompassed much more than the reintroduction of Buddhist logic texts; he was an educator, a writer, influential in high circles of society, and, not least important, he was the founder of the still existent Jinling Sūtra Publishing House (*Jinling kejing chu* 金陵刻經處), which prints modern Buddhist texts and circulates them all over the country.¹⁹ His work in England raised his awareness as to how much richer the tradition was compared to the narrower view he had been exposed to as a Buddhist in China. While working with Nanjō and Max Müller he became aware of the Orientalist scholarship, especially the importance attached to the Pāli canon and Sanskrit texts, and to the difference between Chinese and Indian Buddhism. Buddhist logic for him became one branch, among others, that had withered in China and needed to be replanted in order for Buddhism to flourish. Later, we also see Yang begin to use Buddhist logic in debate with Japanese priests over interpretations of the Pure Land school's doctrine.

When Yang and like-minded Buddhists looked around, Buddhism was anything but flourishing. They were concerned with what they felt was a decline in the quality of the study of Buddhism in China. Many of them believed that the school of Chan's spirit of rejecting study and scriptural authority was harmful for constructing a strong foundation for Buddhism. Yang himself expressed this view, saying: "If one is attached to the kind of method [embodied] in the [Chan] concept of 'not relying on words and letters,' as a fixed teaching, then he is misleading himself and others" (Fang 2000). Another friend of Yang's, Xia Zengyou 夏曾佑 (1863–1924), observed that there were very few Chinese Buddhists who could read the scholastic texts of the Yogācāra tradition, but when he visited Japan he noted how many scholars of Buddhist logic were able to penetrate the meaning of the challenging texts (Zhou 2000, 447). Buddhist logic was perceived as a critical component of any such strong foundations.

Yang shared this view. He was already too old to undertake such study, but he encouraged his students to pursue this important aspect of the study of Buddhism. In one of his letters to Gui Bohua 桂伯華 (1861–1915) (his

¹⁹ See Welch (1968) and Chen (2003).

disciple and Ouyang Jingwu's close friend), Yang tried to persuade him to pursue the study of Buddhist logic in order to obtain a scholarship provided by an uncited friend who was interested in promoting the study of Buddhist logic and Yogācāra. Yang's goal was to encourage the kind of Buddhism that would enlighten the people and prevent them from accepting the wrong views (Zhou 2000, 452). Shen et al. believe this unnamed donor was probably Xia Zengyou (Shen 2001, 323). Gui Bohua eventually gravitated toward the study of esoteric Buddhism, but the scholarship he was offered provides further evidence for the growing recognition of the Buddhist logic tradition's importance at the time.

In 1908, Yang Wenhui established the Jetavana Vihāra Academy (*Qihuan jingshe* 祇洹精舍), his institute for the study of Buddhism. Buddhist logic occupied an important part of the curriculum. He asked his students to learn Ouyi Zhixu's 藕益智旭 (1599–1655) commentary on the *Nyāyapraveśa* in their first year and then study the Kuiji's Great Commentary in their third year (Shen 2001, 323).

In the last few years of his life, Yang's work relied increasingly on vocabulary and concepts taken from Buddhist logic. One example can be found in his employment of Buddhist logic as a weapon in his debates with Japanese Jōdo Shinshū theologians. Similarly to Ming Yogācāra followers, Japanese Pure Land theologians in the 19th century used Buddhist logic to construct stronger arguments against Christian missionaries. Yang used it in an internal debate against the Jōdo Shinshū doctrine. In a letter exchange with a Japanese priest, Yang argued:

Let me rephrase your thesis (*bizong* 彼宗) as a proposition (*liliang* 立量): Your dharmin²⁰ is the rebirth in the Pure Land. Your thesis (*zong* 宗) is a believing mind in other power. The reason (*yin* 因) is the accomplishment of the eighteen vows of Amitabha. It is like the example of (*yuru* 喻如) steam engine ship. But, this syllogism is not properly constructed (*nengli* 能立) as it abolishes self-power. While [the example] mentions a steamboat, [it does not say] who the steamboat belongs to. Therefore you ought to understand that those who attain the joy of the believing mind, and have the desire to be born in his world, are all depended [on his] self-power. The thesis of our school says: The *dharmin* is rebirth in the Pure Land. It is depended on

²⁰ A *dharmin* is the locus of the property (dharma) that needs to be proven. For example, rock can be the *dharmin* of the dharma "hardness."

reciting the Buddha name; the proposition is self-power and other power. The reason is that cause and effect impact one another, just like two wheels in one vehicle (Zhou 2000, 515).

Another example can be found in his comments on the *Sūtra of Complete Enlightenment* (圓覺經, T 842). Yang felt that previous commentators did not capture of true meaning of the sentence:

Good sons, if all bodhisattvas and sentient beings of the degenerate age would merely do this: at all times, do not give rise to false thoughts; in false states of mind, do not strive for cessation; when abiding in false objects, do not strive toward complete understanding; while not [abiding in] complete understanding, do not analyze true reality. If these sentient beings, hearing this teaching, believe, understand, assimilate and remember it without being shocked or frightened by it, they are said to be “according with the nature of enlightenment” (Translation is modified from Charles Muller’s 2003 *Sūtra of Perfect Enlightenment*).

Yang felt that he could shed some light on the phrase “when abiding in false objects” by using Buddhist logic terminology. He tied it to the five consciousnesses and argued:

The five consciousnesses that arise from the five sense organs and their respective cognitive objects are merely a direct perception (Skt. *pratyakṣa*, *xianliang* 現量). However, since they share the same *mano-vijñāna* (or mental consciousness) as their object it becomes an inference (Skt. *anumāna*, *biliang* 比量) and consequently the direct perception is concealed. That is why it is called [in the sūtra] “striving toward complete understanding” (Shen 2001, 324).

Putting aside the validity of Yang’s exegesis, his vocabulary is evidence for the growing importance of Buddhist logic in his thought: Yang Wenhui’s interest in Buddhist logic seems to be limited to the promotion of a more authentic Buddhism. We see this trend strengthening in his disciples’ work. Reintroducing Buddhist logic was a means to strengthen Buddhism and its foundation in times of uncertainty. Buddhist logic was also a way to defend the Chinese Buddhist interpretation of Pure Land thought against the religious imperialism of Japanese Pure Land priests who tried to export their sectarian institutions into China. Finally, although he himself did not contribute to the study of Buddhist logic in China, Yang’s role as one of the most influential

Buddhists in the late 19th and early 20th centuries means that his interest undoubtedly inspired other Buddhists to follow his footsteps.

Wang Xiaoxu 王小徐 (1875–1948)

One of the most successful promoters of Buddhist logic Yang inspired was Wang Xiaoxu. Wang was a leading scientist as well as a Buddhist. The fact that he was scientist lent credibility to his evaluation of Buddhist logic. Wang's unique contribution to the discourse of Buddhist modernity is effectively described in Erik Hammerstrom's 2010 dissertation and there is no need for me to reproduce it here (Hammerstrom 2010, 47–62). Instead, I intend to describe how, like Yang, Wang used Buddhist logic for apologetic purposes, especially against scientific materialism.

Wang used the notion of the *pramāṇa* (described on pages 194–5) to argue that science is empirical and based on the senses and the material world. If Buddhists learned anything from the discoveries of the 19th and 20th centuries,²¹ it was that material explanation derived from the senses is not enough to understand reality.²² Wang concluded from this that the intuition (*zhijue* 直覺) that forms the foundations of science is not genuine direct perception (*xianliang* 現量), but a *pseudo*-direct perception (*si xianliang* 似現量), therefore scientific direct perception yields inferences that are merely *pseudo*-inferences (*si biliang* 似比量). Science alone cannot reach valid knowledge (Hammerstrom 2010, 341–3).

