
Modernity and the Early Discourse of Scientific Buddhism

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The interpretation of Buddhism as consonant with science has been an essential factor in the transmission of Buddhism to the West, as well as in the success of certain reform movements in Asia. Both westerners and Asians developed the discourse of scientific Buddhism in response to different but interrelated crises in their various cultural contexts in the late nineteenth and early twentieth centuries. Anagarika Dharmapala's contribution to this discourse arose out of a crisis of legitimacy in Sinhalese Buddhism that stemmed from colonialism, missionization, western hegemony, and western representations of Asians and Buddhism common to this period. Two Americans, Paul Carus and Henry Steel Olcott, attempted to establish the scientificity of Buddhism in response to the Victorian crisis of faith. This discourse represented Buddhism as an inverse reflection of what skeptics and liberal Christians believed to be problematic about orthodox interpretations of Christianity in light of scientific developments and biblical criticism.

IN THE *International Encyclopaedia of Buddhism*, published in India, an anonymous essay entitled "Religion without Speculation" contrasts Buddhism to "unscientific or speculative religion, the sort which is almost entirely the only kind known to the West" (Singh: vol. 18, 45). Buddhism, it says, is

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[I]ntellectual enlightenment, supreme intuition. And it is this which differentiates it from all other religions or philosophical systems: it is nonspeculative, scientific. (47)

What Gotama did was not to devise a law or formulate a system, but to discover a law, to perceive a system. His part may be compared to that of Copernicus or Galileo, Newton or Harvey, in physical science. . . . Buddhism extends the natural laws, the laws of causality to the mental or psychic domain, or, more exactly, perceives their operation in this sphere, and thereby disposes of the idea of supernatural or transcendental agencies working independent of or in contravention to the natural laws of the universe. (47–48)

This quotation exemplifies one of the most important ways that Buddhism gained cultural currency in the West when it was introduced in the nineteenth century: through its representation as a religion uniquely compatible with modern science. This was also an important idea for Buddhist reform movements in Asia, such as those in Ceylon (now Sri Lanka) and Japan. Nor was this a transient phase in the early encounter of Buddhism and modernity; what I shall call the discourse of scientific Buddhism has become not only more voluminous but far more sophisticated throughout the late twentieth century and is now at its productive and creative zenith. In the last few decades a steady stream of books, both popular and academic, has come out on the subject of Buddhism and the sciences (Austin; Davidson and Harrington; Goleman: 1997, 2003; Hayward; Hayward and Varela; Houshmand, Livingston, and Wallace; Varela; Wallace and Lutzker). The compatibility of Buddhism and modern science has not only become a staple of popular Buddhist literature, it has also become a hypothesis in a large number of quite sophisticated experimental studies. Although all historical religious traditions in their encounters with modernity have had to reinterpret doctrines in light of the dominance and symbolic capital of scientific thinking, its tremendous transformative effects on the world, and its unsurpassed legitimacy in establishing “what is the case,” perhaps no major tradition has attempted to adopt scientific discourse more vigorously than Buddhism. Given the prominence of the idea that Buddhism is uniquely compatible with modern science—or in a stronger version of the claim, was scientific in some sense from the beginning—it should be useful to examine the genealogy of this idea.

This article addresses one crucial part of a much larger question. The larger question addresses how various forms of Buddhism have encountered, incorporated, or been incorporated by narratives of modernity—that is, narratives emphasizing the autonomy of individual reason, the scientific method, the inevitable progress of humanity, the suspicion of

tradition and traditional authority, and the reformist impulses of the Enlightenment and Protestantism. Also inevitably intertwined with this question of the Buddhist encounter with modernity are issues involving colonialism, missionization, and orientalism. If we begin by looking at this issue from the period of the earliest sustained engagements between Asians and westerners regarding Buddhism, the question becomes (from the western side): How was Buddhism incorporated into the pre-existing network of concerns, assumptions, ideas, agendas, and practices that characterized certain features of late nineteenth-century life? From the perspective of Asian Buddhists the question is the inverse: How was the western narrative of modernity reconfigured and incorporated into the Buddhist narratives and sometimes Buddhist nationalism, thus producing forms of Buddhist modernism not reducible to western modalities?

These intertwining modernizing processes over the last 150 years or so have been creating unprecedented forms of Buddhism that are hybrids of Buddhism and modern, western thought and practice. Donald Lopez, Jr. suggests that this new international Buddhism be considered a sect itself (xxxix). Martin Baumann likewise sees “modernist Buddhism” as a distinct form of demythologized and rationalized Buddhism and posits, as well, a distinctively postmodern or “global Buddhism,” which has in turn secularized and psychologized modernist Buddhism. The question of how various forms of Buddhism have met the modern West and how they have incorporated and transformed each other is, I believe, the fundamental question to understanding most of the developments in recent Buddhist history. One of the most important facets of this encounter has been the ways in which Buddhists and Buddhist enthusiasts have taken up the issue of science. Moreover, the story of the early efforts to make accomplices of Buddhism and science illustrates some of the fundamental tensions haunting modernity—tensions between optimistic confidence in human progress and creeping epistemic and existential doubt, between the rationalist’s need for hard certainties and the romantic’s longing for exotic mysteries, and between the colonizer and the colonized.

