

The origins of scientific Buddhism in nineteenth-century Thai intellectual thought

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This essay proposes a revisionist interpretation of the debates between Buddhists and Protestants in nineteenth-century Siam. It argues that the Buddhist–Protestant debates were different in nature from the earlier Buddhist–Catholic clashes, which were interwoven with colonial ambitions and occasionally erupted in acts of persecution against the Catholics. The debates among Protestant missionaries and the Siamese royalist elite, monks and lay literati comprised an intellectual exchange mediated by the printing press. Centred around the encapsulation and bifurcation of religiosity and modernity, the debates helped the literati readjust their epistemological position during Siam’s early modern era, creating a discursive space for the emergence of a form of scientific Buddhism. The latter affirms that Buddhism not only accords with aspects of modern science but was precocious in its understanding of features such as the analysis of mental states prior to modern scientific methods. The ‘scientificity’ of Buddhism as articulated by Siamese literati had long-lasting effects on Thai intellectual life well into the twentieth century.

It has been argued that one of the main hindrances to the ‘civilising process’ in Thailand has been the ‘unscientific’ nature of a society deeply shaped by Buddhism.¹ Yet the conjuncture of Buddhism and science in Thailand is a significant historical theme that has been under-researched. Buddhism has been a living tradition in Thai society for centuries.² Before the nineteenth century, the Buddhist monastery was the centre of learning in Siam, spreading knowledge ranging from the sacred Pali canon to all sorts of ideas about the profane world.³ In the pre-modern era,

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1 See for example, Soraj Hongladarom, *Witthayasad nai sangkhom lae watthanatham thai* [Science in Thai society and culture] (Bangkok: Institute of Academic Development, 2002).

2 Siam is used for all references to the polity before its change of name to Thailand in 1939.

3 For a recent enquiry on this theme, see Craig J. Reynolds, *Power, protection and magic in Thailand: The cosmos of a southern policeman* (Canberra: ANU Press, 2019); see also Stanley J. Tambiah, *World*

most Siamese, whether the general populace or literati, also looked to their faith to teach them magical skills, such as how to activate bodily invulnerability or invisibility. Tales of those with such powers regularly found their way into the royal chronicles.⁴ It was with such knowledge that the foreign minister of Ayutthaya in the eighteenth century had his hands put in a pot of boiling oil in front of a French bishop, while demanding to know whether the Catholic official could demonstrate such powers of invincibility.⁵

Recent studies in comparative religion suggest that the discourse of scientific Buddhism was a nineteenth-century invention produced at the conjuncture of colonialism, Orientalist representations of Buddhism, the crisis of doctrinal interpretations of Christianity in light of scientific discoveries, and Buddhist reform movements that rallied against the proselytisation of Christian missionaries. This conjuncture had helped to create a hybridised form of Buddhism that incorporated aspects of scientific rationality.⁶ ‘A pivotal moment in the history of the discourse of scientific Buddhism’, writes David L. McMahan, was the World’s First Parliament of Religions convened as part of the World’s Columbian Exposition in Chicago in 1893, when the Sinhalese Buddhist Anagarika Dharmapala introduced Buddhism to American enthusiasts as a scientific religion, experimentally verifiable and compatible with the advancements of modern science.⁷

This reformation process had taken decades of negotiation before Buddhism and modern science encountered each other in the discourse of scientific Buddhism. In Ceylon, several Protestant organisations established their missions after the island fell to the British in 1796. As Protestant proselytisation and the evangelical education system expanded, the Buddhist response emerged. These Buddhist–Christian controversies eventually gave rise to a reform movement in Ceylon that spanned much of the nineteenth century.⁸

In Siam, a parallel process had begun in the early nineteenth century with the conjuncture of three circumstances: the transformation towards a market-oriented economy; the resumption of diplomatic and commercial relations between Siam and the West; and the Buddhist reform movement. Nidhi Eosewong has

conqueror and world renouncer: A study of Buddhism and polity in Thailand against a historical background (Cambridge: Cambridge University Press, 1976), pp. 201–8.

4 See *Chronicle of the Kingdom of Ayutthaya: The British Museum version*, intro. David K. Wyatt (Tokyo: Toyo Bunko, 1999), pp. 344–55.

5 *Prachum phongsawadan phakthi 38: rueang chotmai het khong khana batluang farangset* [Collected chronicles volume 37: Historical accounts of the French Mission, in King Borommakot’s reign], cremation vol. for Khunying Songsuradet (Bangkok, 1926), pp. 67–8.

6 David L. McMahan, ‘Modernity and the early discourse of scientific Buddhism’, *Journal of the American Academy of Religion* 72, 4 (2002): 897–933; *The making of Buddhist modernism* (Oxford: Oxford University Press, 2008). See also Philip C. Almond, *The British discovery of Buddhism* (Cambridge: Cambridge University Press, 1988).

7 McMahan, ‘Modernity’, p. 900. For Dharmapala’s speech and distinctive role at the gathering, see John Henry Barrows, ed., *The World’s Parliament of Religions*, 2 vols. (Chicago: Parliament, 1883), vol. 1, pp. 62–187; see also Steven Kemper, *Rescued from the nation: Anagarika Dharmapala and the Buddhist world* (Chicago: University of Chicago Press, 2015).

8 On the Buddhist reform movement in Sri Lanka, see Kitsiri Malalgoda, *Buddhism in Singhalese society, 1750–1900: A study of religious revival and change* (Berkeley: University of California Press, 1976), pp. 191–255; and Ann M. Blackburn, *Locations of Buddhism: Colonialism and modernity in Sri Lanka* (Chicago: University of Chicago Press, 2010).

demonstrated that prior to Ayutthaya's downfall in the late 1760s, lucrative foreign trade had shifted part of the kingdom's mode of production towards an inchoate money economy. The stabilisation of a new dynasty and political order centred in Bangkok in the 1780s generated a new dynamism in elite culture. Religious canons and practices were reformed and purified, ancient legal texts reviewed, and classic works of literature rewritten. Humanistic and rationalistic aspects had evidently emerged in elite thinking, as illustrated in the literature of the early Bangkok period. For instance, the Buddha was presented as a historical person rather than an abstract principle.⁹ The resumption of diplomatic and commercial relations with the West in the 1820s helped to greatly expand this money economy, which in turn was to have a broad impact on Siamese culture. Unavoidably, the Protestant missions in Siam had to come to terms with these circumstances. Their exchanges with an elite that was initiating its own Buddhist reforms eventually developed into the debates that were crucial in shaping intellectual life in the kingdom.

Studies of these religious encounters may be split into two: the Siamese elite's epistemological negotiations with the cultural logic of Western modernity and their discourse of presenting a more rational or 'scientific' Buddhism; and a discourse of Buddhist apologetics in defending the faith against the challenges articulated by the Christian missionaries. As a handful of Thai scholars would argue, these religious encounters were part of the civilising process of modern Siam.¹⁰ A noteworthy study of these changes is Craig J. Reynolds' 1976 essay, 'Buddhist Cosmography in Thai History, with Special Reference to Nineteenth-Century Culture Change'. Reynolds shows that intertwined with trade and proselytisation, Western merchants and missionaries were the harbingers of technological inventions and scientific advancements and were critical of Siamese tradition and religious practices. In response to the challenges levelled at 'the core of Siamese Buddhist belief', the elite developed the position that their cosmography was divided into 'the natural world and religion, each category of phenomena having a set of "laws" which guided its workings' and helped redefine 'the "moral" or "religious" world in the face of the greater explanatory power of Western science'.¹¹ In parallel, the Theravada Buddhist tradition in Siam had undergone a process of purifying reform whereby fundamental aspects of the Buddha's teachings were rationalised. '[T]he earliest documented conversations with Westerners,' as Reynolds recounts, was the publication in 1867 of Chaophraya Thipakorawong's *Nangsue Sadaeng Kitchanukit* (A book explaining various things), which 'might be seen as reflections on the outcome of those discussions'.¹²

Another group of studies looks at the Siamese defence of Theravada Buddhism as a living practice. And the earliest exploration of this aspect was another essay by

9 See Nidhi Eoseewong, *Pen and sail: Literature and history in early Bangkok*, ed. Chris Baker and Ben Anderson (Chiangmai: Silkworm, 2005), esp. chap. 5 on the biography of the Buddha, pp. 255–86.

10 Both arguments appear from Mongkut onwards; the first mostly from Damrong, *Rueang khati khong farang khaoma mueang thai* [Ideas on the arrival of Western peoples in Siam] (Bangkok: Sophonphiphat thanakorn, 1927); see also Thanet Aphornsuvan, 'The West and Siam's quest for modernity: Siamese responses to nineteenth century American missionaries', *South East Asia Research* 17, 3 (2009): 401–31.

11 Craig J. Reynolds, 'Buddhist cosmography in Thai history, with special reference to nineteenth-century culture change', *Journal of Asian Studies* 35, 2 (1976): 211, 215.

12 *Ibid.*, p. 214.

Reynolds published in the late 1970s.¹³ A recent study by Thongchai Winichakul offers a sweeping narrative of this religious encounter, arguing that '[in] Siam, the Catholics were more outspoken'.¹⁴ Framed within his main thesis that the Franco–Siamese conflict in 1893 was the major traumatic moment of modern Siamese history,¹⁵ and that the Buddhist–Catholic controversies were interwoven with colonial intervention over the violent persecution of Catholics, especially during hyper-nationalistic times such as the Second World War.¹⁶ Thongchai focused on Catholic publications and the Buddhist–Catholic controversy, instead of broader Buddhist–Christian contentions, however.

In both strands of these arguments, Christianity was treated monolithically, with the Protestant missionaries and their theological position represented as inseparable from that of the Catholics. For instance, while Thongchai states that '[a] better-known controversy in the mid-nineteenth century centred on publications by Bradley in Nangsue Chotmaihet' in which Bradley's comments 'always prompted sharp rebuttals from Buddhist intellectuals, including Mongkut', the latter were largely dismissed in a single short paragraph with the enigmatic assertion that '[t]he debates on Buddhism in this newspaper were well-known to the Bangkok literati of the time.'¹⁷ Likewise, in foregrounding Thipakorawong's publication, Reynolds had earlier effectively sidelined crucial debates published in the periodical *Nangsue Chotmaihet (The) Bangkok Recorder* in 1844–45 and 1865–67, edited by Daniel Beach Bradley (1804–73), a Protestant medical missionary from upstate New York. This was not only the first ever periodical published in Siam using Thai script but it also offered space for public discussion and dissident voices on various current topics. These earlier debates were undoubtedly the epistemological negotiations that would culminate in Thipakorawong's work and therefore are deserving of a thorough investigation.

Despite their late arrival in Siam, the Protestant missionaries had considerable impact, bringing with them not only proselytisation and technological and scientific innovations, but new interpretations of Christianity. Revelation was a personal

13 Craig J. Reynolds, 'A nineteenth-century Thai Buddhist defense of polygamy and some remarks on the social history of women in Thailand', in *Proceedings of the Seventh IAHA Conference, Chulalongkorn University, Bangkok, 22–26 Aug. 1977*, ed. William Warren et al. (Bangkok: Chulalongkorn University Press, 1979), pp. 927–70; republished as 'A Thai-Buddhist defense of polygamy', in Craig J. Reynolds, *Seditious histories: Contesting Thai and Southeast Asian pasts* (Seattle: University of Washington Press, 2006), pp. 185–213.

14 Thongchai Winichakul, 'Buddhist apologetics and a genealogy of comparative religion in Siam', *Numen* 62 (2015): 86.

15 Regarding the traumatic significance of the 1893 Franco–Siam crisis in Thai historical writings, see Thongchai Winichakul, 'Siam's colonial conditions and the birth of Thai history', in *Southeast Asian historiography: Unravelling the myths*, ed. Volker Grabowsky (Bangkok: River, 2011), pp. 23–45; and 'Modern historiography in Southeast Asia: The case of Thailand's royal-nationalist history', in *A companion to global historical thought*, ed. Prasenjit Duara, Viren Murthy and Andrew Sartori (Oxford: Wiley Blackwell, 2014), pp. 257–68.

16 See Shane Strate, 'An uncivil state of affairs: Fascism and anti-Catholicism in Thailand, 1940–1944', *Journal of Southeast Asian Studies* 42, 1 (2011): 59–87; Shane Strate, *The lost territories: Thailand's history of national humiliation* (Honolulu: University of Hawai'i Press, 2015).