In 1928, Wang published an essay titled “A Scientific Explanation of the Buddha-dharma” (*Foxue zhi kexue de shuoming* 佛法之科學的說明). In this piece Wang seemed to develop a better understanding of what is considered direct perception, namely the indiscriminate sense perception. He equates science with direct perception (because of its empirical nature) and inference with Western logic. Since knowledge is based on correct inference, and since inference in the West was rooted in an incorrect understanding of the mind (Wang argued that Western understanding of the mind is limited to the *manovijñāna*, the sixth consciousness that processes and integrates data from

²¹ He gave the example of electromagnetic physics, perhaps because he perceived them as non-material. At the same time Einstein's theory of relativity was also an example he often referred to.

²² This kind of argument is still common today among writers who tried to use physics (either Einstein's theory of relativity or, even more so, quantum mechanics) to argue for the existence of a higher existence than we can perceive through the senses. See, for example, Goswami (1995), Walker (2000), and Hodgson (2012).

the five senses), Western scientific inferences were necessarily deluded. According to Wang, the Western understanding of the mind failed to take into account the deeper layers of the mind and their functions, such as the seventh consciousness that creates the false sense of an “I.” True knowledge is fully understood, Wang thought, only in the experience of fully awakened buddhas and advanced bodhisattvas, as they possess the ability to have true direct perception. He seems to suggest that highly attained individuals enjoy a knowledge unmediated by any inferential knowledge and experience reality as it is (*yathā-bhūtam*) (Hammerstrom 2010, 294–349).

Song Shu 宋恕 (1862–1910): A Pioneer Student of Buddhist Logic

Another important Buddhist intellectual who is often mentioned in association with the resurgence of Buddhist logic is Song Shu. Song Shu was a renaissance man and a devout Buddhist. He came from Pinyang County in Zhejiang province, and was associated with the Yongjia school (永嘉學派) of Confucianism, which was famous for its emphasis on practical concerns. In the last decades of the 19th century Song was consumed by the attempt to reform the Chinese political system. Like his friends Zhang Taiyan and Liang Qichao, he was both a supporter of the monarchy and a reformer who criticized of the status quo. Like Zhang and Liang, he was also a devout Buddhist and an acquaintance of Yang Wenhui. Song Shu began his Buddhist path as a follower of the Pure Land tradition. He then began to doubt his path when he discovered the Chan school and for a while found it hard to decide which of the two schools’ paths he should choose. Eventually, he began learning the Yogācāra teachings and Buddhist logic from the Shanghai-based Japanese Jōdo Shinshū priest Matsubayashi Kōjun 松林孝純.

Song was inspired by the sophistication of the Yogācāra school and the way Matsubayashi employed Buddhist logic in his arguments against the Christians. Consequently, he developed a strong interest in Buddhist logic. Matsubayashi introduced Song to Kuiji’s commentary on the *Nyāyapraveśa*. In a correspondence he had with another Japanese acquaintance, Song asked about the Buddhist logic studies of two Japanese experts: Kōyō Kira 雲英晃耀 and Murakami Senjō 村上專精 (1851–1928). In his visit to Japan he also met Nanjō Bunyū. The written account that we have of their conversation affirms that Buddhist logic was a genuine concern for Song Shu at the time. It is most evident when he criticizes Yang Wenhui’s studies of Buddhism, claiming they do not go deep enough because he did not study Buddhist logic (Shen 2001, 327–8). In Song Shu we see the usage of Buddhist logic as a means to critically assess what he perceived to be the failure of late imperial

Buddhism. This line of criticism was later developed by Ouyang and his disciples. For Song Shu, Buddhist logic was a corrective measure, a method through which one could understand Buddhism right after the “demons of the Chan [school]” and Pure Land followers’ anti-intellectual tendencies led to the decline of Buddhism. The result was that Buddhism declined after the Song dynasty in China, but was preserved in Japan partially because the scholastic tradition culminating with Buddhist logic never died there, and for that Song Shu was very grateful. As Song put it poetically:

Hindu logic consists of thesis, reason, and examples.
 Who knew this was similar to the Greek *syllogismos*?
 The Chan heretics forgot this adopted science after the Song;
 In the West, Europe perfected it—and now threatens China (Kurtz 2011, 282).

We see in this poem another trope previously mentioned. Logic was not only a means to critically assess the decline of Buddhism in China, but also to respond to the Western threat. For Song Shu, the power of the West was linked to the perfection of logic. China could not afford to remain behind.

Another reason that Song Shu had gravitated toward Buddhist logic was his interest from a very young age in the art of public speaking and in debate. He said once that “public speaking (*yanshuo* 演說) must have historical evidence as its wood and logic as its fire” (Shen 2001, 332). He thought that logic, whether its origins were in India, China, or the West, was an important tool to argue against Western domination and he admired the Japanese who learned to use both “Eastern” and “Western” logic. He argued that China, Vietnam, or India could not react as effectively as the Japanese to the foreign aggression because of the Japanese ability to maintain their national essence (*guocui* 國粹) which served as a defense against Western imperialism. Japan preserved their Shintoism and Confucianism, as well as Buddhism, and cultivated them as a kind of immune system against external pressure. Buddhist logic was paramount in cultivating the kind of Buddhism that could in turn contribute to the national essence.

Song also pointed for the first time to the similarities between Western logic and Buddhist logic, a comparison that would continue to occupy the younger generation of Buddhist logic students. His pioneering appreciation of the importance of Buddhist logic to the future development of Buddhism in China makes him an important figure in the story. Despite the fact that Song Shu did not become one of the leading scholars of Buddhist logic, he was

pivotal as a spokesperson for the cause of making Buddhist logic part of the Buddhist curriculum in China. Not only did he promote in theory, in 1905 he opened his own school in Shandong: the Cuihua School (*Cuihua Xuetaang* 粹華學堂). There he taught, among other subjects, Buddhist logic using the *Nyāyapraveśa* and other materials.

In fact, one of Song's most crucial contributions to the promotion of Buddhist studies in China was the introduction of Buddhism to his childhood friend, Zhang Taiyan. Zhang, who was earlier a critic of Buddhism as a religion that opposes the scientific spirit, was nudged by Song Shu in the direction of Buddhism. Although at first Zhang was skeptical and did not like what he read, the time that he spent in the Manchu jail a few years later transformed his attitude toward Buddhism and turned him into the first true pioneer of Buddhist logic in Republican China.

Zhang Taiyan

Zhang Taiyan 章太炎 (1868–1936), or, in his original name Zhang Binglin 章炳麟, was a philologist, philosopher, and textual critic who turned to Buddhism in the first decade of the 20th century. Zhang was a student of Yu Yue 俞樾 (1821–1907), the well-known evidential research scholar of the late Qing. Yu Yue taught Zhang the critical historiographical and philological approach to the study of the classics. Zhang later traveled to Japan where he devoted a substantial part of his time to the study of Western philosophy and psychology. Back in China in 1903, he was arrested for writing anti-Manchu propaganda. In jail he became fascinated with Yogācāra and dedicated much of his time in prison, from 1903 to 1906, to the study of Yogācāra classics such as the *Cheng weishi lun* (成唯識論, T 1585) and the *Yogācārabhūmi* (*Yuqie shidi lun* 瑜伽師地論, T 1579). In addition he also began to develop an interest in Buddhist logic and studied the *Nyāyapraveśa*, introduced to him by Song Shu. With time his appreciation of the Buddhist intellectual tradition grew, mostly as a result of his study of Indian Buddhist scholastic treatises but also from meeting Indian students in Japan. In a letter to the revolutionary monk and poet Su Manshu 蘇曼殊 (1884–1918) he wrote: “Other than Chinese, among our Asian languages, Sanskrit and Arabic are the most accomplished. Sanskrit is particularly subtle” (Shen 2001, 339). He enthusiastically studied Indian philosophy and for a while even contemplated being ordained as a monk and traveling to India. He gave up the idea only because he realized he had no money for the journey (Shen 2001, 340–1). With such a deep appreciation for Buddhism and Indian thought it is not

surprising that Zhang became so seriously invested in Buddhist thought and logic.