In what follows I show how some of the primary contributors to the formation of the discourse of scientific Buddhism had different but overlapping agendas spurred by two crises of legitimacy in disparate cultural contexts: For the American contributors it was what scholars have dubbed the Victorian crisis of faith—a widespread questioning of traditional forms of Christianity in the late nineteenth century. For the Asians—and in this case we will deal specifically with Ceylon—it was the crisis of colonialism, western hegemony, and demoralization over Buddhism’s loss of prestige in the wake of Christianization. The three figures I examine here

are those most crucial to the early development of this discourse. Two Americans, Henry Steel Olcott and Paul Carus, represent different approaches to relating Buddhism and science, one embedded in Theosophy and spiritualism and one reflecting the extravagant optimism in the promise and epistemic reach of science in the Victorian era. The third is Anagarika Dharmapala, the most important figure in the turn-of-the-century Sinhalese Buddhist revitalization movement. Each of these figures was essential to the early formation of a discourse that has had profound effects not only on the scholarly interpretation of Buddhism but also on its historical development.

ANAGARIKA DHARMAPALA: BUDDHISM, SCIENCE, AND COLONIALISM

A pivotal moment in the history of the discourse of scientific Buddhism was the World's Parliament of Religions in Chicago, 1893. It was here that some of the themes connecting Buddhism to modern science that endure to the present day were proffered to an American audience by Asian Buddhists. Dharmapala was a young, articulate Buddhist from Ceylon who by all accounts had a highly favorable reception at the Parliament. He was already a well-known reformer in Sri Lanka who had worked to establish what has been dubbed "Protestant Buddhism," both for its resistance to Christian missionary efforts and its appropriation of themes and values derived from Protestant Christianity (Gombrich and Obeyesekere: 202–239). In his address he likely made the Christians hosting the assembly uncomfortable by declaring that the Buddha rejected the notion of a "supreme Creator"; yet immediately following this statement he claimed that the reason for this rejection was that the Buddha accepted "the doctrine of evolution as the only true one, with corollary, the law of cause and effect." He then quotes a passage from Grant Allen's *Life of Darwin* (in quotation marks within the quoted passage below), seamlessly interweaving Buddhist concepts with western scientific ones, claiming that Allen's passage "beautifully expresses the generalized idea of Buddhism."

The teachings of the Buddha on evolution are clear and expansive. We are asked to look upon the cosmos "as a continuous process unfolding itself in regular order in obedience to natural laws. We see in it all not a yawning chaos restrained by the constant interference from without of a wise and beneficent external power, but a vast aggregate of original elements perpetually working out their own fresh redistribution in accordance with their own inherent energies. He regards the cosmos as

an almost infinite collection of material, animated by an almost infinite sum of total energy," which is called Akasa. (Dharmapala: 9)

The rhetorical moves in this short passage are illustrative of the most common ways early authors attempted to blend Buddhism with science. The first is the allying of key concepts in scientific discourse with those found in Buddhism. It was certainly not lost on Dharmapala, who was educated in an English school in Ceylon, that he was using two terms charged with significance for his largely western audience: The first, *cause and effect*, was the *sine qua non* of the modern scientific worldview; and the second, *evolution*, was perhaps the most radical, controversial, and "cutting edge" notion in late nineteenth-century intellectual discussion. In claiming these concepts for Buddhism, he fused them with the doctrine that everything emerges from causes and conditions (*hetupratyaya*), dependent origination (*pratītyasamutpāda*), and the doctrine of karma. By rejecting a supreme creator, he risked alienating his liberal Christian allies at the Parliament; but following this rejection with explicitly scientific terminology and claiming it for Buddhism, he threw his hat in with the one discourse in the western world compelling enough to challenge the largely Christian assumptions of the organizers of the Parliament—that of empirical science.

The second rhetorical move common in the discourse of scientific Buddhism and illustrated in Dharmapala's talk is the subsuming of western scientific description and explanation within Buddhist discourse. This was especially prevalent among Asian Buddhists and western enthusiasts who presented Buddhism as embracing, but also preceding and surpassing, western science. In the passage above Dharmapala treats the Allen quote as if it were a direct formulation of Buddhist ideas, nestling it within his discussion of the Buddhist view of the cosmos, then adding the assertion that what Allen is *really* talking about by the "infinite sum of total energy" is *akāśa*, a Sanskrit term used in Buddhism to denote unconditioned space. Clearly the implication is that the Buddha himself understood these scientific ideas 2,400 years ago, though they had been discovered only recently by the West.

Soyen Shaku, a Japanese Zen priest and the other important Buddhist representative at the Parliament, continued these themes in his address entitled, "The Law of Cause and Effect, as Taught by the Buddha." Soyen called the Buddha's notion of cause and effect "the law of nature" and insisted that the myriad phenomena of the world are not governed by an exterior force but by this all-encompassing law. Using one of the most prominent Enlightenment metaphors of the law-abiding cosmos, he says: "Just as a clock moves by itself without any intervention of any external

force, so is the progress of the universe” (Barrows: 390). In a letter written, three years after the conference, to Parliament organizer John Henry Barrows, who had publicly criticized Buddhism in the intervening time, Soyen forcefully but tactfully reprimanded Barrows for his comments on Buddhism, defending his tradition by even more overtly allying it with modern science. Responding to Barrows’s claim that Buddhism “groans under the dominion of inexorable and implacable laws,” Soyen replied: “Now I grant that Buddha taught the irrefragability of law, but this is a point in which, as so many others, Buddha’s teachings are in exact agreement with the doctrines of modern science” (122). Later in the letter he questions whether “mankind can be benefited by believing that Jesus Christ performed miracles,” further affiliating himself with scientific ideas of natural law and causality against notions of supernatural intervention (124–125).