17 Thongchai, 'Buddhist apologetics', p. 82. Thongchai had earlier discussed Thipakorawong's *Kitchanukit*, which was the outcome of these debates. See Thongchai Winichakul, *Siam mapped: A history of the geo-body of a nation* (Honolulu: University of Hawai'i, 1994), pp. 40–42.

matter.¹⁸ The gospel was thus translated, published, and disseminated in a very short time. Nevertheless, proselytising the doctrine of personal salvation went in tandem with advocacy of social improvement. And notably, Protestant theology was not opposed to scientific advances.¹⁹ This was similar to the Social Gospel movement at the turn of the twentieth century when more liberal Protestant missionaries had largely left the soteriological side of Christianity and focused more on the faith as one component of a broader social reform agenda.²⁰ The American Protestants in Bangkok were evangelicals who took the Christian message of salvation seriously, but also linked Christianity to an idea of progress and the ‘civilising mission’. In short, their mission encapsulated the soteriological discourse and the civilisational discourse in order to make Christianity more attractive to the Siamese elite. Progress and civilisation were thus used as ‘baits’ in the hope of luring them to the gospel.

Kate Crosby has pointed out that British colonial logics identified ‘Protestant Christianity as the religion of science and industry’.²¹ By contrast, the Siamese elite elucidated a discourse of Buddhism in Siam as a more rational or ‘scientific’ Buddhism which could engage successfully with Western knowledge and modernity. As is now evident, the history of science in Siam is an underexplored field, and only a few subjects have been adequately documented, namely astronomy,²² geography,²³ modern medicine,²⁴ and climate.²⁵ Here I will argue that the Protestant missionaries

18 Max Weber, *The Protestant ethic and the spirit of capitalism*, tr. Talcott Parsons (New York: Charles Scribner’s, 1930).

19 See Dorothy Stimson, ‘Puritanism and the new philosophy in 17th century England’, *Bulletin of the Institute of the History of Medicine* 3, 5 (1935): 321–34; Robert K. Merton, ‘Puritanism, pietism, and science’, *Sociological Review* 28, 1 (1936): 1–30; Peter Harrison, *The Bible, Protestantism, and the rise of natural science* (Cambridge: Cambridge University Press, 1998); Peter Harrison, ‘Science and secularization’, *Intellectual History Review* 27, 1 (2017): 47–70.

20 The post-Civil War Social Gospel movement was shaped by urbanisation and industrialisation along with Darwin’s theory of evolution, applying the gospel’s principles to social reform. As ‘a crusade for justice and righteousness in all areas of the common life’, the movement engaged in the transformational forces of American society and its Protestantism. See Ronald C. White, Jr. and C. Howard Hopkins, *The Social Gospel: Religion and reform in changing America* (Philadelphia, PA: Temple University Press, 1976), pp. xi–xv. See also Arthur Meier Schlesinger, ‘A critical period in American religion, 1875–1900’, in ‘June meeting: a critical period in American religion’, *Proceedings of the Massachusetts Historical Society*, 3rd Series, 64 (Oct. 1930–Jun. 1932): 522–48; and C. Howard Hopkins, *The rise of the Social Gospel in American Protestantism, 1865–1915* (New Haven, CT: Yale University Press, 1940).

21 Kate Crosby, ‘The impact of the science–religion bifurcation on the landscape of modern Theravada meditation’, in *Theravada Buddhist encounters with modernity*, ed. Juliane Schober and Steven Collins (London: Routledge, 2018), p. 33.

22 Ian Hodges, ‘Western science in Siam: A tale of two kings’, in *Beyond Joseph Needham: Science, technology, and medicine in East and Southeast Asia*, special issue, *Osiris* 13 (1998): 80–95; Wayne Orchiston and Darunee Orchiston, ‘King Rama IV and French observations of the 18 August 1868 total solar eclipse from Wah-koa, Siam’, in *The emergence of astrophysics in Asia*, ed. Tsuko Nakamura and Wayne Orchiston (Cham: Springer, 2017).

23 Thongchai, *Siam mapped*.

24 Davisakd Puaksom, ‘Of germs, public hygiene, and the healthy body: The making of the medicalizing state in Thailand’, *Journal of Asian Studies* 66, 2 (2007): 311–44; Quentin Pearson, ‘“Womb with a view”: The introduction of Western obstetrics in nineteenth-century Siam’, *Bulletin of the History of Medicine* 90, 1 (2016): 1–31.

25 Jakkrit Sangkhamanee, ‘Bangkok precipitated: Cloudbursts, sentient urbanity, and emergent atmospheres’, *East Asian Science, Technology and Society: An International Journal* 15, 2 (2021): 153–72.

in Siam were evangelicals who took personal salvation as seriously as social improvement for humanity at large. In linking Christianity to ideas of progress and a civilising mission, these American clergymen regarded Christianity and modern science as inextricable, and this position was at the core of the debates between the Protestant missionaries and the Siamese literati.²⁶ In contrast to the Protestants' thesis, the Siamese literati insisted that religion and science must be bifurcated. Over the long term into the twentieth century, these debates would help the Siamese literati create a discursive space for scientific Buddhism that remains vital to this day.

The Protestant episode and Bradley's thesis

Along with other foreign religions such as Islam or Confucianism, Catholicism had long been a feature of the port polity of Ayutthaya since the sixteenth century.²⁷ Eventually, the Vatican had recognised its parishes in Siam in 1669, and Louis Laneau (1637–96) was consecrated as the first apostolic vicar of Siam. Apart from guiding their flock, these Catholic priests started to learn vernacular languages and proselytise in them. From the latter half of the seventeenth century, a number of tracts and catechisms on Christianity were written in the Thai script, especially by Laneau.²⁸ However, their proselytisation in the Thai language alarmed the Siamese. In the 1730s, the priests were interrogated, books were confiscated or secretly burnt by the priests themselves, and believers were tortured. Finally, a stone inscription was planted in front of the church at Ayutthaya, forbidding them to proselytise to the Siamese, the Lao, and the Mon.²⁹ But the real calamity came with the Burmese attack and Ayutthaya's downfall in 1767, at which time, the missionaries perished and their flock dispersed.

After the kingdom was liberated by King Taksin (r. 1767–82), the Catholic mission resumed in the environs of the new Siamese capital. Still, disputes persisted. Christian officials refused to join the ceremony of pledging an oath of allegiance to the King in September 1775 and were imprisoned for months before acceding to the royal demands. Meanwhile, the bishop and priests were also imprisoned for

26 My use of the term 'literati' in referring to members of the knowledge community in Siamese society follows Michael W. Charney, *Powerful learning: Buddhist literati and the throne in Burma's last dynasty, 1752–1885* (Ann Arbor: University of Michigan Center for Southeast Asian Studies, 2006), p. 12.

27 See David K. Wyatt, *A short history of Thailand*, 2nd ed. (New Haven, CT: Yale University Press, 2003), p. 74; Chris Baker and Pasuk Phongpaichit, *A history of Ayutthaya: Siam in the early modern world* (Cambridge: Cambridge University Press, 2017), pp. 120–34; Seri Phongphit, *Katholik kap sangkhom thai* [Catholics and Thai society], 2nd ed. (Bangkok: Munnithi Komol Khimthong, 1984), pp. 21–2.

28 Catechism in Thai script appeared at least since 17th century Ayutthaya as seen in a few manuscripts in the Gallica digital library of the Bibliothèque nationale de France, Département des Manuscrits: collection Indochinois 250–350, Siamese ancient fonts; esp.: Indochinois no. 250 *Khăm sôn*, <https://gallica.bnf.fr/ark:/12148/btv1b10088887c>; and Indochinois no. 261, <https://gallica.bnf.fr/ark:/12148/btv1b10088806m>. See Antoine Cabaton, *Catalogue sommaire des manuscrits indiens, indo-chinois et malayo-polynésien* (Paris: E. Leroux, 1912), pp. 196–212, <https://gallica.bnf.fr/ark:/12148/btv1b10329763p>. See also Simona Bunarunraksa, *Monseigneur Louis Laneau, 1637–1696: Un pasteur, un théologien, un sage?* (Paris: L'Harmattan, 2013). A catechism manuscript from this period was also translated into French: see Louis Laneau, *Rencontre avec un sage bouddhiste*, intro. and notes Pierre-Yves Fux (Genève: Ad Solem, 1998).

29 *Prachum phongsawadan phakthi 37: rueang chotmai het khong khana batluang farangset* [Collected chronicles volume 37: Historical accounts of the French mission, during the reigns of King Suea and King Taisa] (Bangkok: Sophon phiphatthanakorn, 1926), pp. 35–80.

almost a year before they were released. When the Catholics refused again to attend the royal barge ceremony in 1778, all missionaries were forced to leave the country.³⁰

The Catholics resumed their mission again after the new court was established in 1782. Arnaud-Antoine Garnault was then given permission to recommence his mission at the Santa Cruz church in Bangkok in 1795. In 1796 his small printing press produced the *Khamson Christang* (Christian admonishment), the first ever publication of a treatise in romanised Thai.³¹ Apart from the unavailability of Thai printing type, the publication of the romanised Thai-language Catholic treatise was partly due to the belief that the Latin script was common to all neighbouring nations where the Jesuits were transcribing works into vernacular languages, that is, Japanese, Chinese, and Vietnamese.³² Nevertheless, the Catholics were also possibly trying to avoid persecution, as preaching and religious writing using the Thai script was prohibited in the last years of Ayutthaya, as mentioned. Notably, the Catholics continued to publish their treatises in Roman script even in the mid-nineteenth century when Thai type was largely available. This was an uncertain moment for scriptural translation, especially for key theological terms such God, Christendom, the commandments, and the promise. 'God' was most difficult to translate into Thai and was rendered with different terms: the appellations most frequently used for 'God' were *phra* and *phra pen chao*.³³ Essentially, *Khamson Christang* was a basic book of catechism, though not clearly organised, its topics ranging from the existence of God and creation, eternal life and the promise, judgement day, the commandments, the passion of Christ and his resurrection, and Christendom (*phra samai*).

Given its inaccessibility to most general readers because of its Roman script, *Khamson Christang* was probably meant to circulate only among religious personnel. As Catholic priests had already been much more successful in converting the resident Chinese and Vietnamese than the Thais,³⁴ most likely this vernacular treatise was aimed not at attracting the immigrants but Thai or Lao who could not read the Roman script but could listen to and understand the texts being read aloud. In any case, Christianity remained thus restricted mainly within the confines of the faithful, but this situation would change when the Protestant missionaries arrived in the late 1820s.

Not long after John Crawford was sent by the governor-general of British India as official envoy to negotiate a new treaty with the Siamese court in 1821, the first two Protestant missionaries, Charles A.F. Gutzlaff and Jacob Tomlin, had stopped in

30 *Prachum phongsawadan phakthi 39: rueang chotmai het khong khana batluang farangset* [Collected chronicles volume 37: Historical accounts of the French mission, during King Ekkathat, Thonburi, and early Bangkok periods] (Bangkok: Srihong, 1927), pp. 100–136; Seri, *Katholik kap sangkhom thai*, pp. 110–14.

31 Arnaud-Antoine Garnault, *Khamson Christang* [The Christian admonishment] (Bangkok: Rongphim Assumption, 1997 [1796]).

32 See Gonçalo Fernandes and Carlos Assunção, 'First codification of Vietnamese by 17th century missionaries: The description of tones and the influence of Portuguese on Vietnamese orthography', *Histoire Epistémologie Langage* 39, 1 (2017): 155–76.

33 Garnault, *Khamson Christang*, pp. 25–41, and *passim*.

34 See Peter A. Poole, *The Vietnamese in Thailand: A historical perspective* (Ithaca, NY: Cornell University Press, 1970), pp. 23–35; Walter F. Vella, *Siam under Rama III, 1824–1851* (New York: Association for Asian Studies, 1957), pp. 35–8.

Bangkok in 1828 en route to their respective postings in China. Prior to their separate departures, they submitted a formal request to the American Missionary Society that a mission should be assigned to Bangkok.³⁵ A permanent mission in Siam was subsequently initiated by the American Board of Commissioners for Foreign Missions in June 1833 and from that year, several missionaries were posted to Bangkok. Most of them were American, although their numbers varied from time to time: in 1850, there were about ten Protestant missionaries working in Siam.³⁶

The Protestant missionaries came to Siam at a time when the kingdom was a focus of Western imperial ambitions in the region after the British won their last colonial war of conquest with Burma. Gutzlaff noted in his *Journal of the Three Voyages along the Coast of China*, in 1834, that the British victory over Burma had created a lot of anxiety among the Siamese elite, even more than the Burmese themselves, because the Siamese viewed Burma as second only to China.³⁷ The Protestant mission therefore came contingently at a time when the old world with China as its towering axis was waning, as the Qing dynasty was embroiled in the destructive Opium War (1839–42). As the governor of Saigon remarked sarcastically to Siam's Minister of Military Affairs, it was a time when 'the Western wind was blowing blissfully'.³⁸

Unlike the earlier Catholics who had shifted their focus onto resident Chinese and Vietnamese, the Protestant missionaries targeted the Siamese, quickly acquiring the vernacular and proselytising their faith through various endeavours, including preaching Christian morality, translating biblical tracts, practising the medical profession, and publishing books in Thai script for free circulation. Among the early publications in Thailand's national archive are, for instance, *Nangsue kham butxa visatchana wa duai satsana phra yesu chao* (Catechism on Lord Jesus' religion, 1841); *Nangsue wa duai phra yesu* (Catechism on Lord Jesus, 1841); *Rueang kitchakan haeng phra yesu chao* (The life of Christ), which was arranged by George Townsend and translated by D.B. Bradley (third edition, 3,000 copies, 1844); and especially the well-known *Opium Tract* (1839, 1841).