As outlined above, during the first decade of the 20th century interest in logic spiked. Chinese intellectuals were busy unearthing China's own logical tradition. Those who accepted logic as the foundation of scientific thinking and were concerned with China's national essence did everything they could to establish that China too had the necessary foundation to build a modern scientific society and to show that the lack of logical thinking in Chinese intellectual history was a sad accident that needed to be corrected. As a response to external critics, such as Matteo Ricci who argued that "Chinese scholarship, despite all its sophistication, had produced 'no conception of the rules of logic'; and knew nothing of 'dialectic'" (Kurtz 2011, 277).

Zhang partially agreed with Ricci's assessment. Like other Chinese intellectuals he was invested in the national essence campaign, and like them he valued highly evidential research methods and scholarship. Yet he refused to employ the methodology of "matching concepts" (*geyi* 格義) between the European and Chinese systems of thought in order to uncover "Chinese logic." For him, instead of going to the Mohist or School of Names nascent logic, Chinese intellectuals should find a more mature form of logic in a different corner of their tradition: Buddhism.

Zhang Taiyan was not the first to recognize the potential contribution of Buddhist logic to the study of logic in China. Some Meiji Japanese scholars (e.g., Echō Chikū 慧澄癡空 [1780–1862], Kirara Kōyō 雲英晃耀 [1824–1910], and Murakami Senshō 村上專精 [1851–1929])²³ and Western intellectuals (e.g., Giuseppe Tucci [1894–1984] and Theodore H. Stcherbatsky [1866–1942]) recognized systems of logic developed in India especially as expressed in the Buddhist tradition as proof that non-Western forms of logic did not exist only in the West and that in some ways Indian logic was even superior to that of the West. As we saw above, Chinese Buddhist intellectuals such as Song Shu also noted the potential to claim logic's history in China through Buddhism.

While Zhang was a Buddhist enthusiast whose study of logic could safely be considered a part of his fascination with this tradition, his unique approach calls for a broader perspective. Unlike Yang Wenhui or, later, Ouyang Jingwu and Taixu, Zhang's interests went beyond Buddhist history and doctrine. Like Song Shu, Zhang was engaged in the debate about the history of logic in

²³ For more, see Jorgensen (2014).

China and its place within the modern state. Zhang criticized the trend among other intellectuals to reformulate the Chinese indigenous intellectual heritage within the Western intellectual conceptual framework. Yet, he was willing to accept the category of logic and, as Kurtz concluded, it seems that Zhang “did not oppose radical reconceptualization *per se*, but only those that uncritically mirrored European taxonomies” (Kurtz 2011, 303). But if there was logic in China, what was its nature? Was the view that Mohism and the School of Names represented Chinese logic adequate? And, if it was, was this logic something to be proud of?

His study of these questions began in 1909 with the publication of his *On the Origins of the Doctrines of Names* (*Yuanming* 原名). Zhang began by reevaluating the traditional view of ancient Chinese schools of thought. For him, the School of Names was not the only school that was concerned with the correct use of names (*ming* 名). In the same way that the “Dao” was a pan-Chinese concern and was not only used by Daoists, the correct use of names was not only discussed by the School of Names but also among Daoists, Confucians, and Mohists. For Zhang, the School of Names was not even the most successful in these endeavors, as their usage of the method or science of studying names was based on “far-fetched and useless distinctions” (Kurtz 2011 303). For Zhang, they were merely “sophists” (Ibid.) He believed that Xunzi’s *On the Correct Use of Names* (正名篇) and parts of the Mohist canon got closer to Buddhist and European logic and dialectics.

Zhang thought highly of Xunzi and juxtaposed Xunzi’s discussion of names with the famous Yogācāra claim that signs (including names) are merely a mental construct (Kurtz 2011, 304). In addition to locating the process of investigation of names as part of the mind’s construction of reality, Zhang also saw logic as a tool for debate. This was another important contribution of his foray into Buddhism and Buddhist logic.

In India, Buddhists had to debate other schools of thought. Mastering the art of debate was crucial to Buddhists’ survival in a culture whose most basic presuppositions about the nature of the world and the self were diametrically opposed to their own. While the Chinese had their fair share of interreligious and intellectual debate, Chinese culture never developed a systematic approach to debate the way India did. Zhang hoped that this would be one of the contributions of Buddhist logic to Chinese thought. While Yogācāra pervaded his metaphysical outlook, his study of logic focused on more specific topics, such as methodology of making an inference, debates and comparisons with Mohism and other non-canonical works, and Aristotelian and Buddhist systems of logic.

Zhang's approach was cautious. He was aware that adopting terms from one system of thought for another was problematic. Yet comparison was inevitable if clarity was to be achieved. He demonstrated his method with the comparison of the Mohist term for reason (*gu* 故) with the meaning of reason in Buddhist logic. For Zhang, the Mohist "knowledge of reason" is elucidated through the Buddhist three-part syllogism (*sanzhi biliang* 三支比量), composed of thesis (*zong* 宗), cause (*yin* 因), and example (*yu* 喻). Zhang noted that "Mozi's 'reason' is similar to the cause/reason (*yin* 因) in [Buddhist logic], for the thesis can only be established if reason is given" (Kurtz 2011, 307). Zhang quoted Mozi as saying "the 'reason:' only if something has it, will it be complete" (Ibid.). Kurtz demonstrates how Zhang was well aware that the comparison was shaky mostly due to the fact that, unlike Buddhist logic, Mozi never developed his science of reason into a full syllogism. He found the Mohists' discussion limited as "they failed to distinguish the functions of reason and example as established in the tripartite inference" (Kurtz 2011, 308). Mozi's logic therefore was largely dismissed, a near "hit" that was never developed as far as the Buddhist equivalent. This is why "Chinese ideas could be recovered from oblivion by translating them into the rediscovered idiom of Buddhist dialectics and the freshly minted terms of Western logic" (Kurtz 2011, 309).

Not all scholars agree with Zhang's assessment. Shen et al. argue in their book about Buddhist logic that although Buddhist logic was indeed more mature than Mohist logic, Zhang dismissed the Mohist logic too quickly:

Despite the fact that its syllogistic forms were not as developed as that of Buddhist logic, in terms of advancing propositions (*lunti* 論題) and using specific examples in the process of demonstrating a [proposition] in order to establish an analogy, [Mohist logic] does not "lack the use of actual examples (*wu suorong yuyi* 無所容喻依)" like Zhang Taiyan has argued" (Shen 2001, 341).

Another scholar accused him of disparaging Chinese logic because of his bias in favor of Indian thought and argued that Zhang's critique was not the result of a "scientific attitude" (Ibid.) The national essence and the question of the logical nature of China's intellectual and spiritual heritage were then—and still are—inevitably intertwined.

For Zhang, Buddhist logic was superior even to Western logic. Western logic and Buddhist logic both include illumination through the self (*ziwu* 自悟) while only Buddhist logic includes illumination through others (*tawu* 他

悟). This distinction is important. Illumination through the self is a process by which an individual learns new knowledge using inference or perception. Illumination through others is achieved through dialectics and conversation with others. Zhang thought that both European and Indian systems of logic only include the syllogism that enabled illumination through the self, but only the Indian Buddhist logic tradition developed the art of dialectic through which new knowledge can be systematically attained by critical engagement with interlocutors in debate and through mutual exploration.

Another point where Zhang judged Buddhist logic to have an advantage is the role of the example (Skt. *dr̥ṣṭānta*, 喻). Zhang argued that in Mohist logic the example appears before the thesis, while in Buddhist logic one begins with the thesis, continues with the reason, and finally provides the example. Zhang found it a much better logical flow. He says: “Those who put the abstract example first do not allow for concrete examples” (Kurtz 2011, 310). This is where Zhang’s comparative strategy, as cautious as he tried to be, failed him. Aristotelian syllogism does not really demand an example the way the Indian syllogism does. The classical Aristotelian argument consists of:

1. Major premise: All big cats are carnivorous.
2. Minor claim: Cheetahs are a big cats
3. Conclusion: Cheetahs are carnivorous.