To understand the historical context of these attempts to ally Buddhism and science by the Buddhist representatives at the Parliament, it is helpful to take a step back and notice some of the central themes of the 1883 world’s fair, of which the World’s Parliament of Religions was a part. The fair that year was the Columbian Exposition, a celebration of the achievements of Christopher Columbus. Robert Rydell and Richard Seager have both convincingly argued that its exhibitions and activities represented a liberal utopian vision of late-nineteenth-century America in which white America was vividly contrasted with “exotic” and “less civilized” peoples. The physical layout of the fair and its exhibitions were divided between the “White City,” a temporary neoclassical utopia constructed for the fair and celebrating the triumphs of Christopher Columbus and America, and the Midway Plaisance, which consisted of exhibits representing the non-western world. They included large-scale replicas of scenes of far-away places: a recreation of a north African village; “Cairo Street,” with a bazaar, dancing girls, and camel rides; a Chinese theater featuring a Confucian play and a fortuneteller. Victorian ladies and gentlemen could meander through the exhibition and gaze at the spectacle of the world’s “primitive cultures,” complete with native peoples shipped in for the event, right in the heart of Chicago.

The ideology behind such representations was the evolutionary model of religion, according to which all world religions were stages along the way to the most highly evolved form of religion and society. Thus, although the Christian organizers of the fair were liberal and enthusiastic about representing non-western cultures, this model and notion of progressive revelation implicitly relegated these cultures to a lower status (Seager: xxii–xxiii). Thus, it is particularly ironic that two of the most significant Buddhist contributors to the Parliament presented Buddhism

as not only in accord with what most educated Americans believed to be the most advanced scientific thinking of the day but as having anticipated such thinking by over two millennia. The use of the language of evolution and cause and effect signaled an attempt to subvert the triumphalism of the evolutionary model of the development of religions and the widespread derogatory representations of Buddhism and Asians in general. The Buddhists' use of scientific language at the Parliament—not to mention their eloquence and sophistication—disrupted the taxonomy of civilized/primitive implicit not only in the condescending language and attitudes displayed by some of the American hosts but also in the very physical design of the fair. Employing scientific language to express, translate, and transform Buddhist ideas represented both the stretching of scientific vocabulary to particular emerging Buddhist agendas and a way of attempting to subvert aspects of the dominant western culture's hegemonic ideology—an ideology graphically presented at the world's fair—in its own language.

Concerns that gave rise to this discourse on the part of Asians were not unique to the Parliament, of course, but were part of a broader attempt to negotiate with representations of Buddhism that had surfaced with the European “discovery” of Buddhism as well as more general representations of Asians. Those Asians who were conversant in English or, like Dharmapala, educated in British-run schools were quite familiar with the characterizations of Asians prevalent in the West in the eighteenth and nineteenth centuries. Virtually all western literature of this period that made reference to non-Anglo-Saxon peoples attempted to explain them through reference to supposedly inherent characteristics and predetermined inclinations, temperaments, and intelligence. The typical Victorian characterization of the “Oriental mind” was that it lacked intellectual ability, was plagued by an excess of imagination, and was indolent and childlike. John Davy said of the Sinhalese:

In intellectual acquirements, and proficiency in arts and sciences, they are not advanced beyond the darkest period of the middle ages. Their character, I believe, on the whole, is low, tame, and undecided: with few strong lights or shades in it, with few prominent virtues or vices. (141; quoted in Almond: 43)

Such attitudes were used to justify colonial control over Asia—indeed such control was seen to be the only hope of the Oriental. Dharmapala was inflamed by such characterizations, particularly of the Sinhalese, and labored in many writings to combat them.

Buddhism itself was often characterized in nineteenth-century western literature as pessimistic, nihilistic, devoid of any power for promoting goodness, and in a state of degradation and decline. Especially representations of living Buddhism decried its apparent idolatry, benighted superstition, and mechanical ritualism. It was not just the uninformed who made such assertions but the early orientalist scholars who were largely responsible for introducing Buddhism to western audiences, such as Jules Barthélemy Saint-Hilaire, who described Buddhism as the nihilistic nadir of Indian pessimism. The interpretation of Buddhism as pessimistic touched off considerable debate among scholars and enthusiasts. Much was at stake in these arguments; as Thomas Tweed points out, “the optimistic spirit of the late nineteenth century made little room for popular adopting of an overtly pessimistic doctrine, and such interpretations may well have spelled the end of the first wave of interest in Buddhism in America.” Thus, it is no accident that Dharmapala’s presentations of Buddhism to Americans and Europeans insisted on its optimism and activism nearly as much as its scientificity.