The translation and publication of these tracts in vernacular languages marked a fundamental difference between Protestant proselytisation from that of the Catholic missions, in which the Church and biblical works in European languages were the authoritative media. Vernacular translation reflected the Protestant view that any Christian soul could be called and could access the glory of God by their own efforts. Reading biblical tracts in the vernacular was encouraged and had been a common practice among Protestants since the Reformation in Europe. The Protestants in Siam came not just as missionaries, but as champions of Western knowledge. Scientific discoveries and technological advancements were actively translated and

35 Thanet, 'The West and Siam's quest for modernity', pp. 408–9.

36 Vella, *Siam under Rama III*, pp. 35–8.

37 Ibid., pp. 117–18; Charles Gutzlaff, *Journal of a residence in Siam, and of a voyage along the coast of China to Mantchou tartary* (Canton: Chinese Repository, 1832), pp. 7–8.

38 A letter from the governor of Saigon to Siam's minister of military affairs, Chaophraya Srisurayawongs, during the early years of Mongkut's reign. See Chaophraya Thipakorawong, *Phrarajaphongsawadan krungrattanakosin ratchakarnti 4* [The dynastic chronicle of the Bangkok Era, 4th reign {1934}], 2nd ed. (Bangkok: Thonchabap, 2004), pp. 160–63; Cawphraja Thiphaakorawong, *The dynastic chronicles: Bangkok era, the fourth reign*, tr. Chadin Flood, 5 vols. (Tokyo: Centre for East Asian Cultural Studies, 1965), vol. 1, pp. 186–9.

transmitted to Siamese society in the nineteenth century, especially through the periodical *Nangsue Chotmai het Bangkok Recorder*. The first commercial fortnightly newspaper published in Siam, its first issue went to press in July 1844 and continued until October 1845; after a two-decade hiatus, the newspaper was revived in March 1865, and would continue until February 1867, under a slightly different title, *Nangsue Chotmai het The Bangkok Recorder*, both under the Bradley's editorship.

The paper featured world news, local news, shipping timetables, commodity prices, technological advancements, scientific discoveries, and medical knowledge. Subscribers³⁹ could flip through its pages and be amazed with treatises on blood circulation, physiology, elementary chemistry and physics, treatment of ulcers, vaccinations, smallpox and cholera, intermittent fevers, miasmatic theories, histories, and articles on technological advancements such as railways and steamboats. Nonetheless the paper's most notable feature was that it became an arena of contention between the Protestant civilising project and Theravada Buddhism as practised in Siam.

The earliest article that assailed a heavy attack on the Siamese literati was a piece on the 'History of the Sandwich Islands, Overthrow of Idolatry', a history of Hawai'i after the islands were 'discovered' by Captain Cook, published in October 1845. The anonymous writer, most likely Bradley himself, described the people of Sandwich Islands as 'cruel [and] ignorance [*sic*] because [they] don't have the Book'. Once the islanders had converted to Christianity, became literate, and inaugurated their trade with Western merchants, that 'idolatrous and ignorant' country became increasingly prosperous and enlightened, and its people enjoyed their new luxuries and conveniences.⁴⁰

This was evidently the first time that the Book (*nangsue*) was signified and introduced to Siamese society as an emanation of Western modernity and Christianity as reflected in the civilising of a then little-known island. The appellation *nangsue* corresponded not just with any book but the Holy Scripture. It was not with just any book that a person can learn of this earthly world, but it must be with the Book that represented the pinnacle of Western civility and modernity. Therefore, it was a two-step process: first, the natives would need to convert to Christianity and shed their own backward habits and customs; only then, when armed with a new set of moral values, would they be able to progress or advance as a people. This represented

39 In the first year of its publication, the subscription rate was 1 baht per year (for 24 issues). Reader could buy it for 1 *fueang* per copy. As one baht comprised of 8 *fueang*, without a subscription, one paid 3 baht for 24 issues. In its second run a list of 102 subscribers was published in 1866. Most lived in Bangkok; 11 were provincials: 8 from Phetchaburi; 3 from Nakhon Si Thammarat, Songkhla and Pang-nga. The subscribers were: 18 princes and other royals. The rest comprised of 2 officials of the highest rank (*Chao Phraya*), 12 high officials (*Phraya*), 16 officials (rank: *Phra* or *Chamuen*), 13 officials (rank: *Luang*), 15 lower-ranking officials (*Muen* and lower), 4 foreigners, 3 Buddhist monks (one a well-known intellectual, Thiannawan), and 15 commoners. Of these, 7 were Chinese; 2 Thai subscribers from Phetchaburi had Christian names, i.e., Frederick William (son of the deputy governor of Phetchaburi) and Walter Lawry (son of the governor of Phetchaburi). See 'Raichue phu thi chue chotmai het ni' [List of those who purchased the periodical], *Nangsue Chotmai het The Bangkok Recorder* (BR) 1, 23 (Jan. 1866): 225–6.

40 'History of the Sandwich Islands: Overthrow of idolatry', BR 2, 16 (Oct. 1845): 13–15. For an insightful account of this encounter, see Marshall Sahlins, *How 'natives' think: About Captain Cook, for example* (Chicago: University of Chicago Press, 1995).

the inextricable linking of Western civility and modernity to the Christian faith, the Scripture as a signifier of Western civilisation. Rather than simply a pillar of faith, the Bible explicitly expressed the Protestant project of spreading civility and modernity. It was the first time that the twinned notions of modernity and progress were encapsulated in the Bible and presented to the Siamese.

In reaction to the claims in this article, Prince Mongkut wrote a letter to his correspondents in New York, Mr and Mrs Eddy, on 18 November 1849, that the missionaries' work in Siam was set in the same *modus operandi* as when Christianity was introduced to the 'savage & barbarious [*sic*] countries' by Christopher Columbus. For the prince, this was a 'vulgar desire' among the missionaries who were used to coping with the 'savage & barbarious nations' as had happened with the native people of the 'Sandawed Island & Co [*sic*]'. Mongkut well knew that Siam was not like those 'barbaric nations', and that Siam had its own traditional 'knowledge of morality & civility'. He went on to argue that, despite being mixed with supernaturalism and Hinduism, Siamese beliefs were more systematic than Jewish tradition that to him was almost as 'Barbarious'. It was only because of its introduction to the Europeans before the age of 'lights of undoubtable knowledge of wonderful sciences', that Judaism and Christianity could continue to the present. The Jewish religion was therefore, according to him, dissociated from the European progress of modern scientific and technological advancement. Besides, contemporary European 'men of knowledge' of various sciences had attacked and refuted some of the Bible's contents; some had even declared that they did not believe in the Bible in the least.⁴¹

Embedded in Mongkut's reading of Bradley's thesis was the prince's own Buddhist reforms. In July 1824 the prince had been ordained as a novice, a mere matter of days before his father's last breath, because of a potential conflict over the succession to the throne at the end of the Bangkok dynasty's second reign. His refuge in monastic life turned out to be a great opportunity for his long career in education, first related to Buddhism before his close association with foreigners, especially the Catholic Bishop Jean-Baptiste Pallegoix, who acquainted him with Western knowledge, that is, Latin, English, astronomy, and geography.⁴²

Bangkok in the early nineteenth century was a commercial port that attracted merchants and ships from across the region, from Xiamen, Shantou, Jiangdong (Kangtang), Ningbo, Okinawa, Hanoi, Tonkin, Ha Tien, Batavia, and Penang, to ports along the southern Indian coast.⁴³ Since the late eighteenth century, the nature of trade had changed from the court's monopoly on commodities through a tax-in-kind system towards market-oriented production. Money economy and wage labour had expanded to affect the normal populace ever since the last years of

41 Seni Pramroj and Kukrit Pramroj, *A king of Siam speaks* (Bangkok: Siam Society, 1987), pp. 14–19.

42 Prince Mongkut is reputed to have even understood that the earth was spherical some 15 years before the missionaries came in 1828, when he was nine years old, the age at which he attained puberty. See W.L. Bradley, 'Prince Mongkut and Jesse Caswell', *Journal of the Siam Society* 54, 1 (1966): 38. See also Paul Christopher Johnson, "'Rationality" in the biography of a Buddhist king: Mongkut, King of Siam (r. 1851–1868)', in *Sacred biography in the Buddhist traditions of South and Southeast Asia*, ed. Juliane Schober (Honolulu: University of Hawai'i Press, 1997), pp. 232–55.

43 For an eyewitness account of Bangkok in the late 1820s, see Gutzlaff, *Journal of a residence in Siam*, pp. 20–26. Bangkok's trading port was also vividly depicted in Sunthorn Phu's poems; see Nidhi, *Pen and sail*, pp. 153–98.

Ayutthaya. With the kingdom's downfall in 1767, all economic activity came to a halt and returned to self-sufficiency. Nevertheless, after the efforts of the new Bangkok dynasty to establish a new order, economic activity had resumed to earlier dynamic levels from the early 1780s. The trade with China, both tributary and private, became once again tremendous and lucrative. A number of Chinese merchants from rich families were thus appointed to the Treasury, which was responsible for trade and foreign affairs.

The booming economy would alter the mentality of the Siamese elite away from traditional tax-in-kind exploitation towards a capitalist profit-and-loss perspective that was the *modus operandi* of the commercial world. The Siamese elite's capital accumulation overflowed. They started expanding their capital city and building more temples. In attempting to reassemble their cultural legacies and to reconstruct a lifeworld that had collapsed along with the old capital that they yearned for, the elite sponsored Buddhist education and literary production. Their literature displayed a bourgeois worldview deeply absorbed with humanistic and empirical perspectives.⁴⁴

King Rama I (r. 1782–1809), Prince Mongkut's grandfather, was not only a gifted military tactician who helped King Taksin (r. 1767–82) to neutralise the Burmese and defeat other claimants to the throne, he was also a masterful strategist.⁴⁵ In one study of Buddhism and political thought during his reign, Rama I is described as a humanistic, rational man. Ritualistic and miraculous aspects became less important, and religion became more concerned with scriptural Buddhism. Once he was crowned, his 'more bourgeoisie court' had attempted 'to establish humanistic Buddhist principles as state ideology'.⁴⁶ He had the Buddhist canons reviewed for their purity. New translations of some Buddhist texts were commissioned, and works on major aspects of Buddhism compiled. Likewise, a large number of poorly disciplined monks were disrobed. A number of royal ordinances about Buddhist practices were also enacted in his reign. In short, in coping with the great social, political and economic disruptions since the mid-eighteenth century, the Siamese elite returned to the Pali texts and offered a more humanistic, realistic and rationalistic reinterpretation of Buddhism. During his reign, Rama I had several questions for the Buddhist patriarch and senior monks. Saichon Wanarat argues that, apart from intending to encourage the monks to return to the core Buddhist texts, these questions were raised to understand Buddhism more rationally and to encourage monks to study Buddhism more analytically.⁴⁷

Mongkut therefore carried with him to monastic life in July 1824 not simply a traditional view of Buddhism, but rather a changing lifeworld. During his second

44 On socioeconomic change in the early Bangkok era, see Nidhi, *Pen and sail*, pp. 1–152; Saichon Wannarat, 'Phuttha satsana kap naew khwamkhit thang kan mueang nai ratchamai phrabatsomdet phraputthayotfa chulalok (pho.so.2325–2352)' [Buddhism and political thoughts in the reign of Rama I (1782–1809)] (MA thesis, Chulalongkorn University, 1982), pp. 23–91; Chris Baker and Pasuk Pongpaichit, *A history of Thailand* (Cambridge: Cambridge University Press, 2005), pp. 26–46.

45 See Nidhi Eoseewong, *Kanmueang thai samai phrachao krung thongburi* [Thai politics in the Kingdom of Thonburi] (Bangkok: Sinalapawatthanatham, 1986).

46 Saichon, 'Phuttha satsana', pp. chochang and 205. See also David K. Wyatt, 'The subtle revolution of King Rama I of Siam', in *Moral order and the question of change: Essays on Southeast Asian thought*, ed. David K. Wyatt and Alexander Woodside (New Haven, CT: Yale University Southeast Asian Studies, 1982), pp. 9–52.