The use of examples is much more prevalent in Buddhist syllogism. Here is an example from Dharmapāla’s commentary on the *Ālambanaparīkṣā*²⁴:

1. Reason: Because [atoms] are unable to produce images of themselves in consciousness;
2. Thesis: *viṣaya* are not atoms;
3. Example: just as [they are not] eyes and the other *indriyas*.

Zhang frequently used Buddhist logic in his arguments and, as in earlier cases, used it as a means to attack modern and Western views that challenged his increasingly Yogācāra world view. For example, he used it when arguing against the Western god (*Wushen lun* 無神論) as the creator of the world. He argued that if one would like to claim that all things were created by a deity, than something would have to create that deity, which would lead to the fallacy Buddhist logicians called “infinite regress” (*wuqiong guo* 無窮過). In his essay *On the Five Negations* (*Wuwu lun* 五無論), Zhang rejected five concepts that inevitably lead to the emergence of the kind of modern state of

²⁴ T. no. 1625, 31: 889c29.

which he disapproved. These five concepts are: no-self, no-sentient beings, no-world, no-state, and no-groups. As Viren Murthy showed, the goal was to resist the evolution that is rooted in ignorance. This karmic force, like the Will in the case of Schopenhauer's moral imperative, is one that we need to resist, not to celebrate (Murthy 2012, 511–15). As part of his argument against the modern state, Zhang employed the following syllogism: “[Thesis] Race based nationalism (*minzu zhuyi* 民族主義) is a narrow minded view, [Reason] because it imposes boundaries on that which has no boundaries, [Example] like the traditional clan-based thought” (Zhang 2003, 221) Another way that he constructed the syllogism is: “[Thesis] State-based nationalism is a narrow minded view, [Reason] because it imposes boundaries on that which has no boundaries, [Example] like provincialism (*cunluo sixiang* 村落思想)”²⁵ (Ibid.).

Zhang, like most Chinese scholars, had a limited selection of texts with which he could work, and no knowledge of other classical Buddhist languages. Yet, among the first generation of intellectuals who studied Yogācāra and Buddhist logic texts that arrived from Japan, Zhang was by far the most knowledgeable about Chinese, Western, and Buddhist logic, and contributed more than anyone else to the reintroduction of Buddhist logic to the broader Chinese intellectual discourse. His influence on the reception of logic in China did not spread much beyond Buddhist circles, which is possible evidence that Buddhist intellectuals perceived Buddhist logic as a tool for modernizing Buddhism, while Chinese non-Buddhist intellectuals preferred to domesticate Western logic.

Ouyang Jingwu and Taixu

Two important reformers of Buddhism during the republican period were Ouyang Jingwu 歐陽竟無 (1871–1943) and Taixu 太虛 (1890–1947). Both were educators, leaders, and prolific writers, and both established schools and exerted considerable influence on the future of Buddhist education in China.²⁶ While both highlighted the importance of the Yogācāra school, their contributions to the study of Buddhist logic were not as far reaching as their work in other areas. Their importance lies in the fact that they promoted the study of Buddhist logic, made it part of the curriculum in their Buddhist

²⁵ Literally, village mentality or village thought.

²⁶ I limit myself here to their contributions to the study of Buddhist logic. For more about the career and role of Taixu see Pittman (2001) and Ritzinger (2010). On Ouyang Jingwu, see Cheng (2000) and Aviv (2008 and 2014).

academies and dedicated some of their essays to the subject. The fact that Buddhist leaders of their stature advocated for the study of Buddhist logic contributed to its rise in popularity during the Republican period.

For Ouyang, Yogācāra was a solution for an inherent problem in the way Chinese intellectual history had evolved. In his essay “Discussing Weishi[‘s Major Topics]” (*Weishi jueze tan* 唯識抉擇談), he argued that part of the problem with Chinese Buddhism was the Chinese intellectual tradition’s “vague and unsystematic” nature (*longtong* 籠洞) and that it “lacks careful investigation” (*shi jingmi zhi guan cha* 欠精密之觀察) (Ouyang 1976, 1359–60). While Ouyang does not refer in this essay to Buddhist logic, it is not a big stretch to suggest that Buddhist logic could be a useful tool to correct sloppy thinking.

Early in his career, Ouyang wrote a commentary on Dharmapāla’s commentary of Dignāga’s seminal *Ālambanaparīkṣā*, which, as we have seen, included a refutation of the theory of atomism through reliance on syllogistic forms from Buddhist logic. During the late 1920s Ouyang Jingwu was busy printing critical editions of Buddhist texts. Among them, he published and edited the *Nyāyapreśa* and the *Nyāyamukha*. He also wrote prefaces to both texts and argued that the *Nyāyamukha* is the more important of the two.

In addition, Ouyang was the first to understand the limitations of the materials available to the Chinese reader through the canon. He argued that it was impossible to understand the tradition without the towering work of Dharmakīrti 法稱 (ca. 7th century), one of the most profound and creative Buddhist philosophers in the history of Buddhism. While Dignāga is most often recognized as the founding father of Buddhist logic, Dharmakīrti’s work was considered the foundation of Buddhist logic throughout the later history of Buddhism in India and Tibet. Since Dharmakīrti’s influence spread after Xuanzang’s visit to India and because Xuanzang’s interest in Buddhist logic waned after said visit, Dharmakīrti’s works were not translated into Chinese until the modern period. Ouyang argued for the first time that Dharmakīrti was even more important than Dignāga to understanding Buddhist logic. While he himself was much more interested in metaphysics and soteriology, he encouraged his students to work on the Sanskrit and Tibetan materials.

Like other intellectuals of his day, Ouyang recognized the importance of logic. Like Zhang Taiyan, he was critical of the attempt to understand Buddhism through other forms of logic. But unlike Zhang, he cared more about what Buddhist logic said about Buddhism than what it said about logic.

Buddhist logic was a means to show that Buddhism has its own logic and therefore should be a respected tradition whose teaching should not be reduced to a sub-category of philosophy. (Ouyang 1995, 82–3).

As with Ouyang, only a small part of Taixu's corpus is dedicated to Buddhist logic. He was a prolific writer, but his greatest mark was not in his scholarship, but rather in the reforms he offered to the Saṅgha. His charisma and followers among the elite gave greater weight to his endorsement of Buddhist logic, and his inclusion of Buddhist logic in his Wuchang Buddhist Institute was an important part of the tradition's story in Republican China. Like Ouyang, and perhaps inspired by him and others, Taixu wrote extensively on Yogācāra. Taixu also wrote about Buddhist logic. His most important work *Introduction to Buddhist Logic* (*Yinming gailun* 因明概論) was published in 1922 and outlines the major principles of the tradition and analyzes its principal texts. It was based on a lecture he gave at Zhonghua University. In the book Taixu argues that Buddhist logic is for teaching people correct theories and helping them understand the truth (*Introduction to Buddhist Logic*, <http://www.buddhaway.org/Taixu-T00/T06-01d.pdf>, accessed May 4, 2014).

Ouyang and Taixu's goal was the same: to promote Buddhism. However, they each understood Buddhism, and consequently Buddhist logic's role in the tradition as a whole, in different ways. Taixu saw Chinese Buddhism as the crowning achievement of Buddhism. Chinese Buddhism, for Taixu, is perfect when all of its eight pillars, or eight schools, are flourishing. His interest in Buddhist logic was a part of his attempt to reintroduce it as a part of the Yogācāra school and an important component in the modernization of Buddhism. Ouyang, on the other hand, believed that many of the indigenous Chinese schools, especially Huayan and Tiantai, were not genuine Buddhism. In addition, he believed some practices in Pure Land and Chan Buddhism should also be given up. For Ouyang, there was an important difference between Indian Buddhism and its later Chinese iteration. To make Buddhism relevant in the modern age, it had to return to its authentic form. Ouyang understood Yogācāra to be the most perfect expression of this authentic Buddhism, and he saw Buddhist logic as part of this authentic tradition.