Although such disparaging characterizations of Buddhism abound in the European and American literature of the time, the assessment of Buddhism was not universally negative. Indeed, Dharmapala arrived for the Chicago fair during a surge of interest in and enthusiasm for Buddhism. Westerners favorably disposed toward Buddhism at this time, however, seldom if ever embraced the living tradition; rather they looked to the figure of the Buddha, popularized by Edwin Arnold’s romantic poem, *Light of Asia*, and to the Buddha’s original, “pure” teachings, which they believed had later become adulterated by the ignorant. The Buddha often was portrayed in the latter decades of the nineteenth century as a noble ethical reformer who rejected the caste system and set forth a touching doctrine of infinite compassion for all beings. Henry Steel Olcott saw the Buddha as a figure much like the ideal liberal freethinker—someone full of “benevolence,” “gratitude,” and “tolerance,” who promoted “brotherhood among all men” as well as “lessons in manly self-reliance” (1883: 36, 37, 42, 45; quoted in Prothero: 97). The Buddhism of the Buddha, no longer practiced by the ignorant masses of Asia but recovered by scholars and Olcott’s own Theosophical movement, was utterly distinct from the rituals, celebrations, attempts to control spirits, and image veneration present in the popular Buddhism of Ceylon. Olcott took his cue here from orientalist scholars for whom the search for origins was a dominant theme. These scholars located “true Buddhism” in the texts of the ancient past and delimited it to carefully selected teachings, excluding any consideration of living Buddhists, save reformers like Dharmapala and Soyen. Philip

Almond argues that the rejection of living Buddhism and the creation of an “ideal textual Buddhism” allowed the construction and appropriation of a Buddhism “grounded in the past, ideally conceived, and textually constructed.”

Dharmapala, a close associate of Olcott for a time, was well aware of the various European and American representations of Buddhism and of Asians in general. It was not just these representations to which he felt compelled to respond, however; underlying Dharmapala’s efforts to revitalize Buddhism was his deep resentment against colonial suppression of his native Ceylon. He aimed to rehabilitate Buddhism not only in the eyes of its western detractors but in those of the colonized and demoralized Sinhala Buddhist population. Indeed, Dharmapala was not only one of the earliest and most important evangelists of Buddhism in the West, he also was the single most significant reformer of Buddhism in his own country. With colonial rule and its attendant missionary activity Buddhism faced a crisis of legitimacy, having lost prestige and considerable economic and political power. Dharmapala vigorously opposed Christian missionization and promoted a nationalistic revival to bring Buddhism back from its demoralization.

Dharmapala’s writings and talks make evident that part of the way out of the crisis was a revival of Buddhism in ways that embraced the favorable representations of Buddhism put forth by western enthusiasts and vigorously countered the disparaging ones. Thus, he portrayed Buddhism as a religion perfectly suited to the challenges of the modern age, combatting the impressions of Buddhism as nihilistic, pessimistic, passive, ritualistic, and superstitious and promoting Buddhism as activist, optimistic, and scientific. He largely adopted the textualist reconstruction of his tradition offered by orientalist scholars, as well as the positive characterizations of Buddhism by westerners who tried to make it appealing to late Victorian culture. Dharmapala proffered a rational Buddhism centering on the individual and his or her own salvation as well as altruistic social service. He adopted the perspective common among orientalists that the living Buddhism of his day was in a state of corruption and degeneration, having declined from the pristine, scientific, rational teachings of the Buddha himself. He emphasized the internal and ethical elements of Buddhism and was critical of many practices that could be interpreted as superstitious or ritualistic. In place of them he attempted to codify a version of Victorian morals and decorum in the style of Buddhist monastic codes of behavior in order to reform the everyday behavior of the peasants (Gombrich and Obeyesekere: 212–215). Portraying the Buddha as a rebel against the authority of Brahmanical priesthood and their rites, he insisted that the Buddha was

“democratic” and saw no intermediary between the individual and truth. Thus, Dharmapala’s representation of Buddhism, though it could be fiercely critical of Christianity and the West, was deeply informed by Protestantism, Enlightenment rationalism, and Victorian cultural forms. Moreover, this influence is largely masked in his writings—nowhere does he admit influence from the West, and perhaps he was himself unaware of its extent. Always these themes are presented as “pure Buddhism.”

It was because Dharmapala’s Buddhism resonated so well with liberal Victorian sensibilities that it could be used as a powerful rhetorical tool for harmonizing with natural allies as well as as a weapon against those of whom he was critical. His presentation to western audiences of a rational, scientific Buddhism represents a kind of reverse orientalism what Seager, following James E. Ketelaar, calls “strategic occidentalism”: “the selective and often highly politicized appropriation of western ideas, techniques, and critiques for use in undermining the claims of the West, asserting Asian independence, and negotiating roles in the emerging global society” (Seager: 96; Ketelaar). Although Dharmapala often used this strategy for undermining western claims to superiority, he also used it to ally himself with certain carefully selected western ideas and practices. Especially when directed at western audiences, such discourse was often finely tuned to reflect the sentiments of his listeners and readers. For example, while in the United States for the Parliament, Dharmapala gave a talk in New York in which he exploited liberal upper-middle-class Protestant prejudices against Catholicism, ritual, superstition, and perhaps even Jews and Arabs, at the same time acutely appealing to their progressive Victorian sensibilities, which extolled individualism, altruism, and scientific rationalism:

In Christian countries scientists are at work to elevate the masses by scientific methods, while the missionaries that go to Asia are utterly deficient in scientific knowledge, and all they can offer are the myths of Canaan and Galilee which had their origin in the backwash of Arabia. (25)

The message of the Buddha that I bring to you is free from theology, priestcraft, rituals, ceremonies, dogmas, heavens, hells and other theological shibboleths. The Buddha taught to the civilized Aryans of India twenty-five centuries ago a scientific religion containing the highest individualistic altruistic ethics, a philosophy of life built on psychological mysticism and a cosmology which is in harmony with geology, astronomy, radioactivity and reality. (27)

Even a cursory knowledge of Sinhalese Buddhism on the ground belies Dharmapala’s characterization of Buddhism as free from ritual,

priests, ceremony, heavens and hells; yet this sentiment is repeated often by early apologists, and its echo continues today. What is striking is the way Dharmapala clearly perceived the fissures in American society and caste his lot with educated liberals who embodied the modernist ideals of the European Enlightenment against his nemeses, the evangelical, mission-minded Christians, whom he saw as political tools of western governments. Dharmapala vociferously opposed these missionaries and their activities in his native Ceylon. Their behavior, he claimed, revealed their Christianity to be “political camouflage” whose three aspects are “politics, trade, and imperial expansion” and whose weapons were “the Bible, barrels of whiskey and bullets” (439). He even suggests, in an amusingly prescient passage, that America should be sending scientists rather than missionaries to Asia:

Instead of sending missionaries who preach the unscientific doctrine of fundamentalism to India and Buddhist lands, I would suggest that scientific missionaries who can give needed knowledge on radioactivity, and teach technical industries to the youths be sent. It is more meritorious to give pure knowledge born of science than to give the antiquated theological dogmas which originated in the brain of muddleheaded priests of the medieval period. (29)

Elsewhere he claims that Christianity has been detrimental to the progress of the nations of Europe, who “groveled in darkness until the light of physical science began to dawn” (440). The western narrative of the evolution of “civilization” is thus turned on its head, with the ancient Indians possessing a scientific religion while Europe wallowed in ignorance until the Enlightenment. Clearly he was appealing to, and adopting the rhetoric of, late nineteenth-century American modernist Christians and skeptics who themselves had quarrels with evangelical Christianity, missionization, and theologies that they believed could not withstand scientific scrutiny.

Dharmapala’s contribution to the discourse of scientific Buddhism reflects concerns specific to the legitimation crisis of Buddhism in his own land and abroad. Although his project was highly influenced by western notions of science, democracy, individualism, and enlightenment, he remained loyal to a distinctively Buddhist vision of the world. For him Buddhism encompassed these western ideas; they were already nestled comfortably within the Dharma, which anticipated them by centuries. For the early western contributors to this discourse Buddhism would have to find its place within a different worldview.

HENRY STEEL OLCOTT'S THEOSOPHICAL BUDDHISM AND OCCULT SCIENCE

If the development of the discourse of scientific Buddhism on the part of Asians like Dharmapala was in part a response to the demoralization brought about by colonialism, racist representations, and missionization, the interests of some of the important western interpreters using such rhetoric were somewhat different. Each side construed Buddhism in scientific-rationalist terms in response to separate crises in their various cultural contexts. Yet these responses were not isolated from each other. Dharmapala's emphasis on science and reason was deeply influenced by his relationship with Henry Steel Olcott and the Theosophical movement. He also was invited to the United States several times by Paul Carus. Although Olcott's and Carus's approaches to the relationship of Buddhism and science were quite similar, their general philosophies were distinct, Olcott representing an esoteric approach and Carus a more rationalist-positivist one.

Olcott, one of the founders of the Theosophical movement along with Helena P. Blavatsky, was by all accounts the first American formally to become a Buddhist. He and Dharmapala joined forces for a time in an effort to reform Buddhism in Ceylon and in an attempt to create a global Buddhist network. Theosophy grew out of the spiritualist movement which attempted to investigate supernatural phenomena, to contact the dead by use of mediums, and to bridge the chasm between the human and spirit worlds. Theosophists considered this a fundamentally scientific endeavor—albeit an “occult science”—using empirical research and rational arguments to prove their hypotheses. Olcott and Blavatsky drew on the German Romantics' yearnings for magic and mystery and ideas of the Indian origins of all things spiritual found in Schlegel and other Romantics. Claiming that she was in telepathic communication with the “mahatmas,” a group of spiritual masters in Tibet who still possessed an ancient wisdom tradition, Blavatsky brought together the romantic images of the mysterious East with the current vogue in spiritualism, tempered by scientific and quasi-scientific concepts. Like Dharmapala they made liberal use of Darwinian theory to promote the idea of spiritual evolution and were among the first to suggest that Asian traditions had developed internal empirical sciences for fostering this evolution.