47 Saichon, 'Phuttha satsana', pp. 92–119.

Lent as a monk in 1825, Mongkut re-ordained with a venerable Mon preceptor, as he considered that Mon Buddhist practices in accordance with the Vinaya and hence to be more revered. In 1829 he moved to Wat Samorai at the edge of Bangkok, in proximity to the Catholic cathedral where Pallegoix resided. Some of his early disciples reasoned that it was easier for him to observe his new practices at that monastery. Nonetheless the real reform project started when Mongkut moved to become the abbot of his own monastery at Wat Bowonniwet, closer to the grand palace, in January 1836. When Jesse Caswell, a Protestant missionary and an associate of Bradley, was hired to teach Mongkut and his followers the English language, a programme of Buddhist education was also instituted at Wat Bowonniwet. The study of Pali texts was diligently cultivated; a printing press was established to provide educational materials and for religious affairs. A special envoy was sent to the ecclesiastics in Ceylon (Sri Lanka); a new alphabet was created as an alternative script for Pali to communicate with the Sinhalese monks; and earlier cohorts of his disciples were sent to various parts of Siam to found new monasteries for what would be known later as the Thammayuttika order.⁴⁸

Caswell wrote in his letter to the American Board on 20 January 1846 that

[f]rom six months intimacy with the inmates of this wat [Bowonniwet] I have been led to conclude that there is a strong tendency in the new school of priests to the rejection of everything in religion which claims a supernatural origin, or that has anything to do with other than the present state of existence.⁴⁹

Seemingly, Mongkut and his associates had arrived at this position on their own rather than by following the Ceylonese. But it is also evident that Mongkut did not only have correspondence with the Ceylonese ecclesiastics, but he seemed to be well-informed about the ongoing reform movement in that island nation off the southern coast of India. In another letter on 26 July 1845, Caswell reported that there were '48 Ceylonese residing in his wat, 32 of them priests. All but two of them came in a ship which the king sent to Ceylon last year, and which returned a few months since.'⁵⁰ Mongkut undoubtedly learned of the Buddhist reform movement that had embroiled the island since its irruption in the mid-1810s. The movement was revived with Walane Siddhartha Thera's founding in 1841 of the monastic college Parama Dharmma Cetiya, which would become 'the centre of Buddhist revival'.⁵¹ In the

48 Srisupon Choungsakul, 'Khwaṃ plianplaeng khorn khaṃsaṃ: sueksa korani thammayuttikanikaya, pho.so. 2368–2464' [Change within the Sangha: A case study of Thammayuttikanikaya, 1825–1921] (MA thesis, Chulalongkorn University, 1987). See Mongkut's correspondence in Pali on *Sima* religio-spatial demarcation, Pali pronunciation, and the ritual purity of the Buddhist ordination with the Ceylonese and Burmese monks in *Prachum phraratchaniphon phasabali nai ratchakanthi 4 phakthi 2* [Collected Pali writings of King Mongkut, part 2], cremation vol. for Chuan Uthayi, the Supreme Patriarch (Bangkok: Khanathammayut, 1972), pp. 338–619. For a comparative perspective of Buddhist purification reforms in mainland Southeast Asia, see Anne Ruth Hansen, *How to behave: Buddhism and modernity in colonial Cambodia, 1860–1930* (Honolulu: University of Hawai'i Press, 2007); Jason A. Carbine, *Sons of the Buddha: Continuities and ruptures in a Burmese monastic tradition* (Berlin: De Gruyter, 2011).

49 Bradley, 'Prince Mongkut and Jesse Caswell', p. 39.

50 Ibid., p. 36.

51 Susantha Goonatilake, 'Pānadurā Vādaya and its consequences: Mischievous association with fundamentalism', *Journal of the Royal Asiatic Society of Sri Lanka*, NS 49 (2004): 87–118.

1860s, the movement would attract worldwide attention with the emergence of figures like Hikkaduwe Sri Sumangala and Migettuwatte Gunananda (the ‘Lion in Oratory’) who had challenged the Protestant missionaries in Ceylon to debates.⁵² This new period of Buddhist–Christian contention had culminated in Migettuwatte’s debate with David de Silva in 1873, known as the Panadura Debate, which also involved the Theosophical Society of Ceylon, and pushed Buddhist reform onto the world stage.⁵³

It was in this context that Prince Mongkut’s comments had found their way to New York; strong as his words were, however, they appeared only in private correspondence. It was thus a preliminary reaction, and public Buddhist–Protestant Christian debates in Siam would only come some two decades later. After a little more than a year in print, in October 1845 the *Nangsue Chotmai het Bangkok Recorder* printed its last issue. In William L. Bradley’s words, ‘There developed a serious rift within the mission over a difference in doctrine, at last the American Board, which was faced with financial problems at home, decided to close its mission to Siam.’⁵⁴

First Buddhist–Protestant Christian debate

Historical studies have shown that the transitional 1830s and 1840s had a profound impact on Mongkut’s mindset; he was mesmerised by the very civilising process he was attempting to resist.⁵⁵ Arguably, he accepted only the secular aspects of that process but not its spiritual ones. In other words, he was trying to break down the civilising process into its different components rather than accepting everything as a package. Undoubtedly, Mongkut read widely, subscribing to, among other periodicals, the *Anthropological Review*,⁵⁶ seeking to understand the fundamentals of a ‘civilised and enlightened nation’. In one of his letters in 1853, however, he admitted that Siam was still ‘half civilised and half barbarian’.⁵⁷ Once he was crowned King of Siam in 1851, Mongkut inaugurated a civilising project of his own. He had procured an English governess for his children, contracted foreign consultants for many of his reform projects, and even named one of his daughters ‘Princess of Light and Progress’.⁵⁸ It was during his reign that Siam had started sending students abroad, or on shorter study-visits for training in new technologies such as printing or minting.

These developments undoubtedly created another generation of Siamese literati who would become Bradley’s readership in the next two decades, after which he

52 Blackburn, *Locations of Buddhism*, pp. 15–18, 104–42.

53 See Michael S. Vasanthakumar, ‘The legacy of the controversies: The continuing impact on interfaith encounters in Sri Lanka of nineteenth-century controversies between Buddhists and Christians’ (MPhil thesis, Open University, 2001); see also Malalgoda, *Buddhism in Sinhalese society*, pp. 191–255, and Blackburn, *Locations of Buddhism*.

54 Bradley, ‘Prince Mongkut and Jesse Caswell’, p. 40.

55 See Reynolds, ‘Buddhist cosmography’, pp. 211–14.

56 Manuscript of Mongkut’s letter without the name of the addressee, 1866, published in *Phraratchahatthalekha phrabatsomdet phrachomklao chaoyuhua* [Royal letters of King Mongkut], 3 vols. (Bangkok: Kurusapha, 1963), vol. 2, pp. 126–7.

57 ‘Chotmai het ratchakan thi 4 cho.so.1215’ [Manuscript of the fourth reign in 1853], no. 82; cited in Charnvit Kasetsiri, ‘Siam/civilization—Thailand/globalization: Things to come?’, *Thammasat Review* 5, 1 (2000): 120.

58 Thongchai Winichakul, ‘The quest for “Siwilai”: A geographical discourse of civilizational thinking in the late nineteenth and early twentieth century Siam’, *Journal of Asian Studies* 59, 3 (2000): 531–4.

resumed publishing his newspaper after a hiatus. As their mission closed in the mid-1840s, most of the missionaries were reassigned to posts in China. Both Caswell and Bradley were ‘persuaded to resign completely’ from the American Board. At the time of its closure, Bradley himself was in America after his wife passed away and remained there for another few years. When Bradley returned to Siam from America in 1849, he lightened his medical practice and devoted himself to conversion and commercial publishing, the latter due to a lack of financial support from the American Missionary Association, his new affiliation.⁵⁹ Endeavouring to improve his financial situation, Bradley also inaugurated the age of print for Siamese society, unleashing a flood of classical texts and poetry as well as new knowledge.⁶⁰ Significant in the context of the present discussion of Protestant–Buddhist debates on faith, civilisation and modernity was his reissuing of the *Nangsue Chotmaiher The Bangkok Recorder*.

In reviving the *Bangkok Recorder* in March 1865, Bradley declared that his paper would publish material concerning politics, scientific discoveries, general knowledge, commerce, world news, and local news. He intended to offer his paper as a ‘telescope’ and a ‘great light’.⁶¹ A year later, after having been attacked by King Mongkut, who said that the populace should not believe in his newspaper’s ‘mutterings in delirium’,⁶² Bradley expounded on this position again: his paper was equivalent to a ‘great light’ that helped illuminate the city and lessen its darkness. He suggested that wildlife and criminals were fond of darkness, and they run away and seek refuge when the sun rose. Contrary to the royal complaint about his newspaper’s delirious mutterings, he argued that his paper would nourish and strengthen the country’s happiness.⁶³

From its inception, the debate between Bradley and a group of Siamese literati gradually galvanised to become one of discursive negotiation without parallel in Siam’s intellectual history. The discussions encompassed religion, the West and the East, the material and spiritual worlds, light and darkness, tradition and progress, spanning a period from June 1865 until May 1866. The debate commenced with Bradley’s article on the university in June 1865, which reported news of merchant donations to build a university in Bombay. Bradley suggested that the Siamese government should take advantage of this example of progress by instituting a university to teach various sciences, as well as English, French and German. The Siamese government would thereby be able to translate international laws, which would be very beneficial and necessary for the country. Bradley now offered an alternative geographical

59 Washington Gladden, ‘the father of the Social Gospel’, was a supporter of ‘the oldest and strongest of the church groups working for the education of the freedmen, the American Missionary Association’. Gladden was elected to the AMA presidency at the beginning of the 20th century. See White Jr. and Hopkins, *The Social Gospel*, pp. 103–7. Like Gladden, who had high praise for W.E.B. Du Bois’ *The Souls of Black Folk* (1903), Bradley was an abolitionist. See ‘Khao ma tae mueng amerika’ [News from America], *BR* 2, 1 (Mar. 1866): 6–7.

60 Damrong Kraikruan, ‘Kan phim kap mo Bradley’ [Printing and Bradley], in ‘Proceedings of the Conference on D.B. Bradley and Thai Society, Thammasat University and Chulalongkorn University, 16–17 July 1985’, unpublished.

61 *BR* 1, 1 (Mar. 1865): 4.

62 ‘Nangsue luang’ [Royal letter], *BR* 1, 24 (Feb. 1866): 233–4.

63 ‘Nangsue mo Bradley’ [Bradley’s letter], *BR* 2, 1 (Mar. 1866): 8–9.

discourse, saying that Siam on the civilisational scale was not in the same 'location' as before. It had already moved to be in proximity with European nations. If Siam did not procure for itself European knowledge, shame and ignorance would befall it. Besides, the surrounding countries would become more advanced in terms of languages and science.⁶⁴

A month later, in July 1865, Bradley printed an even more provocative article on a scale of progress that would help measure the differences between Western and Eastern civilisations. If one compared all things of the West and of the East, said Bradley, those that originated in the West were 'more magnificent' (*prasoet wiset*, lit. exceptionally splendid) than things that originated in the East. Epistemologically, this article was the first treatise in the discursive mode that Edward Said would later call Orientalism directed at the Siamese elite. The West meant rationality and progress. Bradley went on to claim that, armed with rationality, the West could invent many magnificent wonders. Meanwhile, the East was irrational and traditional; the East worked labouriously rather than intelligently, apparently, not able to advance. Bradley clearly states that the main reason behind Western progress was Christianity. In short, since the West has the blessing of 'divine scripture' (*khampi wiset*, lit. the excellent canon that is almighty and invincible), Westerners can observe the 'Dharma teachings of the true God' (*thamma khong phrachao phu thi thiang thae*).⁶⁵

In October 1865, there was a response from a reader in defence of Buddhism. The anonymous reader supported the idea of founding a university, but feared that Siam might be corrupted with malicious foreign ideas. The reader complained that Bradley always associated mundane knowledge with religion. Should the university be founded, the missionaries might not only illuminate with their Western knowledge, but most likely they would also proselytise the Christian faith to their students. Finally, Buddhism would disappear.⁶⁶ In the same issue, there was another essay on 'European education', presumably composed by Bradley. Its author argued that the general anxiety over the founding of a university showed that it might threaten the existence of Buddhism in Siam because the Siamese were profoundly more fond of Buddhism than of knowledge. They were worried that Buddhism would not continue to exist under the light of science and knowledge from Christian origins, just as the darkness of night could not persist when the sun has risen. If Buddhism was genuinely magnificent, he challenged, why were there no great scholars in China, Burma and Siam when there were plenty of scholars in Europe who were adept in linguistics, mathematics, astronomy, anatomy, chemistry and so forth? If Buddhism was truly great, why were there no great and strong Buddhist countries similar to the Christian nations. Above all, he reasoned, Buddhism was responsible for 'darkness'. As a result, the Siamese have less knowledge, rather like having a little torch of light whose brilliance would vanish under sunlight. If a Siamese scholar went to Europe to demonstrate his knowledge, he would cease to exist just as a candle loses its light in daytime. The Siamese affiliation with Buddhism was thus equivalent to 'a

64 'Yuniwoetsiti' [On the university], *BR* 1, 7 (June 1865): 37–8.