Ouyang's major disciple, Lü Cheng, continued Ouyang's project to authenticate the Buddhist tradition in China. Lü's scholarship took Buddhist studies in China to a whole new level of philological sophistication and linguistic ability. It was Lü Cheng who studied Pāli, Sanskrit, and Tibetan, and was able to transcend the linguistic limitations that hindered most of the other scholars around.

Lü Cheng 呂澂 (1896–1989) and the Quest for Authenticity

So far, we have seen numerous examples of Buddhists and other intellectuals who celebrated Buddhist logic, used it to argue against Christians and rival interpretations of Buddhism or, as in Zhang’s case, against nationalism and “statism.” In all of these cases, an understanding of the deeper structure and rationale of how Buddhist logic works was deficient. Take, for example, one of Zhang Taiyan’s syllogisms discussed above: “[Thesis] Race based nationalism is a narrow minded view, [Reason] because it imposes boundaries on what has no boundaries, [Example] like the traditional clan-based mentality.”

As noted above by Tillemans, Buddhist logic is rooted in epistemological concerns and in debate culture. There is no way to construct a well-formed syllogism without establishing first the tacit or explicit agreements on what constitutes a *pramāṇa*: a valid means of knowing something. According to the *Nyāyapraveśa*, one of the ways to commit a fallacy (Skt. *hetvābhāsāḥ*, *siyin* 似因) is for the reason to be accepted only by one side (*liangju bucheng* 兩俱不成 see *Nyāyapraveśa*, T 1630, 11c10–14). Here interlocutors from the revolutionary party are likely to dispute the reason and also the thesis and the examples. A complete and valid syllogism cannot exist with an inherent logical fallacy.

In addition, another logical problem in Zhang’s syllogism is ambiguity. Ambiguity is a fallacy wherein a proposition is rejected because its status is doubtful (Skt. *samdigdha-asiddha*, *youyu bucheng guo* 猶豫不成過) for it does not follow from the fact. For example, a state is an artificial construction that artificially forms boundaries and thus is narrow-minded. One can think of reasons why it is actually a brilliant idea. Also, it is not clear from the example what a state has to do with clan mentality. Did clans also impose boundaries on that which does not have boundaries? We can find similar problems with others who used Buddhist logic and it seems safe to suggest that it took time for Chinese intellectuals to reacquaint themselves with the intricacies of Buddhist logic.

One of the scholars—arguably the most important scholar—who brought the study of Buddhist logic to maturity was Lü Cheng. Lü’s systematic approach and meticulous attention to detail came with a price. Unlike Zhang, Yang Wenhui, or Ouyang, Lü’s scholarship remained too technical to become practical for most Chinese Buddhists and non-Buddhists. He did not apply it to debates outside of the scope of Buddhist studies, and consequently his

achievements remain academic in nature and failed to sustain a lasting interest in Buddhist logic.

Lü Cheng was no leader or public intellectual, which is probably why he is the least known among the names mentioned. He was a scholar throughout his life. He began his academic career with an interest in economics and switched to art, following his brother Lü Fengzi 呂鳳子 (1889–1959). His brother was also the one who introduced him to Buddhism and took him to hear Ouyang Jingwu teach Buddhism at the Jinling Sūtra Publishing House, Yang Wenhui's important institution for the dissemination of Buddhist texts. Lü remained committed to Ouyang. In 1922, when Ouyang opened his Inner Studies Institute (*Zhina neixue yuan* 支那內學院) and asked Lü to join him, Lü quit his job at the Shanghai School of the Arts (*Shanghai meishu zhuanke xuexiao* 上海美術專科學校). He remained Ouyang's right hand throughout Ouyang's life and became the head of the Inner Studies Institute after Ouyang's death until the Institute was forced to close its gates in 1952.

Lü was committed to Ouyang's project of reviving the scholastic tradition of Buddhism as a response to what they saw as the maladies of Buddhism in the modern age. Lü himself played an important role in the Inner Studies Institute's program to distinguish between what they saw as authentic Buddhism (*zhenshi* 真實 / *zhen fojiao* 真佛教) and inauthentic or fake Buddhism (*jia/xiangsi fojiao* 假/相似佛教). Unlike most of his other students, Lü followed Ouyang's advice and studied other Buddhist languages. Most important for his future works were Sanskrit and Tibetan (he also studied Pāli). Lü studied them with a Russian Sanskritist, Baron Alexander von Stāl-Holstein (1877–1937), who had escaped the Bolshevik revolution to Beijing. Lü also studied with another of Ouyang's brilliant students, Huang Shuyin 黃樹因 (1898–1923), who sadly died prematurely. Huang, whom Ouyang compared later to Yan Hui 顏回,²⁷ studied Tibetan in Beijing with Tibetan monks in the Yonghe Temple (雍和宮) and studied Sanskrit with the German linguist Ferdinand Lessing (1882–1961). In five years of intensive study, Lü dedicated much time and effort to master these two languages, skills which served him and Ouyang in publishing the critical editions for the canonical texts (藏要) (Lin 2014, 346).

Lü's contribution went well beyond Buddhist logic and included numerous publications about the history of Buddhism in India, Tibet, and China. Lü also wrote extensively about the *Āgamas*, *Abhidharma* texts, and Yogācāra. Free from the limitation of only Chinese sources, Lü studied new texts and engaged

²⁷ Confucius's disciple who also passed away prematurely.

in comparative philological methodology, which yielded important insights and corrections to common misinterpretations of important texts among Chinese Buddhists. Among these texts we can find foundational sūtras and śāstras such as the *Diamond Sūtra* or the *Laṅkāvatāra Sūtra*, as well as essays rejecting the authenticity of other works such as the *Awakening of Faith* (*Dasheng qixin lun* 大乘起信論, T 1666 for Parmārtha's translation and T 1667 for the later Śikṣānanda translation) and the *Śūraṅgama Sūtra* (*Da foding shoulengyan jing* 大佛頂首楞嚴經, T 945).

Inspired by scholarship that came from Japan that gained traction among Chinese scholars, Lü argued that these works are not genuinely Buddhist, that they were product of Chinese authors and contained mistaken ideas about Buddhist doctrine. Working with other Tibetan and, when available, Sanskrit sources, Lü delineated their doctrinal evolution, identified the junctures where the translations deviated from the original meaning and where commentators interpreted canonical texts in way that led to the production of apocryphal and, to his mind, misguided sūtras and śāstras.

In his study of Buddhist logic, Lü benefited from a collection of texts that Huang Shuyin brought with him from his Tibetan teachers. While most of them were Yogācāra texts, one foundational text in the field of Buddhist logic was Dignāga's *Pramāṇasamuccaya*. Lü Cheng saw Buddhist logic as crucial to the authentic Buddhism he sought to propagate. In the formative years of the Inner Studies Institute (1923–1926), most of the courses he offered were on Yogācāra and Buddhist logic. Lü used a variety of texts to teach Buddhist logic (Lin 2014, 354).

Lü's work with languages beyond Chinese led to major progress in the level of scholarly work in the field of Buddhist studies in China. As Dan Lusthaus explains:

Correlating Chinese texts with their Sanskrit and/or Tibetan versions provides insights otherwise unobtainable from the Chinese texts alone. In the case of difficult texts or passages—and there were many—consulting the Sanskrit or Tibetan could offer invaluable clues to otherwise unsolvable interpretive conundrums. Indian and Tibetan texts not only offered alternative interpretations of important Buddhist concepts, but they also shed light on how to critically read the Chinese translations more accurately, since they could reveal what lay behind a translator's method and choices and clarify the intended denotations of

terms that were sometimes obscured by their Chinese literary equivalents (Lusthaus 2014, 320).