The Theosophical Society took a decidedly universalist direction that attempted to find the hidden truth behind all religions. One of the fundamental premises of the movement was that there exists beneath the diversity of the world's religions a primordial esoteric tradition that is the wellspring of the visible traditions. Buddhism, Olcott and Blavatsky

believed, was the best representative of that primordial tradition. Blavatsky said of Buddhism that it was “incomparably higher, more noble, more philosophical and more scientific than the teaching of any other church or religion” (quoted in Batchelor: 269). Their understanding of Buddhism was deeply informed by orientalist scholarship, especially that of Rhys Davids and his pioneering work in translating Pali texts. Like the orientalists they paid little attention to the living traditions of Buddhism, except to declare their debasement and attempt to reform them. Olcott was careful in his writings to distinguish “true Buddhism” from the supposed degenerate Buddhism of the masses.

Olcott went to great lengths to take control of the representation of Buddhism and promote his vision of the Dharma not only to the West but to the Sinhalese during his extensive time in Ceylon and to other Buddhists worldwide. The most influential and enduring legacy of this attempt is *The Buddhist Catechism* published in 1881. The work was intended as a compilation of fundamental Buddhist beliefs, set out in question-and-answer format. It had five sections, the first three on the Buddha, Dharma, and *sangha* and the last two on “The Spread of Buddhism” and “Buddhism and Science.” Modeled on Christian catechisms used by both Catholics and Protestants, it attempted to extract what Olcott considered the most important doctrines from the Buddhist tradition and lay them out clearly and simply. His aim was to disentangle the true teachings—which by definition were those that could be interpreted as consonant with the modern, scientific worldview (though broadly interpreted vis-à-vis Theosophy)—from the weight of what he considered accumulated cultural baggage. The *Catechism* became hugely popular and helped to define Dharmapala’s Protestant Buddhism of Ceylon. Indeed, it is still used in schools there today.

The *Catechism*’s chapter on Buddhism and science was probably the earliest attempt to work out a definite correlation between Buddhism and science, however idiosyncratic its view of both. Far from the increasingly prominent positivism of the late nineteenth century, Olcott’s was an “occult science.” Early in this chapter Olcott states definitively that “we [Buddhists] do not believe in miracles” and then spends quite a few pages discussing artistic depictions and textual descriptions of the Buddha with *buddharansi*, rays of light emanating from the Buddha (1947: 115) and other apparently supernatural phenomena that are standard elements of Buddhist literature. The light rays, Olcott claims, are the human aura, which has been photographed and scientifically proven to exist “by carefully conducted experiments” (1947: 114). This aura, he insists, is a natural phenomenon, not a miracle, and “it has been proved that not only all human beings but animals, trees, plants and even stones

have it” (1947: 115). Olcott introduces the human aura as an example of *iddhi* (Sanskrit, *rddhi*), a term found throughout Buddhist literature designating supernormal phenomena believed to be cultivated through, or a byproduct of, meditative practice. One of the common *iddhi* in Buddhist and other ancient South Asian writings is the ability to create illusory bodies (*manomāya*)—duplicates of oneself, someone else, or an object.¹ Olcott refers to an instance of multilocation in the tale of *Chullapanthaka* and insists that it is an example of hypnotic suggestion, an element of a “branch of science” well known to those acquainted with mesmerism and hypnotism. The *bhikkhu* in the tale who makes his body appear as 300 identical bodies was, he claims, using his mental powers to impress an image on the mind of the viewer and did not actually create other physical bodies for himself (1947: 115–118).

A double rhetoric, therefore, is present in the *Catechism* regarding the miraculous. On the one hand, “we do not believe in miracles.” On the other, the miraculous can in fact occur, but it is fully explainable by science—not the positivistic science of the day but occult science. In another passage Olcott tells his questioner that human beings do in fact have “latent powers for the production of phenomena commonly called ‘miracles’” but that these are “natural, not supernatural” (1947: 119–120). He then describes the various kinds of “occult powers” and ways they might be developed (1947: 120–121). Throughout, he carefully maintains his scientific rhetoric:

377. Q. *Our scriptures relate hundreds of instances of [miraculous] phenomena produced by Arhats: what did you say was the name of this faculty or power?*

A. *Iddhi vidha*. One possessing this can, by manipulating the forces of Nature, produce many wonderful phenomena, i.e., make any scientific experiment he chooses. (1947: 123–124)

Olcott’s worldview was highly influenced by his own Theosophical movement and the long tradition of alternative American spirituality and as such admitted the existence and value of clairvoyance, faith healings, and communication with the dead and with the mysterious mahatmas (Fuller). In response to the growing popularity of Catholicism in Ceylon and especially of a Catholic shrine where numerous healings were said to have taken place, he even went on his own Buddhist faith-healing tour of the island. Drawing on his early training in mesmerism he is reported to

¹ In classical literature the most extensive description of such phenomena is found in Buddhaghosa.

have performed many healings which he publicly attributed to the Buddha, no doubt to show that the Catholic healing shrine was not the only healing game in town and to dissuade Sinhalese from converting. In private, however, he again rejected the “miraculous” nature of his cures. Insisting on strictly physiological explanations, he accounted for them in terms of “the passing of a ‘nerve-aura’ between himself and a patient whose ‘mesmeric fluid’ was in ‘sympathy’ with his” (Prothero: 108).