65 'Trachu yang nueng' [On a certain balance], *BR* 1, 9 (July 1865): 58–9.

66 'Phu klua phuttha satsana cha mot rew pai' [One who fears that Buddhism might soon be extinguished], *BR* 1, 16 (Oct. 1865): 140–41.

love of darkness rather than a love of light'. While the sun beamed its light brilliantly on the horizon, the Siamese would still be carrying his little torch.⁶⁷

Certainly, darkness, light, and sun were not invoked here as mere metaphors of intellectual and cultural conditions of 'uncivilised' versus 'civilised' people, but it is important to note that they were also biblical. The image of 'light' to refer to God to contrast with the darkness of paganism, unbelievers, and sinfulness referred back to the Old Testament and is an important theme in the New Testament. They refer respectively to the spiritual darkness of unbelievers who have not yet been saved by the light of the gospel. Their semantic connotations are highly charged with Western logics of modernity and the civilising mission, invoked deliberately to posit Christianity as a moral imperative for the Siamese. On the one hand, Bradley proposed the same thesis encapsulating Christianity and modernity that he had advanced two decades earlier. On the other, he offered another discourse, one that presents Buddhism and Christianity as polar opposites. In short, he explicitly argued that Christianity was a source of progress and modernity, whereas by contrast, Buddhism was a source of darkness, ignorance, and an obstacle to progress.

In the following issue, there was an article '*Kham tuean sati than thanglai*' (Advice to all sentient beings) by an anonymous author who announced that he was someone who truly loves, but does not live in, Siam. The writer praised the Japanese government for recently sending 19 young gentlemen to study in Britain, and complained that there was no one in Siam who was truly thirsty for real knowledge that would be of benefit to the country. Whenever an international problem occurred, Siam always needed to hire a foreigner to translate the official documents of state. That was hardly tolerable, according to the writer. A country that was not well prepared in its administration and did not keenly seek knowledge and observe morality would certainly not survive as independent and in the end would become subject to another country.⁶⁸

In the same issue, another anonymous letter attacked Bradley's piece on European education. Its author insisted that Buddhism must be considered only within the spiritual realm as a religion that is resistant to human passions. That would already require high intelligence and contemplative qualities. With such a stance, the writer refuted Bradley's thesis of encapsulating Christianity and modernity: a lot of Europeans did not affiliate themselves with Christianity, but were just as learned and prosperous as Christians.⁶⁹ Instead of Bradley's polarising discourse of Buddhism and Christianity, the writer offered another binary category: matter and spirit, the secular and the sacred. In terms of matter and the secular world, the writer chose to adopt the progress and rationality introduced by the West. But in terms of spirituality and religiosity, Buddhism was praised as a model of spiritual guidance.

Because of its strongly worded attack on the civilising logics of Christianity and modernity, Bradley cautiously responded with '*Khamtop than phu sansoen phutta satsana*' (A reply to the one who praises Buddhism) in the following issue. Bradley argued that any pious person who has true faith, that is, Christianity, whether wise

67 'Kan sangson wicha yang phrathet Europe' [On European education], *BR* 1, 16 (Oct. 1865): 143–4.

68 'Kham tuean sati than thang lai' [Advice to all sentient beings], *BR* 1, 17 (Nov. 1865): 149–50.

69 'Kan thi than kae duai satsana' [On your defence of religion], *BR* 1, 17 (Nov. 1865): 149.

or ignorant, shall be saved. He then took pains to offer an encapsulation of Christianity. Despite some pockets of atheism, European countries were progressive and prosperous because of their Christian origin. Atheists were simply taking advantage of Christianity. In other words, all European knowledge was the sweet fruit of Christianity, just as the darkness in Siam had its origin in Buddhism. The progress of European unbelievers was a luminous product of the Bible that the Lord Jesus Christ had benevolently revealed; similarly, the darkness in Siam came from the Buddhist canon. The reward for a good deed in Christianity, that is 'light and will power', was superior to the rewards of Buddhism. Meanwhile, the backwardness of Chinese and Vietnamese Christians in Siam was due to their lip-service to the faith, and hence they could not be seen as true Christians.⁷⁰

Two issues later, in December 1865, Bradley printed two more pages on the same topic, indicating that relations were quite tense between the missionaries and the Siamese literati at the time. In attempting to demarcate a difference between the true Christian and the lip-service Christian, Bradley wrote, God truly loves true Christians and blesses them with magnificent things for their country. These Christians are a light that illuminates the earth. Wherever they may be, they will contribute to their country. Their country will be stronger than others, and stronger than that of non-believers. Lip-service Christians who do not truly love the Lord Jesus, but live in a truly Christian country, would definitely enjoy those blessings of the Lord, just as the sun shines its light on the good and the evil alike. A good example was the French anarchy of 1789. For Bradley, the upheavals were a direct result of Robespierre's regime cruelly forcing the people to abolish religion, with the rationale that there was no God, that the world exists by itself, and there was no need to fear God. The anarchy that prevailed was thus God's punishment. The world became peaceful again after a group of the faithful captured and executed Robespierre. Bradley later narrated the tale of an infidel king who had an audience with Queen Victoria. The king had enquired why Britain become a greater power than any other country? The queen replied piously that it was because the British had the Bible.⁷¹

After Bradley's great efforts to convince doubting readers over two months, an anonymous author, possibly King Mongkut, gave a long reply, saying that Bradley had to publish it in two issues. Fundamentally the article was a refutation of Bradley's thesis that the Bible was a great light and a source of 'enlightened wisdom and knowledge'. That claim sounded strange, said its author, and he was not certain whether it was a serious or a frivolous remark. If one examined world geography, one would never satisfy oneself with answers from the Book of Genesis. He then proceeded with modern scientific knowledge that clearly departed from traditional Siamese cosmography: the duration of day and night as a direct result of the earth's rotation rather than a creation of God. He wondered whether God had any knowledge of modern discoveries, including the steamboat and latitude and longitude. If God did have such knowledge, he enquired, why did He not reveal it to Noah during the

70 'Kham top than phu sansoen phuttha satsana' [A reply to the writer who praises Buddhism], *BR* 1, 18 (Nov. 1865): 162–4.

71 'Kham top kae than phu chop phuttha satsana' [An answer to the writer who admires Buddhism], *BR* 1, 20 (Dec. 1865): 186–7.

Flood? He reasoned that the Bible stood for ignorance of certain kinds of knowledge, especially modern astronomy. In short, Christianity was bifurcated from science and progress. Some learned men, he argued, were well-versed in modern astronomy yet had a high regard for Buddhism as being superior to all other religions. And the writer still was its faithful follower.⁷²

Bradley retreated and acceded to this bifurcation of Christianity and modernity in an article '*Nangsue top phu thi sansoen phuttha satsana*' (A reply to one who praises Buddhism) in the following issue. He admitted that the Bible was not a handbook of all knowledge. Fundamentally, the Bible was a canon that illuminates minds to recognise the existence of the Creator, who is the absolute true and permanent God. Men should have faith and pay absolute respect to Him. Originally, man had fallen and committed great sin, in ignorance, and forgot to pray for Him. But a man who follows the Lord's command, shall once again become enlightened.

It is tempting to argue here that Bradley's attempt to yoke Christianity and modernity together finally lost its emotive power in this article. The discursive pair became bifurcated and incompatible. Simultaneously, Bradley introduced a new topic: a history of the fall. Original sin had dispatched all mankind from the Garden of Eden to a terrifying darkness where God could not be known. Nevertheless, the Messiah was God's promise for salvation from that unfathomable darkness. The Bible was thus an instrument that would assist in the purification of the mind's darkness, superior to all other religious canons. All scientific knowledge was not, therefore, equivalent to the gospel because it was the Bible that helped mankind discover 'light' that would make hearts hundreds of thousand times more joyful than any infidel faith could. Despite agreeing that Christianity was not equivalent to modernity, Bradley persisted in arguing that, apart from illuminating one's mind and happiness, the gospel was helpful in inducing insight and intelligence in all of its followers in all branches of knowledge more profoundly than any other religion, even though the Book did not deal with such secular things.⁷³

The allegory of the fallen angel was used here to signify the moral superiority of Christianity to which the infidel native is required to submit. Though Christianity was not in tune with scientific advancement, it had moral force. In other words, the Christian mind is morally sanctioned and superior to the Buddhist one. This article had thus claimed certain ground for the moral space of Christianity in Siam. After this, there would not be any writing, either by Siamese or Westerners, on the topic again for as long as the *Bangkok Recorder* was still in print; in February 1867 Bradley decided to wind up his paper in the final issue of its second year.

Thai Buddhism's defence of science

It is indisputable that these debates had revolved around the ongoing controversy of identifying the one true religion. Thongchai has demonstrated that since the mid-nineteenth century the missionaries in Siam had started to churn out catechisms and contentious arguments. There was something rather different in the nature of the

72 'Nangsue luang' [Royal letter], *BR* 1, 21 (Jan. 1866): 204; and 1, 22 (Jan. 1866): 211.

73 'Nangsue top phu thi sansoen phuttha satsana' [A reply to the one who praises Buddhism], *BR* 1, 23 (Jan. 1866): 228–9. See also Schlesinger, 'A critical period', pp. 524–30.

Buddhist–Catholic controversy compared to the Buddhist–Protestant debates due to their different positions. Whereas Bradley and the later Protestant missionaries attempted to extend their theology to include scientific advancement, namely by bringing together Christianity and modern science, the Catholics would retain their arguments on the theology of God and the refutation of Buddhism.

In 1844, Bishop Pallegoix, head of the Catholic Mission in Siam, published the *Butxa visatchana* (Questions and answers) in romanised Thai, and republished this book in 1850 in Thai script under a different title, *Maha kangwon* (Of great concern); in 1894 and 1897, both were reprinted under the same title, *Butxa visatchana*.⁷⁴ In the 1897 editions, Pallegoix expressed great concern regarding which religion was genuinely the true one. He pondered that only the religion that submitted to Lord *Phra phutti chao* was true. Only a faith that offered norms for correcting human behaviour and relations with God and fellow men could be judged as the true religion.⁷⁵

In invoking the term *Phra phutti chao*, literally, the Magnificent Buddha who is the Lord, Pallegoix meant God, the Creator.⁷⁶ In other words, he translated the concept of a supreme being, that is, God the Creator, boldly using a signifier for the Lord Buddha in the Siamese semantic system. For Pallegoix, only God the Creator was the true *Phra phutti chao*.⁷⁷ Further, Lord Buddha, the Gautama, was not the genuine *Phra phutti chao*; since he was a mere human being. Pallegoix explained that the being of God is incompatible and far from the being of humankind.⁷⁸ The true God is pure spirit, with qualities of omnipotence and perfection equivalent to none. He has no origin and no end. He exists everywhere, in heaven and on Earth, in ways comparable to the sunlight illuminating the Earth. He enlightened all in the past, the present, and the future. God is thus beyond human comprehensibility, much like gazing on the dazzling rays of the midday sun, impossible for human eyes. On the contrary, Lord Gautama was not the true *Phra phutti chao*, that is, God, since he did not have the abovementioned qualities. Men should not, therefore, pay due respect to the Lord Buddha. Instead, humankind must totally submit to God, the Creator, who was the true *Phra phutti chao*.⁷⁹ Pallegoix's explanation was not only provocative but would have been extremely unconvincing and absurd to Siamese readers.

Thereafter, apart from biblical tales of creation and original sin, God's commandments were compared with the Buddhist canon, that is, the Tipitaka. In contrast to the commandments, the Tipitaka had a human creator, the Buddha. Its principles existed in and by themselves; and its life-cycle logic was untrue.⁸⁰ Pallegoix pointed out further that there were differences between the idolatry of a Buddha image and the

74 See Simona Bunarunraksa, *Monseigneur Jean-Baptiste Pallegoix: Ami du roi du Siam, imprimeur et écrivain (1805–1862)* (Paris: l'Harmattan, 2013).

75 Jean-Baptiste Pallegoix, *Butxa visatchana* [Questions and answers], 2nd ed. (Bangkok: Catholic Mission Press, 1897[1850]), pp. 11–12.

76 Pallegoix also used other, more neutral, terms to designate God: *Phra chao* [lit. 'the magnificent lord'], *Phra pen chao* [lit. the magnificent (who) is lord], and *Phra phu pen chao* [lit. the magnificent who is lord]. Pallegoix, *Butxa visatchana*, pp. 327 and passim.