When we take into account the fact that, before Lü Cheng, the majority of scholars relied on only the few Chinese materials available, one can appreciate the contribution that Lü's erudition brought to the study of logic as well as to other facets of Buddhist studies.

Lü's philological approach can be seen in his translation of Dignāga's *Pramāṇasamuccayavṛtti* based on two Tibetan translations.²⁸ Lü's translation of the *Pramāṇasamuccayavṛtti* was the first major translation of a new Buddhist logic text into Chinese since the Tang. Lü also translated into Chinese Dignāga's *Hetucakraḍamaru* (*Yinlun jueze lun* 因輪抉擇論 *The Drum Wheel of Reason*, a text that focused on the three characteristics of the sign (Skt. *liṅgasya trairūpya, yin sanxiang* 因三相).²⁹

His philological and cross-reference analysis methods can be seen in most of Lü's work on Buddhist logic. Like many others, Lü first studied Kuiji's commentary on the *Nyāyapraveśa*, which resulted in the publication of his "On the Fourteen Logical Fallacies in the *Nyāyapraveśa*" (*Rulun shisi yinguo jie* 入論十四因過解). The essay relies on the Chinese text but also on a thorough study of the two Tibetan versions, together with other supplementary materials. When the Sanskrit version was discovered, Lü added it to a later critical edition of the text in 1935 (Lü 1991, 153–6; Lin 2014, 355). His

²⁸ Dignāga's *Pramāṇasamuccaya* and its *Vṛtti*, or commentary, has not survived in Sanskrit. Lü Cheng relied on two Tibetan translations— that of Kanakavarman and Dad-pa śes-rab, and that of Vasudhararakṣita and Seṅrgyal (see Lin 2014, 355). For years the *Pramāṇasamuccaya* was available only in Tibetan. In recent years, Professor Ernst Steinkellner discovered a complete Sanskrit edition of the *Pramāṇasamuccaya* in central Tibet embedded in a sub-commentary by Jinendrabuddhi. It is now being published by the Austrian Academy of Sciences Press.

²⁹ The three characteristics are three conditions that a syllogism in Buddhist logic must contain in order to be considered valid. The three are:
 (1) The thesis and the reason must share similar property. Using one of the most common examples, "Sound is impermanent. Because it is a product. Like a pot." Here the Thesis (sounds is impermanent) is made up of subject (*dharmin*) and predicate (*sādhya*). The subject "sound" has the property outlined in the reason "it is a product."
 (2) A similar example: Like a pot (the pot is also impermanent because it is a product).
 (3) A dissimilar case is often also provided. Here there is no product that is not impermanent. So no dissimilar case can be provided.

comparative methodology continued with his study of Dignāga's *Nyāyamukha* and the *Pramāṇasamuccayavṛtti*. His studies led him to conclude that Dignāga's methods in his major work the *Pramāṇasamuccaya* were based on the *Nyāyamukha* (Lin 2014, 355–6).

Lü Cheng also applied his philological skills thoroughly to his analysis of Dignāga's *Ālambana-parīkṣa*. Its commentary by Dharmapāla 護法 (circa 6th century) formulated many of the arguments as syllogisms and framed the arguments of the text within the context of the original debate, or at least the debate as Dharmapāla thought it occurred. The *Ālambana-parīkṣa* is also an important text in the history of East Asian Yogācāra. The text was introduced to China by three of the most prominent translators in the history of Chinese Buddhism. Both Paramārtha (T 1619) and Xuanzang (T 1624) translated Dignāga's texts, in the mid-6th century and mid-7th century (657) respectively. Yijing (T 1625) translated the commentary of Dharmapāla, excluding the last two verses of the text.³⁰ During the Ming's short Yogācāra revival, two main commentaries appear by Ouyi Zhixu and by Mingyu. The *Ālambana-parīkṣa* was also considered to be one of the foundational texts of Yogācāra by Xuelang Hongen 雪浪洪恩 (1545–1608) in his influential work the *Eight Essential [Texts] of the Faxiang School* (*Xiangzong bayao* 相宗八要, X 899).³¹

Lü published several essays about Buddhist logic. Among them is an essay about the early phase of Buddhist logic in China (*Yinmingxue zai zhongguo de zuichu fazhang* 因明學在中國的最初發展), another on Tibetan Buddhist logic (*Xizang suozhuan de yinming* 西藏所傳的因明), and an essay on Dharmakīrti's logic (*Fojiao luoji: Facheng de yinming shuo* 佛家邏輯：法稱的因明說). One of the crowning achievements of Lü's writings on logic is his highly acclaimed *Primer of Buddhist Logic* (*Yinming gangyao* 因明綱要), published in 1926. The *Premier* is still one of the most compressive books on Buddhist logic written in Chinese. Lü opens with the five phases (as he divided them) of the history of Buddhist logic. He then carefully outlines the major premises of the Buddhist logic tradition (the fifth—and the most crucial one from Dharmakīrti onward—was not transmitted to China). In the following three chapters Lü explains the basic three-fold syllogism and goes over each of its components: thesis, reason, and example. In the following

³⁰ It is unknown if the original Dharmapāla text was unfinished, if Yijing for some reason failed to translate the last two verses and their commentaries, or that the text simply did not survive.

³¹ The *Nyāyapraveśa* was another one.

chapters he explains in detail how to construct a valid syllogism with plenty of examples, and later illustrates how to attack and properly refute others' syllogisms. The last section is dedicated to a discussion of the two valid means of knowledge: direct perception (Skt. *prayakṣa-pramāṇa*, *xianliang* 現量) and inference (Skt. *anumāna-pramāṇa*, *biliang* 比量) (Lü 2006).

In 1914, a few centuries after the Ming resurgence of Yogācāra, Ouyang Jingwu began his prolific career as a writer with his own commentary on Yijing's translation of Dharmapāla. Ouyang's commentary relied on the Ming commentary, but despite his effort and the efforts of so many previous readers and writers, the text remained a challenge to its readers. With this context in mind, Lü Cheng stepped up to the challenge and used his philological and linguistic skills to work on his own translation based not only on the three translations in Chinese, but also on those available in Tibetan versions together with a commentary by Vinitadeva which does not exist in Chinese. Lü's goal was to get the most accurate understanding of the text and to shed new light on the foundational text using, for the first time since the Tang, non-Chinese sources.

When putting Lü's work on Buddhist logic in the general context of his work and in the broader context of the Inner Studies Institute's mission, it is clear that his goal was to reintroduce Indian texts and genres into Chinese Buddhism, use them to challenge conventions that, according to critical methods, proved to be erroneous, and make the strongest case possible for a genuine Buddhism. Unlike Ouyang Jingwu, who remained committed to the Buddhist path until his death, it seems that for Lü Cheng, as time went by, his interest was less motivated by his identity as a Buddhist and more as a scholar of Buddhism.

Conclusions

The role Buddhist logic played in China still awaits further study. What was the fate of the study of logic in the later years of the Republican period and during the first few decades of the People's Republic of China? Why did Buddhist logic, yet again, fail to take root among Chinese Buddhists? Was Buddhist logic's moment of glory and subsequent disappearance from public discourse tied to the short-lived popularity of Yogācāra? What was the legacy of the study of Buddhist logic for later generations of Buddhists?

This paper addressed the role of Buddhist logic during the early decades of the 20th century, when logic became one of the authoritative means of

knowledge in China and replaced other traditional authorities, most importantly the Confucian canon. Scientists and experts on Western thought took the place of imperial exam degree-holders. Their methods were not the study of authoritative interpretations of the canonical texts, but logic and knowledge based on experimentations.

Once the field of logic was recognized, it soon turned to what Bourdieu called “cultural capital,” knowledge that led to prestige and authority. Chinese intellectuals searched their own indigenous philosophical tradition for a native form of logic, which was important in order to show that Chinese culture was advanced and had the roots of logic even if it had failed to develop it as the West had.