Although the *Catechism* relies extensively on occult science, Olcott also marshals some of the essentials of mainstream science to the defense of Buddhism. Siding with science against Christianity, he denies “creation out of nothing,” claiming that this would be a miracle—presumably in the sense of the abrogation of natural law rather than the “manipulation of the forces of Nature” referred to above. Buddhism also affirms, along with science, the “indestructibility of force” and the consistent operations of causality (Olcott 1947: 119). Like Dharmapala, Olcott also presses the theory of evolution into his service, claiming that, according to Buddhism, “everything is in flux, and undergoing change and reformation, keeping up the continuity according to the law of evolution” (1947: 110). He also asserts that the Buddha taught that “there were many progenitors of the human race” and that the theory of evolution verifies the Buddhist doctrine of karma.

Modern scientists teach that every generation of men is heir to the consequences of the virtues and the vices of the preceding generation, not in the mass, as such, but in every individual case. Every one of us . . . gets a birth which represents the causes generated by him in an antecedent birth. This is the idea of Karma. (1947: 118)

On the basis of these parallels between science and Buddhism, he claims that Buddhism is a “scientific religion” rather than a “revealed religion,” obviously giving more credence to the former category (1947: 109).

Olcott’s emphasis on science was part of a larger attempt to present Buddhism as congruent with the more liberal elements in Victorian culture, combining influences from Enlightenment philosophy with the ideas deriving from the German Romantics and late-nineteenth-century occultism. Olcott sums up the essence of Buddhism with the word “justice” because of its insistence that, through karma, “everyone will unerringly reap the rewards of his actions, bad or good” (1947: 53), as well as “self-culture” and “universal love” (1947: 54). He also takes pains to insist that Buddhism opposes “idol worship” and the observance of “ceremonies and other external practices” (1947: 55–58). “[C]harms,

incantations, the observance of lucky hours and devil-dancing,” moreover, are all “positively repugnant” to the fundamental principles of Buddhism (1947: 58), and such practices found among contemporary Buddhists are due to the decline and corruption of the Dharma. Olcott insists, as well, that Buddhism perfectly embodies the social virtues highly valued among liberal modernists: women are on a “footing of perfect equality with men” and the Buddha was a social reformer who rejected caste inequality outright (1947: 71–72). Buddhism, moreover, displays an experimental, pragmatic attitude and is based on empirical evidence and autonomous reason, an implicit but obvious contrast with traditional Christianity for which he often showed contempt. “[W]e are earnestly enjoined to accept nothing on faith; whether it be written in books, handed down from our ancestors, or taught by the sages” (1947: 62). A Buddhist is required to believe only “when the writing, doctrine or saying is corroborated by our own reason and consciousness” (1947: 63). Derived primarily from the *Kalama Sutta*, this insistence on verification through personal experience and distrust of “faith” in the Christian sense would become perhaps the most central theme of modernist Buddhism.

PAUL CARUS: BUDDHISM AND THE RELIGION OF SCIENCE

Perhaps the most important western figure in the attempts at interpreting Buddhism through science was Paul Carus, a German immigrant to the United States and prolific author who edited the periodicals *The Open Court* and *The Monist* and wrote over seventy books and 1,500 articles on a wide variety of subjects including Kant, Spence, Goethe, Christianity, science, and mathematics. A participant at the World’s Parliament of Religions, Carus was not a scholar of Buddhism *per se*; like Olcott he rode on the orientalist’s coattails for his understanding of things Buddhist. His importance to this inquiry lies in his popular presentations of a definitively rationalist, scientific Buddhism that, like Olcott’s Buddhism, also reflected the broad themes of liberal Protestantism and Enlightenment philosophy but was much more devoted to a mainstream, rather than occult, understanding of science.

Carus’s own religious background is significant in understanding his attitudes toward Buddhism. He grew up a devoted conservative Christian but had a crisis of faith that shattered his early worldview. His own speech at the World’s Parliament of Religions poignantly hints at the trauma of believing that he was damned for his increasing doubts about Christianity. He declared to the audience that he himself had “suffered from the misapplication of religious conservatism. . . . I have experienced in my heart, as a faithful believer, all the curses of infidelity and felt the

burning flames of damnation” (1916: 34). Condemnations of evangelical Christianity later in the talk suggest the cause of his loss of faith:

You who preach such a religion, can you fathom the tortures of a faithful and God-loving soul, when confronted with ample scientific evidence of the untruth of his religious convictions? . . . Whenever there is a soul distorted by a conflict between faith and scientific insight, the latter will, in the long run, always be victorious. And what a downfall of our noblest hopes must ensue! The highest ideals have become illusions; the purpose of life is gone, and desolation rules supreme. (1916: 34–35)

Out of this desolation, however, Carus came to believe that a new “purified” Christianity could be built. Indeed, from the fragments of his lost faith he constructed a new one, the cornerstone of which was the very science that had destroyed his old one. He believed that his own experience mirrored the evolution of religion itself, the “dross” of which must be stripped away by the light of reason and science to leave only the gold. The despair entailed in this purging was necessary in order to “learn to appreciate the glory and grandeur of a higher stage of religious evolution” (1916: 36). This higher stage is heralded by the ascendancy of the scientific worldview, and Carus’s new faith sacralized science as nothing less than a new revelation.