77 Ibid., pp. 25–6.

78 Ibid., pp. 27–8.

79 Ibid., pp. 29–36.

80 Ibid., pp. 124–54.

practice of worshipping Jesus Christ, the Cross, and the saints. The Christian did not worship these relics as equivalent to God; Jesus and the Cross were worshipped because of His sacrifice on the cross for human redemption; Mary, mother of God, because she was immaculate and holy; and the saints for strictly observing the commandments and practising pieties.⁸¹

Pallegoix also explained Catholic ecclesiastics, the state of death, judgement day, and paradise that would be permanent and bring supreme joy. He was of the opinion that there would be no Nirvana in the Buddhist sense. Arguing that if the spirit was no longer in existence, there could be no more supreme happiness.⁸² In later chapters there are elaborations on Catholic doctrine, Christianity in China and Vietnam, sketchy notes on Hinduism, Islam, and indigenous beliefs. Finally, there is a short review and criticism of the Protestant missions in Siam—‘heretics’, he called them—before concluding with a Catholic prayer manual.

In 1867, the year that *Nangsue Chotmai*het *The Bangkok Recorder* ran its final issue, Reverend John Taylor Jones published *Trachoo thong* (The golden balance), a balance scale between Christianity and Buddhism. Jones said that he intended to help people know what was right and what was wrong, useful and harmful, truthful and deceitful. He asserted that his balance would be meticulously precise in measuring religion. In this regard, many people were almost sightless, equivalent to the blind. He hoped his small but magnificent book would be a magic *pharmakon* that could help enlighten human vision and be pure as the celestial eyes that had the power of sight even in darkness. Disputes between Buddhism and Christianity—about which religion was truthful, and which was not—would be settled. Either Buddhism or Christianity was the only one that could be true, not both.⁸³

These contentions, of both the Catholics and the Protestants, eventually led to the publication of a significant text in Siam’s intellectual history, Chaophraya Thipakorawong’s *Sadaeng Kitchanukit*, first published in 1867.⁸⁴ I will argue that one can never fully understand this monumental work without the texts and context of the debates discussed above.⁸⁵

Thipakorawong or Kham Bunnag, an aristocratic member of the literati, was a high official, a minister of foreign affairs during Mongkut’s reign, and above all a scholar: a translator of Chinese dynastic history, and compiler of the Bangkok

81 Ibid., pp. 191–202.

82 Ibid., pp. 235–6.

83 John Taylor Jones, *Trachoo thong* [The golden balance] (Bangkok: Sarasat, c.1953 [facsimile 5th ed., 1889]), pp. 4–7.

84 Thipakorawong, *Sadaeng Kitchanukit* [Book explaining various things], cremation vol. for Siddhi Sawetsila (Bangkok: 2016 [facsimile 1867 ed.]). See also Henry Alabaster, *The modern Buddhist* (London: Trübner & Co., 1870); and Henry Alabaster, *The wheel of the law* (London: Trübner & Co., 1871).

85 There are few studies on Thipakorawong’s *Kitchanukit*. Most of them ignore the preceding debate in *Nangsue chotmai*het *The Bangkok Recorder*. See Saichon Wannarat, ‘Phon kratop khong mo Bradley to sangkhom thai’ [Bradley’s effect on Thai society], in ‘Proceedings of the Conference on D.B. Bradley and Thai Society, 16–17 July 1985’. See also Sven Trakulhun, ‘Chaophraya Thiphakorawong: A book on various things (Thailand, 1867)’, in *Religious dynamics under the impact of imperialism and colonialism: A sourcebook*, ed. Bjorn Bentlage, Marion Eggert, Hans Martin Kramer and Stefan Reichmuth (Leiden: Brill, 2017), pp. 63–76; Reynolds, ‘A Thai-Buddhist defense of polygamy’, pp. 185–213, and Thongchai, *Siam mapped*, pp. 40–42.

dynastic chronicle from the First to Fourth Reign (1782–1868).⁸⁶ After his manuscript of *Kitchanukit* had been denied publication by the missionaries, partly because of its provocative anti-Christian content, he published the book himself on a lithograph of his own devising.

Thipakorawong not only retained the bifurcation of religion and science, Christianity and modernity as seen earlier in the press debates, he insisted that ‘all [religions] ... [were] opposed to true astronomical teaching’.⁸⁷ In Islam, claimed Thipakorawong, when scholars had discovered that the earth was spherical and rotating in space, Mohammedan followers put them in prison as this explanation was opposite to the teachings of God.⁸⁸ He challenged the missionaries’ claims that this astronomical fact—that the earth is spherical and rotates on its own axis—was Christian doctrine and not opposite to the teaching of God. In fact, it was formerly treated as heretical thought that risked severe punishment.⁸⁹ Even a vernacular Buddhist text such *Traibhumi lokawinitchai* (Three worlds cosmographical description) was also challenged. Its teachings were not only untrue, in Thipakorawong’s view, but also included non-Buddhist elements of Hinduism within Buddhist cosmology.⁹⁰ Indeed people of various origins, whether they were Hindu, Chinese, or European, had similar ideas about ancient astronomy. The axiom that the Earth was spherical and rotating was definitely a novel astronomical idea of learned men who were not of Christian origin.

In terms of religious knowledge itself, Thipakorawong questioned the missionaries’ claims that Buddhism was not a true religion and not equivalent to Christianity.⁹¹ He attacked the missionaries stationed in Bangkok, one by one. For a certain Catholic missionary (apparently Pallegoix) who wrote a book called *Maha kangwon* (Great concern), Thipakorawong suggested that his concern should focus on proselytising his own religion. Meanwhile, he raised a few questions for the author: If God is indeed the Creator, why should He create various great teachers, all of whom claim that they are the only true followers of God, and the others are enemies of Christianity? Why would God, if he is indeed the Creator, create many religions that would become enemies of His teachings?⁹²

As for the Protestant missionary Charles Gutzlaff, who opined that Buddhist teachings were meaningless because their main aim was paying homage to the Buddha, Thipakorawong wondered whether this was not also the case with Christianity or Islam, which proselytised their followers to worship only God. If a

86 See Somjai Phiroththirarach, ‘The historical writings of Chao Phraya Thipakorawong’ (PhD diss., Northern Illinois University, 1983), pp. 30–80 for his life and career; pp. 81–130 for his religious and cultural writings; and pp. 131–77 for his historical writings.

87 Alabaster, *The modern Buddhist*, p. 12.

88 Thipakorawong, *Kitchanukit*, pp. 123–7, 155–7.

89 *Ibid.*, p. 196.

90 *Ibid.*, pp. 128–30, 153–8. For a Siamese traditional cosmology and cosmography, see Frank Reynolds and Mani B. Reynolds, *Three worlds according to King Ruang: A Thai Buddhist cosmology* (Berkeley: University of California Press, 1982); Reynolds, ‘Buddhist cosmography’; and Thongchai, *Siam mapped*, pp. 20–36.

91 It is perhaps worth pointing out that the idea of an absolute religious truth, though acceptable to most Westerners, would not have made sense to Siamese Buddhists.

92 Thipakorawong, *Kitchanukit*, pp. 167–8.

person who had committed a mortal sin converted to Islam, he would be forgiven and go to the paradise. But if he did not convert, he would remain in hell infinitely. Why would God create many religions to test man? Would it not be better if He created only one and all men could go to paradise?⁹³

Thipakorawong stated that he had once inquired of Jesse Caswell: How do missionaries know that the Christian God exists but Chinese gods do not, when there was no evidentiary proof of either and none could behold them with their own eyes. The myth of God and Creation is thereby of ancient peoples' invention in their own minds. If God is indeed the Creator and man is his creature, would it not be so with the appendix in man's intestine? An operation undertaken by a missionary to remove it would be in contradiction with God's will. According to the missionaries' proselytising, the appendix was created purposively by God as punishment for human sin. Caswell was very angry with him and labelled Thipakorawong an 'incurable man' who was unteachable.⁹⁴ As for Jones' *Trachoo thong*, Thipakorawong simply brushed it aside; he viewed Jones' 'balance' as 'very one-sided'.⁹⁵

Overall, Thipakorawong was problematising the Protestant discourse that fused Christianity and modernity. For him, Christianity and modernity were incompatible, and they needed to be kept separate; this would be crystallised in his reply to Gutzlaff's claim that Western technology—the steamship, railways, telegraphs, guns—was superior to that of other human races. Thipakorawong opined that all human beings suffered similarly, and none were better or worse than any other. Technological advancements were a secular aspect of the evolution of human knowledge, and had nothing to do with religion. There was no evidentiary proof that God had given such knowledge to the Europeans. It was also not true that if a man converted to Christianity, he would be saved from original sin. There was no such thing, for him. The convert also suffered during the labour of giving birth, and from infant mortality, and all other sicknesses in the same manner as the infidel.⁹⁶

Thipakorawong did not only discuss Christianity; he also offered a sort of comparative discussion of religion by drawing on Hinduism, Buddhism, Christianity, and Islam.⁹⁷ Religion was a personal choice, according to him, and one could choose which was the true religion. There was no end to the disputes between the followers of each religion to determine which was the most righteous. Even the Kha, a tribal people in Laos whom Thipakorawong classified at the lowest level of social evolution, held animistic beliefs and worshipped certain spirits as their benefactors. It was impossible to convince them to abandon their spirit cults.⁹⁸ Just as there are the Sunni and the Shia among the Muslims, within Christianity itself there were different denominations such as Catholicism, Mormonism, and Protestantism. For him there were only two kinds of religion: those calling for help, and those relying on the

93 Ibid., pp. 171–6.

94 Ibid., pp. 169–70, 176–9; Bradley, 'Prince Mongkut and Jesse Caswell', pp. 38–40.

95 Thipakorawong, *Kitchanukit*, pp. 168–9; Thongchai, 'Buddhist apologetics', p. 82.

96 Thipakorawong, *Kitchanukit*, pp. 179–84.

97 See Ruth Streicher, 'Imperialism, Buddhism and Islam in Siam: Exploring the Buddhist secular in the *Nangsue sadaeng kitchanukit*, 1867', *Journal of Southeast Asian Studies* 52, 1 (2021): 7–25.

98 Thipakorawong, *Kitchanukit*, p. 226. Earlier in the 1830s, Gutzlaff wrote a similar note on the tribe of Kha who lived in the 'most inaccessible mountains' of Lao and were 'not far superior to that of herding elephants'. See Gutzlaff, *Journal of a residence in Siam*, p. 16.

self. Christianity was of the first kind, calling for help, and Buddhism was of the latter.⁹⁹

Buddhism, progress, evolution

In his works on Thipakorawong's Buddhist thought published in the early 1870s, just a few years after *Kitchanukit* was published, Henry Alabaster (a British diplomat turned Siamese royal adviser) called Thipakorawong the 'Modern Buddhist' and concluded that in his discourse religion is 'the science of Man, and not the revelation of God'.¹⁰⁰ In Siam the controversy continued to reverberate time and again during the late nineteenth century.

After Bradley's publishing venture went bankrupt, partly because of a libel suit filed against him as editor, another entrepreneur came along. Samuel J. Smith was a Presbyterian missionary who served his calling at Bangkoklaem not far from the European residential quarter. He later established a private college called Siam University. From 1868, Smith and his associate, Thomas S. Andrew, founded the first English daily newspaper in Siam, the *Bangkok Daily Advertiser*, which ran for less than a year, and later in that same year Smith started another daily paper, the *Siam Daily Advertiser*. His success with the commercial publication of Thai literary writing became legendary. Eventually he decided to publish a fortnightly Thai periodical, *Chotmai het Sayam Samai*, which was published from 16 August 1882 until to 18 August 1886. Its yearly subscription rate was 3 baht, and it sold for 1 salueng (1/4 baht) per copy.

Broadly, *Sayam Samai* was similar in many ways to Bradley's *Bangkok Recorder*. It printed reports on world news, local news, obituaries, official decrees, complaints, and commentaries on various topics such as the monkhood, the Chinese-immigrant tax, theatre, and entertainment. For instance, a series of commentaries on political economy was published over several issues covering property, use-value and exchange-value, and labour. Among the topics that most attracted readers and occasionally stirred a series of exchanges were commentaries on the meaning of the civilising process and comparative religion. Apparently, the state of being civilised (*siwilai*) and how to measure whether Siam was or was not yet civilised was of great interest.¹⁰¹ Occasionally, the paper would print news and comments on Christianity, for example, on 'Krut farang' (Christmas), held in memory of God's benevolence that has given 'the passage of salvation' to humankind. Those who accepted Jesus Christ as their Lord (*phra borom lokanatha*, lit. the magnificent Lord who is the pillar/saviour of this earth, a Pali-Sanskrit term Siamese used to refer to the Buddha), would be emancipated from the fear of hell as they were destined to go to heaven.¹⁰²

In February 1883, Smith printed an anonymous letter written to complain that the author just wanted to read about official matters and it was foreign notices,

99 Ibid., pp. 179–80.

100 Alabaster, *The wheel of the law*, pp. xiii–xvi.

101 See for example, 'Polit nam' [River police], *Chotmai het Sayam Samai* (SS) 2, 10 (19 Dec. 1883): 80; 'Kham top chotmai het sayam samai kho thi klaw sansoen' [Answer to *Sayam Samai* on aspects that were worthy of praise], SS 2, 12 (16 Jan. 1884): 95–6; Nai Khui [Mr Khui], 'Kham plae kham top chotmai het sayam samai' [A translation of *Sayam samai's* answer], SS 2, 13 (30 Jan. 1884): 103–4.