Buddhist intellectuals’ interest in Buddhist logic should be seen as a part of the Chinese fascination with logic and the authority it quickly assumed. Studies of Buddhist logic were conducted both by those who wished to claim Buddhist logic was a part of China’s logical history and by those who wished to establish Buddhism as a modern tradition (and, in cases like that of Zhang Taiyan, some scholars tried to do both). The generous shipment of hundreds of Buddhist volumes by Nanjō Bunyū to China, which included many Yogācāra and Buddhist logic texts that were reintroduced to the mainland made it possible to convert the general interest into more meticulous studies.

The study of Buddhist logic evolved with time. The goals and methods of modern students of Buddhist logic were diverse. Most of the scholars studied in this paper thought of Buddhist logic as an important tool for purging Buddhism of damaging aspects that had evolved in China over the years. Yang Wenhui and followers such as Song Shu and Ouyang Jingwu critiqued the “sloppy thinking” prevalent among Chinese Buddhists, which resulted from Chan Buddhism’s anti-intellectualism trope.

Logic became important as a tool to defend against other Buddhists and especially non-Buddhist claims. Using Buddhist logic as an apologetic tool can be traced to the Ming Dynasty revival of Yogācāra. We saw that in the modern period both Yang Wenhui and Song Shu employed Buddhist logic as an apologetic tool against Japanese Pure Land interpretations of the Buddhist teaching or, in the case of Zhang Taiyan, as tools for criticizing the Christian notion of a creator god. Buddhist logic as an apologetic tool was also used by Wang Xiaoxu to argue against scientific materialism.

Zhang Taiyan was the most prominent student of Buddhist logic who recognized its value beyond Buddhism. For him, Buddhist logic was a part of the heritage of Chinese (or Asian) tradition vis-à-vis the Western one. Zhang

argued that Buddhist logic was not only important for Buddhism but it also had broader significance, as it added to the study of logic's dimensions that he thought were missing from Western logic.

Finally, Buddhist logic was a part of the quest of some Buddhist intellectuals—most notably Ouyang Jingwu and Lü Cheng—to purge Buddhism in China of its indigenous and non-authentic aspects. While monks such as Taixu wished to weave Buddhist logic into the tapestry of Chinese Buddhism, Ouyang Jingwu and Lü Cheng saw authentic Buddhism as Indian Buddhism, especially as expressed in the *Yogācāra* teaching. Authentic Buddhism was, for them, a modern tradition based on reason and as such could serve as a perfect vehicle for personal transformation in the modern period. Buddhist logic was a part of authentic Buddhism that they wished to reintroduce to China.

Yet, all the scholars studied in this paper shared the conviction that if Buddhism was to be modernized, Buddhist logic must play an important role in reshaping the tradition. And, for a short period of time, Buddhist logic did play this role. It remains to be seen whether Buddhist logic will retreat to the margins or will become again a cornerstone in the revival of Buddhism in contemporary China. If it does flourish, the foundational work of the early Republican scholars will undoubtedly be pivotal in educating a new generation of Chinese Buddhist intellectuals in the art and science of Buddhist logic.

References

Primary Sources

- Cheng weishi lun* 成唯識論. T 31, no. 1585.
Fangbian Xinlun 方便心論. T 32, no. 1632.
Guan suoyuanyuan lun 觀所緣緣論. T 31, no. 1624.
Guan zongxiang lunsong 觀總相論頌. T 31, no. 1623.
Guansuoyuanlun shi 觀所緣論釋. T 31, no. 1625.
Jiejuan lun 解卷論. T 31, no. 1620.
Qu yin jiashe lun 取因假設論. T 31, no. 1622.
Rushi lun 如實論. T 32, no. 1633.
Wuxiang sichen lun 無相思塵論. T 31, no. 1619.
Xiangzong bayao jie 相宗八要解. X 55, no. 900.
Xiangzong bayao 相宗八要. X 55, no. 899.
Yinming ru zhengli lun shu 因明入正理論疏. T 44, no. 1840.
Yinming ru zhengli lun 因明入正理論. T 32, no. 1630.
Yinming zhengli men lun 因明正理門論. T 32, no. 1629.
Yinming zhengli men lunben 因明正理門論本. T 32, no. 1628.
Yuqie shidi lun 瑜伽師地論. T 30, no. 1579.
Zhangxhong lun 掌中論. T 31, no. 1621.

Secondary Sources

- Aviv, Eyal. 2008. Differentiating the Pearl From the Fish Eye: Ouyang Jingwu (1871–1943) and the Revival of Scholastic Buddhism. Ph.D. diss., Harvard University.
- . 2014. Ouyang Jingwu: From Yogācāra Scholasticism to Soteriology. In *Transforming Consciousness: Yogācāra Thought in Modern China*, edited by John Makeham, 285–316. New York: Oxford University Press.
- Bhikkhu Bodhi and Bhikkhu Nanamoli, trans. 1995. “Cūḷamālunkya Sutta (MN 63)” *The Middle Length Discourses of the Buddha: A Translation of the Majjhima Nikāya*. Boston: Wisdom Publication.
- Bourdieu, Pierre. 1986. The forms of capital. In *Handbook of Theory and Research for the Sociology of Education*, edited by J. Richardson, 241–58. New York: Greenwood Press.

- Cheng, Gongrang. 2000. *Ouyang Jingwu foxue sixiang yanjiu* 歐陽竟無佛學思想研究 (*Studies in Ouyang Jingwu's Buddhist Thought*). Taipei: Xinwenfeng Press.
- Chen, Jidong (Chin Keitō). 2003. *Shinmatsu Bukkyō no kenkyū: Yō Bun'e o chūshin toshite* 清末仏教の研究：楊文会を中心として (*Studies in Late Qing Buddhism: With a Focus on Yang Wenhui*). Tokyo: Sankibo Busshorin.
- Chu, William. 2006. *A Buddha-Shaped Hole: Yinshun's Critical Buddhology and the Theological Crisis in Modern Chinese Buddhism*. PhD Diss., UCLA.
- Duara, Prasenjit. 1995. *Rescuing History from the Nation*. Chicago: The University of Chicago Press.
- Durkheim, Émile. 1976. *Elementary Forms of Religious Life*. 2nd ed. Translated by Joseph Ward Swain. London: George Allen and Unwin Press.
- Fang, Guangchang. 2000. Yang Wenhui de bianzang sixiang 楊文會的編藏思想 (Yang Wenhui's Approach for Editing the Canon). *Journal of Chinese Buddhist Studies* 中華佛學學報 13: 179–205.
- Gensler, Henry. 2010. *Introduction to Logic*. New York: Routledge.
- Goossaert, Vincent, and David A. Palmer. 2011. *The Religious Question in Modern China*. Chicago: The University of Chicago Press.
- Goswami, Amit. 1995. *The Self-Aware Universe*. New York: Tarcher Press.
- Gangxiao 剛曉. 2013. *Yinming jiangji* 因明講記 (*Lecture Notes about Hetuvidyā*). <http://www.fjdh.cn/wumin/2013/03/160727213696.html>, accessed April 27, 2014.
- Haaparanta, Leila, ed. 2009. *The Development of Modern Logic*. New York: Oxford University Press.
- Hammerstrom, Eric J. 2010. *Buddhists Discuss Science in Modern China, 1911–1949*. Ph.D. diss., Indiana University.
- Harari, Yuval Noah. 2011. *A Brief History of Mankind (Kitsur Toldot Ha-Enoshut)*. Or Yehuda: Dvir & Zmora Bitan Press. (An English translation will be available on Nov. 2014 with the title *Sapiens: A Brief History of Humankind*. Harper Press.)
- Hayes, Ricahrd P. 1988. *Dignaga on the Interpretation of Signs*. New York: Springer Press.
- Hodgson, David. 2012. *Rationality+ Consciousness= Free Will*. New York: Oxford University Press.
- Jorgensen, John. 2014. Indra's Network: Zhang Taiyan's Sino-Japanese Personal Networks and the Rise of Yogācāra in Modern China. In *Transforming Consciousness: Yogācāra Thought in Modern China*,