102 'Krut farang' [Christmas], SS 2, 11 (2 Jan. 1884): 89.

and especially news from Europe, which lots of people also wanted. Stories about Jesus Christ should be published in full, but as a complement for subscribers. He warned that proselytising Christianity in Siam would not be easy as the Siamese had long been adherents of their own religion, and the Siamese were quite fearful of being tortured for wielding the cross.¹⁰³ Possibly, he was recalling the persecution of Catholics in the late Ayutthaya period or during King Taksin's reign.

The debate over salvation was still very much alive. In the next issue, another reader was doubtful of the Buddhist concept of salvation/enlightenment. Making lots of merit such as temple-building and donations aiming to make merit for the next life, he wrote, does not mean 'gaining merit' in Christianity. In that faith, a person must be baptised before he could be saved.¹⁰⁴ The Buddhist-Christian debate thus resurfaced in this paper. The discussions attracted both Buddhists and Christians, though presumably the latter were Protestants rather than Catholic readers of this Presbyterian paper. In one case, a Christian defended his faith, saying that Jesus was both human and divine, since he was the incarnation of God. He had just appeared for man's eyes in human form, but in fact his soul was the soul of God.¹⁰⁵ Smith at once printed his own comment alongside the article. He explained that God is not human and a human being cannot be God. Jesus had appeared in a human body, but his soul was God's spirit. Jesus had thus performed miracles, such as walking on water, raising the dead, and letting the blind see. He was crucified because he wanted to demonstrate before men's eyes that he had sacrificed his life for man's original sin. Men and sinners who believed in and followed him would thus be saved on judgement day.¹⁰⁶

A few issues later, a letter by a Buddhist queried these assertions. In claiming that the God for all nations is the same God, its author asked about His origin, who appointed Him to be God, and who had made Him the 'owner' (*chao khong*) of all life? The letter's author wanted more elaboration. Since Smith had always referred to the Bible, the author wanted evidentiary proof from the canon. As for himself, the author of the letter said, he believed in the Buddha's teachings because he could see their truth. The Buddha was not jealous of other religions, and he did not boast that he was the true God. It was thus more beneficial if Smith would print only useful teachings, he suggested. He and his associates would then observe its truth and choose their own practice.¹⁰⁷ Smith replied that it would be hard to elaborate on these matters in a short space. He simply suggested that if a person would really like to know more about these matters, he should buy a book called *Butxalae Visatchana*.¹⁰⁸

In a letter commenting on the country's progress, in terms of more buildings and cleanliness, its author opined that this was so because Christianity had been proselytised in Siam.¹⁰⁹ Another author pointed out that the main reason for progress in all

103 'Kham chom lae kham ti' [Praise and a criticism], SS 2, 14 (13 Feb. 1884): 109–10.

104 'Kham rong thuk' [A complaint], SS 2, 15 (27 Feb. 1884): 117–18.

105 'Waduai phrachao' [On God], SS 2, 19 (30 Apr. 1884): 150.

106 'Manut pen phrachao mai dai' [Humans cannot be God], SS 2, 19 (30 Apr. 1884): 150.

107 'Phraborom lokkanath chao' [The lord of this earth], SS 2, 23 (25 June 1884): 182.

108 It is not certain whether this title refers to Pallegoix's original work or a variant of the same.

109 'Kham tuan sati' [A notification], SS 3, 7 (15 Oct. 1884): 264–5; and 'Khun chotmai' [Worth of

kinds of fields of knowledge, or wealth and happiness in countries such as Britain and America, was Christianity. Once again, the story of Queen Victoria who had replied to this very question by referring to the Bible was reiterated.¹¹⁰ In reforming their country, another said that the Japanese had made the West their teachers. It was because the Japanese believed in the power of Christianity that Japan had thus achieved a reputation for its progress.¹¹¹ In contrast, another reader commented that a country's progress had nothing to do with religion. Instead, it depended on its people. Progress was possible because a country's population was harmonious and unified in its practices of commerce and technological advancement.¹¹²

The debate was never-ending until the paper ceased publication in 1886. Nonetheless, Bradley's original thesis encompassing Christianity and modernity was never taken for granted again. But perhaps the appetite for debate about both propositions, that is, Christianity as a cause of progress and its refutation, had faded?¹¹³ One letter, aside from reporting that some Siamese took the free Christian tracts to use the paper to roll their tobacco in, for example, complained that there were some people who would like to convert but declined to do so out of fear of persecution by the authorities. They therefore wrote these questions-and-answers for Smith's paper anonymously, hoping that it would help publicise their faith to a wider audience.¹¹⁴ So the debate continued, but with different positions. Themes of the debate tended to focus more on religious matters, for example, on the cycles of birth and rebirth, merit-making, and the ethics of animal slaughter.

The two-decade interval between Bradley's paper in the mid-1860s and Smith's in the mid-1880s seems to have not only changed the readership for such periodicals but expanded it as well. The literati who authored letters and comments printed in the 1880s comprised of readers from several walks of life associated with the new bourgeois money economy. They included state officials, Buddhist monks, local Protestants, foreign residents (presumably the so-called 'Asiatics' from other parts of Asia who were able to read Thai), local clerks of foreign companies who had travelled abroad, and residents of outer provinces such as Phetchaburi.¹¹⁵ This expanded

the chronicle], SS 4, 12 (11 Nov. 1885): 89–90. See also 'Kham tuean sati chao sayam' [A notification for the Siamese], SS 4, 3 (23 Sept. 1885): 20–21.

110 Karaket, 'Het hai mi khwam charoen' [A cause of progress], SS 4, 11 (4 Nov. 1885): 84–5.

111 'Kham tuean sati' [A conscientious warning], SS 4, 14 (25 Nov. 1885): 108–9. In Japan, except for the early phase, Christians were persecuted, especially after 1614. On martyrdom and apostasy, see C.R. Boxer, *The Christian century in Japan, 1549–1650* (Berkeley: University of California Press, 1951), pp. 308–61; Shusaku Endo, *Silence*, trans. William Johnston (New York: Picador, 1969).

112 'Chao sayam top kham phra phuttha satsana' [A Siamese replied to a Buddhist discourse], SS 4, 19 (30 Dec. 1885): 145–6.

113 See for example, 'Kham top to wa chao sayam thi ang wa tua thue khitto satsana' [An answer to the Siamese who claimed that he believed in Christianity], SS 4, 6 (30 Sept. 1885): 44. See also exchanges on the situation in Ceylon and Burma in 'Rueang mueang langka' [A story of Ceylon], SS 4, 7 (7 Oct. 1885): 51–2; 'Khon thi yak bangkhap chaokhong chotmai' [Those who wish to have a commanding influence on the paper's owner], SS 4, 10 (28 Oct. 1885): 79.

114 'Wa duai satsana' [On religion], SS 4, 45 (30 June 1886): 356.

115 See, for example, 'Khaphachao phu-chao phetchaburi' [a Phetchaburian] in SS 3, 7 (15 Oct. 1884): 265–6; 'Khaphachao phu satsue thuenai kritsatsana' [a Christian follower] in SS 4, 3 (23 Sept. 1885): 19–20; 'Khaphachao thipen suppayek thangprethet' [a foreign subject] in SS 4, 14 (25 Nov. 1885): 109; 'Khaphachao lae kampani khong khaphachao' [I and my company] in SS 2, 2 (22 Aug. 1883): 13; 'Mong wae' [Mr Maung Wae] who was a resident of Moulmein in Burma in SS 4, 8 (14 Oct.

readership in the 1880s was arguably the outcome of Bangkok's economic and social development following the signing of Siam's free-trade treaty with Britain in 1855.

It is tempting to argue that the 1880s debates had not involved the leading elites as had been the case with the 1860s readership. The 1880s was a crucial transitional period in mainland Southeast Asia as Upper Burma had fallen to the British in 1885, and Tonkin and Annam had become French protectorates in the 1880s. In parallel, Siam was on the eve of its own reforms, centralising the Bangkok dynasty's power over autonomous principalities. The younger generation of King Chulalongkorn and his brothers who would become a major force for reform were all in their twenties or thirties and were consolidating their power, especially after the death of the regent Suriyawong in 1883 and the last 'second-king', Prince Wichaichan, in 1886. When the last issue of Smith's paper was printed in mid-1886, sweeping reforms were well on their way.¹¹⁶ Visible signs of these changes were new industries such as the mechanical rice mills along the Chao Phraya and the arrival of trams in the late 1880s.¹¹⁷

In addition, the growth of Western education was at least as important as the economic and social development. Over time, Siam began to have a critical mass of elites trained in the West and therefore easily able to separate secular/material from spiritual progress and refute Bradley's views. These Siamese reformers saw themselves as men of science and scientific inquiry piqued their interest. A brief glance at journals published in the same period as Smith's paper in the 1870s to 1890s, that is, *Davunovada*, *Museum*, *Vajirayan*, and *Vajirayan Viset*, should suffice to fill in this picture. Scientific knowledge dominated the pages of these periodicals. For instance, Prince Kashemsanta Sobhaga, the editor of this generation's first periodical, *Darunovada*, published in 1874–75, wrote on modern geology.¹¹⁸ *Museum*, published in 1877–78, featured essays on mineralogy, obstetrics, and the laws of nature.¹¹⁹ Phraya Pasakorawong, a minister of education during Chulalongkorn's reign, wrote a short piece printed in the first volume of *Vajirayan* on the meaning of science.¹²⁰ Prince Damrong, the driving force of reforms as minister of education and later minister of the interior, wrote an article on elementary physiology.¹²¹ In short, these journals continued to publish articles on scientific topics such as the life cycle of trees, modern geography, and so forth.¹²² Phenomena such as chemiluminescence,

1885): 59; and 'Nai Karaket' [Mr Karaket] who had lived in the Straits Settlements, in SS 4, 11 (4 Nov. 1885): 84–5.

116 Wyatt, *Thailand*, pp. 181–4.

117 Trais Pearson, *Sovereign necropolis: The politics of death in semi-colonial Siam* (Ithaca, NY: Cornell University Press, 2020), pp. 36–44.

118 Kashemsanta Sobhaga, 'Waduai rupapan lokaya' [On geology], *Darunovada* 1, 2 (1875): 11–13.

119 'Minerlochi vichahinlaeraethang-thang' [Mineralogy], *Museum*, 3 vols. (Bangkok: Bradley, 1877–78), vol. 2, pp. 151–66; J.W. Van Dyke, 'Vichahaeng khong' [On the law of nature], *Museum*, vol. 2, pp. 143–50 and vol. 3, pp. 135–44.

120 Pasakorawong, 'Athibai kham wicha' [Explanation of knowledge], *Vajirayan* 1, 1 (1885): 53–60.

121 Disawara Kumara [Prince Damrong], 'Kaya karuha' [On the human body], *Vajirayan* 1, 2 (1885): 89–122.

122 See for instance, Khun Maha Vichai (Chand), 'Tonmai mi chiwit rue' [Is a tree a living being?], *Vajirayan* 17 (1896): 1753–75; Nai Arunpricha, 'Sonthana rueang thammada sat' [A discourse on normal science], *Vajirayan* 26 (1896): 2614–41, and 27 (1896): 2710–37; 'Sonthana rueang phumisat' [A discourse on geography], *Vajirayan* 20 (1896): 2051–68, 21 (1896): 2137–53, 22 (1896): 2250–60, and 23 (1896): 2322–30.

bioluminescence, and unknown animals became objects that were worthy of gaze and observation.¹²³

On religion, notably among the Thammayuttika order closely associated with the royal house of Chakri, the main preoccupations were making Buddhism more rational and more scriptural/canonical. The Buddhist canon was printed in Thai script for the first time, as opposed to handwritten texts using traditional and obscure scripts such as *khom*, and widely studied and translated. The Jataka tales were regarded as parables for their moral lessons. Meanwhile, Chulalongkorn also sponsored the British Pali Text Society's translation and publication of the Tipitaka in English. Prince-Patriarch Wachirayan Warorot, another of Mongkut's sons, was also instrumental in Buddhist educational reform.¹²⁴

This next generation's interest in scientific inquiry eventually made a tryst with Buddhism. In an essay titled 'Buddhism as Exists in Siam' that was read on his behalf at the World's Parliament of Religions in Chicago in 1893, Prince Chandradat informed the gathering that Buddhist tradition in Siam taught that all things came from the Dharma, the 'essence of nature'. The Dharma itself consisted of two essences: matter (*rupa*) and spirit (*nama*). Matter represents 'the world and the corporeal parts', while spirit represents 'the mind of man'. The Dharma, however, represents three phenomena of 'the universe' that 'exist in every being': the accomplishment of eternal evolution; sorrow and suffering; and a separate power that is uncontrollable by human desire and belongs not to human beings. The universe's phenomena, he argued, 'varied according to the degree of evolution accomplished within it'. For him, Buddhism means evolution. 'The difference between all material things,' said Chandradat, 'depends upon the degree of evolution that is inherent to matter; and the difference between all spirit depends upon the degree of will, which is the evolution of spirit.' In short, all things are thus perishable in nature and shall be destroyed and recreated time and again continually 'by an eternal evolution'.¹²⁵

What Chandradat was referring to here is the Buddhist concept of impermanence and also, arguably, Darwin's theory of evolution. The Siamese literati had access to this seminal work not long after it was published in 1859. The sixth edition of Darwin's *The Origin of Species*, published in 1882, appeared in the 1892 *Catalogue of the Books of The Royal Vajirajan Library*.¹²⁶ The earliest account related to Darwin's evolution that I could trace was a short essay on human races in

123 'Saengsawang tham hatsai chaithale' [Luminous light on the beach], *Vajirayan Viset* 7, 41 (1892): 481–83; Librarian's Assistant, 'Rueang satpralat' [On strange animals], *Vajirayan Viset* 6, 12 (1891): 139–40.

124 See Craig J. Reynolds, 'The Buddhist monkhood in nineteenth century Thailand' (PhD diss., Cornell University, 1973); Craig J. Reynolds, *Autobiography: The life of prince-patriarch Vajiranana of Siam, 1860–1921* (Athens: Ohio University Press, 1979); Patrick Jory, 'Thai and Western Buddhist scholarship in the age of colonialism: King Chulalongkorn redefines the Jatakas', *Journal of Asian Studies* 61, 3 (2002): 891–918; Patrick Jory, *Thailand's theory of monarchy: The Vessantara Jataka and the idea of the perfect man* (New York: SUNY Press, 2016).

125 Chandradat Chudhadharn, 'Buddhism as exists in Siam', in Barrow, *World's Parliament of Religions*, vol. 1, pp. 645–9.

126 Chas S. Sveistrup, comp., *Catalogue of the books of the Royal Vajirajan Library* (Bangkok: R. Gotte, 1892), p. 26.

Vajirayan Viset in 1886, written by Prince Sonabandit. Few authorities, he wrote, would argue that all human races shared the same origin and came from the same parent. Another authority believed that human beings were even evolved from certain animals similar to apes, but not monkeys as they are today, and that these apes were the primordial ancestors of mankind. They had evolved gradually, both physically and mentally, until they were in human form. Thereafter, they had advanced in time to become human beings as they are today.¹²⁷ In another essay, Prince Prisdang took a comparative perspective on evolution, citing for instance that there was a big difference between forest people such as the curly-haired natives who still eat human flesh and civilised people such as the British or Siamese.¹²⁸

These Siamese literati began to participate in the international networks of scientific advancement that became embodied in the Natural History Society of Siam, founded on 4 February 1913. For instance, Prince Chumpon was recruited as a member, and exhibited more than 50 specimens of fungi collected from various regions of Siam at the second general meeting of the society in 1916 at the *Bangkok Times* office on 16 August. At the second general meeting of the society on 3 July 1917, at the same venue, the prince exhibited specimens of birds, mammals, and shells that he had collected from southeastern Siam.¹²⁹

Twentieth-century legacy

The debates between the Siamese literati and Protestant missionaries not only illustrate a conjuncture of two epistemologies that clashed over the projects of revelation and progress. They also demanded a reappraisal by the literati on the meanings of mundane knowledge and religiosity. In contrast to the Protestant thesis that combined soteriological matters with a civilisational discourse, Buddhism as practised in Siam, from the point of view of its literati, was superior and precocious in its understanding of the laws of nature. In short, they argued that Buddhism was scientific, and its teachings on level with the contemporary vogue for evolutionary theory.

The emphasis of this epistemic position was more forceful in the publications of another Siamese generation, especially the young men who had studied abroad in the early twentieth century and were attracted to Orientalist studies of Buddhism by figures such as T.W. Rhys Davids, Max Müller and Monier Monier-Williams. An early notable was Luang Suriyaphong Phisutthiphaet (Krachang Bunnag), son of Siamese nobleman Phraya Suriyanuwat, minister plenipotentiary in Berlin at the time of Krachang's birth in 1891. Krachang spent the first half of his life as a student in Europe. He studied in the German gymnasium system before becoming a student of medicine at Heidelberg University in 1912, graduating as a doctor from Berne University in 1921. After a three-decade-long career in Europe, including a period as a POW during the war that cost his engineer-student brother's life, Krachang returned to Siam as a lecturer at the medical school before moving to the railways medical service. Later in life, he developed an interest in Buddhism. His grounding

127 Sonabandit, 'Wa duai manut' [On human races], *Vajirayan Viset* 1, 11 (1886): 183–4.

128 Prisdang, 'Thammavavatti vicha' [On evolution in nature], *Vajirayan Viset* 4, 50 (13 Oct. 1889): 586–7; this article was serialised until 5, 21 (1890): 248–9; cited from 5, 5 (17 Nov. 1889): 53–4.

129 'Proceedings of the Society', *Journal of the Natural History Society of Siam* 2, 2 (1916): 183 and 2, 4 (1917): 347.

in Buddhism came not from the Siamese monastic tradition but translations, studies, and interpretations of the abovementioned Orientalists. For Krachang, the Buddha was a real historical person whose existence could be proved by archaeological excavation and historical evidence such as the discovery of his ashes in Piprahwa in 1898, the Lion Capital of Asoka erected at the border of Nepal found in 1890–98, and early Chinese travelogues. In one of his writings in English on ‘The Buddha’s Doctrine of Truth’ (c.1935), he pondered on the law of dependent causation that ‘all natural phenomena ... is subject to cause and effect, and that everything which we can grasp with our senses arises and ceases in dependence of each other’. Accordingly, ‘nothing in this world remains the same for two consecutive moments and everything that we experience with our senses is *transient*, *miserable* and *non-self*’.¹³⁰

Most remarkable among these figures was Samak Buravas, who had a Bachelor of Science with first-class honours from the Royal School of Mines, London University, and was an eloquent author. When not occupied with his studies or profession, Samak composed treatises on various topics. In 1935, still an undergraduate engineering student in London, he wrote a treatise on scientific Buddhism and sent it back to be published in Bangkok. Among his most well-received works, still in print today, was a treatise on Buddhist philosophy as explained from a scientific perspective.¹³¹ The Buddhist new millennium (*yuga phra sri araya*) will surely start in this atomic age, wrote Samak, and it would be a real scientific era (*yuga vitthayasat an thae ching*). Unlimited funds will be channelled for scientific affairs, all research will be devoted to pure knowledge, and scientists will find their utopia on this earth.¹³² Another notable member of this generation was Yong Hoontrakool, who also had a Bachelor of Science. In 1953, Yong published an English essay on ‘Buddha Dhamma and Science’ for the annual Visakha pamphlet of the Thailand Buddhist Society, intended for circulation to Buddhist societies abroad. This essay was later translated and published together with an original English version as a cremation volume reprinted several times. Apart from elaborating on the genesis of the *Paticcasamuppada* and the laws of physics, he proposed that ‘The Law of Karma is, in fact, the mother of Newton’s Third Law of Motion’.¹³³ Likewise, Professor Uay Getusingh, a former head of physiology and dean of pharmacy at Siriraj Medical School, delivered a series of lectures on Buddhism and science in the 1960s, proposing that the Buddha’s analysis of relations between sense-organs, sense-perceptions, and mental states were more advanced in their detail than modern

130 *Anuson khong pho.to. luang suriyaphong phisutthiphaet* [A memorial of Major Luang Suriyaphong phisutthiphaet], cremation vol. for Krachang Bunnag (Bangkok, 1965), pp. 33–5, original emphasis; see also Krachang Bunnag, *Chaikhwam khong phraphutthasatsana doi yo* [A concise introduction to Buddhism] (Bangkok: Srikrung, 1935).

131 Samak Buravas, *Phutthapratya: athibai duai vitthayasat* [Buddhist philosophy: A scientific explanation] (Bangkok: Thongtham, 1937) and *Phutthapratya: mong phutthasatsana duai thatsana thang vitthayasat* [Buddhist philosophy: Look at Buddhism through a scientific perspective] (Bangkok: Sayam, 1994 [1953]).

132 Samak Buravas, *Vitthayasat mai lae phra sri araya* [New science and new Buddhist millennium] (Bangkok: Phraephitthaya, 1970 [c.1955]), p. 643.

133 Yong Hoontrakool, *Phutthatham kap vitthayasat* [Buddha dharma and science], tr. Rosarind Kakkhanang, cremation vol. for Ua Chiamprasert (Bangkok, 1954), pp. 20 (in Thai); 11 (in English). The English translation appears after the Thai essay, but its page numbering starts anew.

physiological research by two-and-a-half millennia, and had been formulated without the benefit of modern laboratories.¹³⁴

This epistemic position has been reproduced or expounded time and again in Thai Buddhist literature, either by scholars or observers. Among recent publications along these lines was an attempt by an engineer-turned-monk to bring Buddhism and science together by proposing that both branches of knowledge share the same end: a search for truth in nature.¹³⁵

A towering figure among these scholars and observers was Buddhadasa Bhikkhu (1906–93), whose life and works have been highly influential in twentieth-century Thailand.¹³⁶ In an interview with one of his disciples, Buddhadasa stated that Samak Burawas' scientific explanation of Buddhism had inspired him to employ scientific principles and empirical demonstration to elaborate his reinterpretation of Buddhism.¹³⁷ Among his astonishing remarks was that the Buddha's teachings of centuries ago were scientific. Generally basing his thinking on the *Kalama sutta*, a sermon of the Buddha that alleges truth cannot be established until it is verified by personal experience, Buddhadasa also invoked other teachings of the Buddha to offer a reinterpretation of rebirth and suffering (*jati/bhava* and *dukkha*), which is, in fact, a psychological or mental state conditioned by the law of cause-and-effect (*hetupaccaya*).¹³⁸ Suffering and rebirth were thus reinterpreted as psychological consequences here and now in this world that everyone can observe and make manifest; they have nothing to do with the previous life or the next life, as is usually interpreted in the Theravada doctrine.¹³⁹ Buddhism and science, for Buddhadasa, 'are alike in their scientific principles',¹⁴⁰ and Buddhism is thus a scientific religion.

134 Uay Getusingh, *Vitthayasat sueksa phraphutthasatsana* [Science studies Buddhism], cremation vol. for Khambai Kasemsant (Bangkok, 1971).

135 Rungrueng Papassaro, *Kan banchopkan khong phraphutthasatsana lae vitthayasat* [A convergence of Buddhism and science] (Bangkok: Munnithi kan rianru phua dek thai, 2017).

136 On Buddhadasa, see for instance, Peter Jackson, *Buddhadasa: A Buddhist thinker for the modern world* (Bangkok: Siam Society, 1988); Tomomi Ito, *Modern Thai Buddhism and Buddhadasa Bhikkhu: A social history* (Singapore: NUS Press, 2012).

137 Pracha Prasannathammo, *Lao wai muea wai sonthaya: attachiwaprawat khong than phutthathat* [Talking in the twilight years: An autobiography of venerable Buddhadasa] (Bangkok: Munnithi Khomon Khimthong, 1992), pp. 545–8.

138 Buddhadasa, *Dhamma nai thana vitthayasat* [Buddhism as a science] (Chaiya: Thammathan, 1991). This book comprises his weekly sermons during the Buddhist Lent of 1979, delivered at his monastery in Surat Thani. See also Jackson, *Buddhadasa*, pp. 125–55.

139 On Buddhadasa's criticism of the misinterpretation of conditioned genesis, see Buddhadasa, *Patikkasamuppada chak phra-ot* [Patikkasamuppada in Buddha's own words] (Chaiya: Thammathan, 1979), pp. 1–85. On its controversy, see Ito, *Modern Thai Buddhism*, pp. 153–60.

140 Jackson, *Buddhadasa*, pp. 60–61.