- edited by John Makeham, 64–102. New York: Oxford University Press.
- Kneale, William and Martha Kneale. 1985. *The Development of Logic*. New York: Oxford University Press.
- Kurtz, Joachim. 2011. *The Discovery of Chinese Logic*. Leiden: Brill Academic Press.
- Kwok, D.W.Y. 1965. *Scientism in Chinese Thought, 1900–1950*. New Haven: Yale University Press.
- Lin, Chen-kuo. 2014. The Uncompromising Quest for Genuine Buddhism: Lü Cheng's Critique of Original Enlightenment. In *Transforming Consciousness: Yogācāra Thought in Modern China*, edited by John Makeham, 343–74. New York: Oxford University Press.
- Lü, Cheng. 1991. Rulun shisi yinguo jie 入論十四因過解 (On the Fourteen Logical Fallacies in the *Nyāyapraveśa*). In *Lü Cheng foxue lunzhu xuanji* 呂澂佛學論著選集 (*Collected Writings of Lü Cheng's Buddhist Writings*), 151–169. Jinan: Qilu Shushe Press.
- . [1926] 2006. *Yinming Gangyao* 因明綱要 (*Primer of Buddhist Logic*). Beijing: Zhonghua shuju.
- Lusthaus, Dan. 2003. *Buddhist Phenomenology: A Philosophical Investigation of Yogācāra Buddhism and the Ch'eng Wei-shih Lun*. New York: Routledge.
- . 2014. Lü Cheng, Epistemology, and Genuine Buddhism. In *Transforming Consciousness: Yogācāra Thought in Modern China*, edited by John Makeham, 317–42. New York: Oxford University Press.
- Makeham, John, ed. 2014. *Transforming Consciousness: Yogācāra Thought in Modern China*. New York: Oxford University Press.
- McMahan, David. 2008. *The Making of Buddhist Modernism*. Oxford: Oxford University Press.
- Muller, Charles, trans. 2003. *The Sūtra of Perfect Enlightenment*. http://www.acmuller.net/bud-canon/sutra_of_perfect_enlightenment.html#div-6, accessed April 27, 2014.
- Murthy, Viren. 2012. Transfiguring Modern Temporality: Zhang Taiyan's Yogacara Critique of Evolutionary History. *Modern China* 38, no. 5: 483–522. doi:10.1177/0097700412442835.
- Nedostup, Rebecca. 2009. *Superstitious Regimes: Religion and the Politics of Chinese Modernity*. Cambridge: Harvard University Asia Center.
- Orzech, Charkes Henrik H. Sørensen, and Richard Payne (editors). 2011. *Esoteric Buddhism and the Tantras in East Asia*. Leiden: Brill Press.
- Ouyang, Jingwu. 1976. Weishi jueze tan 唯識抉擇談 (Discussing *Vijñāptimātra*['s Major Topics]). In *Ouyang Jingwu yiji* 歐陽大師遺集

- (*Collected Writings of Master Ouyang*, 1337–1402). Taipei: Xinwenfeng Press.
- . 1995. Yi su shuo zhen: fo zhi fofa tan 以俗說真：佛之佛法談 (Discussing Ultimate Buddhism Through Conventional Buddhism). In *Ouyang Jingwu ji* 歐陽竟無集 (*Collection of Ouyang Jingwu*), edited by Huang Xianian. Beijing: Zhongguo shehui kexue chubanshe.
- Pittman, Don A. 2001. *Toward a Modern Chinese Buddhism: Taixu's Reforms*. Honolulu: University of Hawai'i Press.
- Priest, Graham. 2001. *Logic: A Very Short Introduction*. New York: Oxford University Press.
- Ritzinger, Justin. 2010. Anarchy in the Pure Land: Tradition, Modernity, and the Cult of Maitreya in Republican China. Ph.D. diss., Harvard University.
- . 2013. Dependent Co-evolution: Kropotkin's Theory of Mutual Aid and Its Appropriation by Chinese Buddhists. *Chung-Hwa Buddhist Journal* 26: 89–112.
- Rosental, Claude. 2008. *Weaving Self-Evidence: A Sociology of Logic*. Translated by Catherine Porter. Princeton: Princeton University Press.
- Russell, Bertrand. 1945. *History of Western Philosophy*. New York: Simon & Schuster.
- Shen, Jianying, ed. 沈劍英. 2001. *Zhongguo fojiao luoji shi* 中國佛教邏輯史 (*History of Chinese Buddhist Logic*). Shanghai: Huadong Normal University Press.
- Shen, Weirong. 2011. Tantric Buddhism in Ming China. In *Esoteric Buddhism and the Tantras in East Asia*, edited by Charles Orzech, Henrik Sorensen and Richard Payne, 550–60. Leiden: Brill.
- Shengyan 聖嚴. 1987. Mingmo de weishi xuezhe ji qi sixiang 明末的唯識學者及其思想 (Late Ming Yogācāra Thinkers and Their Thought). *Chung-Hwa Buddhist Journal* 2: 1–41.
- Siderits, Mark. 2007. *Buddhism as a Philosophy*. Indianapolis: Hackett Publishing.
- Spence, Jonathan. 1991. *The Search for Modern China*. New York: W. W. Norton & Company.
- Stcherbatsky, F.T. 2008. *Buddhist Logic*, Vol. 1. New York: Dover Publications.
- Taixu 太虛. *Yinming gailun* 因明概論 (*Introduction to Buddhist Logic*). <http://www.buddhaway.org/Taixu-T00/T06-01d.pdf>, accessed May 4, 2014. (Originally published in 1936)
- Taylor, Charles. 1992. *The Sources of the Self: The Making of the Modern Identity*. Cambridge: Harvard University Press.

- Tillemans, T.J.F. 1999. *Scripture, Logic, Language: Volume I: Essays on Dharmakīrti and His Tibetan Successors Studies in Indian and Tibetan Buddhism*. Boston: Wisdom Publications.
- Walker, Harris Evan. 2000. *The Physics of Consciousness: The Quantum Mind and the Meaning of Life*. New York: Basic Books.
- Wang, Xiaoxu. 1929. Fofa zhi kexue de shuoming 佛法之科學的說明 (Scientific Explanation of the Buddha-dharma). HCY, 10:8: MFQ 173. 233–243.
- Wang, Zuoyue. 2002. Saving China through Science: The Science Society of China, Scientific Nationalism, and Civil Society in Republican China. *Osiris: A Research Journal Devoted to the History of Science and Its Cultural Influences* 17: 291–322.
<http://www.jstor.org/stable/3655275>.
- Welch, Holmes. 1968. *The Buddhist Revival in China*. Cambridge, MA: Harvard University Press.
- Wittgenstein, Ludwig. 1998. *Tractatus Logico-Philosophicus*. Translated by C. K. Ogden. New York: Dover Press.
- Wu, Jiang. 2003. Buddhist Logic and Apologetics in Seventeenth-Century China: An Analysis of the Use of Buddhist Syllogisms in an Anti-Christian Polemic. *Dao: A Journal of Comparative Philosophy* 2, no. 2: 273–89. doi:10.1007/BF02857199.
- Xu, Yibao. 2003. Bertrand Russell and the Introduction of Mathematical Logic in China. *History and Philosophy of Logic* 24, no. 3: 181–96. doi:10.1080/0144534031000117105.
- Zhang, De Wei. 2010. A Fragile Revival: Chinese Buddhism under the Political Shadow, 1522–1620. PhD diss., University of British Columbia.
- Zhang, Taiyan. 2003. *Zhang Taiyan jingdian wencun* 章太炎經典文存 (*Depository of Zhang Taiyan's Classical Works*). Shanghai: Shanghai daxue chubanshe.
- Zhou, Jizhi, ed.. 2000. *Yang Renshan quanji* 楊仁山全集 (*The Complete Works of Yang Renshan*). Hefei: Huangshan Shushe publishing.