The religion of the future cannot be a creed upon which the scientist must turn his back, because it is irreconcilable with the principles of science. Religion must be in perfect accord with science. . . . Science is divine, and the truth of science is a revelation of God. Through science God speaks to us; by science he shows us the glory of his works; and in science he teaches us his will. (1916: 20)

Carus was so insistent that science was a religious revelation that he criticized antipathy to science by the religious as “a grievous fault,” a “moral error,” and, in fact, itself “irreligious” (1916: 34). Not content to leave Christianity behind completely, he came to believe that he could retain its essential truths while jettisoning its dogmatic and mythical elements. His new faith was in a religion not yet fully formed but that was emerging through the rise of science and the increasing contact among the world’s religions. What was developing from this historical situation, Carus asserted, was a “religion that can never come into conflict with science, which is based on simple and demonstrable truth” and which is “the goal and aim of all religions” (1892: vi–vii). Carus called it the Religion of Science.²

² For a thoughtful treatment of Carus’s Religion of Science, see Verheoven.

Carus's encounter with Buddhism came at the World's Parliament of Religions, where he was especially impressed by the speeches of Dharmapala and Soyen, whose talks, as we have seen, reflected an already-modernized and westernized Buddhism. Their presentation of a Buddhism whose essence was evolution, cause and effect, natural law, and experiential knowledge convinced Carus that he had found the best representative of the Religion of Science among all the traditional, historical religions. He spent the next few years vigorously studying Asian religions and quickly became America's most enthusiastic supporter of Buddhism. His position as editor of two journals plus the Open Court Publishing Company allowed him to disseminate books and articles on Buddhism to a wide audience. Although explicit connections between science and Buddhism were scant in his works, he presented the broad outlines of Buddhism as a religion containing many essentials of Enlightenment rationalism and late-nineteenth-century science: karma was natural law translated into the ethical realm; rebirth anticipated the Darwinian understanding of species transforming themselves into other species; the detailed analyses of mind in Buddhist texts were in fundamental agreement with modern psychology; the exhortations of the Buddha to be "lamps unto yourselves," not blindly believing but to verifying his statements experientially, contained the quintessence of the scientific spirit.

Carus's most influential work, *The Gospel of Buddhism*, assembled material from the Buddhist canon edited to resemble the chapter and verse arrangement of the Christian gospels. Although disparaged by some scholars, it became quite popular and was translated into numerous languages. Like Olcott's *Catechism, Gospel* was used to introduce Asian Buddhists themselves to Buddhism: Soyen reported that it was used at Tokyo Imperial University, Dharmapala promoted it widely in Ceylon, and a sect of Japanese Pure Land Buddhists used it for training priests (Sharf: 12). *Gospel* used translations of Buddhist texts available at the time, but Carus admitted to occasional "modernization" of the contents, and he added six chapters of his own that he called "elucidations of [Buddhism's] main principles"—principles, of course, that were considered "main" insofar as they appeared to be in harmony with the Religion of Science (1915: vi). He made little attempt to conceal that he was highlighting certain aspects of Buddhism and suppressing others.

The mark of the Buddhism relevant to the modern world was, like that which embodied the true spirit of Christianity, whatever could be interpreted as in accord with the current scientific worldview. Although he did not expunge all of the miraculous elements in the texts—keeping those that he believed morally significant or that "bear witness to the holy

awe of the first disciples and reflect their religious enthusiasm”—he nevertheless “pruned away the exuberance of wonder which delights in relating the most incredible things, apparently put on to impress while in fact they can only tire” (1915: viii). Those texts, summaries, and excerpts he chose to include were many of the ethical and doctrinal teachings in the Pali canon, as well as parables and stories from the Buddha’s life. Keen to show that the heart of Buddhism was basically the same as the heart of Christianity, he also included an appendix drawing parallels between passages in his Buddhist gospel and passages in the Christian gospels. These parallels serve, in turn, another purpose: that of demonstrating that the essential truths of both Buddhism and Christianity point toward a universal religion not yet manifest in the world. His program is clear from a passage in the introduction to the *Gospel*:

All the essential moral truths of Christianity, especially the principle of universal love, of eradication of hatred, are in our opinion deeply rooted in the nature of things, and do not, as is often assumed, stand in contradiction to the cosmic order of the world. Further, some doctrines of the constitution of existence have been formulated by the church in certain symbols, and since these symbols contain contradictions and come in conflict with science, the educated classes are estranged from religion. Now, Buddhism is a religion which knows of no supernatural revelation, and proclaims doctrines that require no other argument than the “come and see.” The Buddha bases his religion solely upon man’s knowledge of the nature of things, upon provable truth. Thus, we trust that a comparison of Christianity with Buddhism will be a great help to distinguish in both religions the essential from the accidental, the eternal from the transient, the truth from allegory in which it has found its symbolic expression. We are anxious to press the necessity of discriminating between the symbol and its meaning, between dogma and religion, between the metaphysical theories and statements of fact, between man-made formulas and eternal truth. And this is the spirit in which we offer this to the public, cherishing the hope that it will help to develop in Christianity not less than Buddhism the cosmic religion of truth. (1915: xiii)

In this passage are many of the basic elements of Carus’s translation of Buddhism into a religion of scientific modernism, and it deserves extended commentary. It begins with a reference to a scientific notion of the fundamental order of things, in Carus’s words, “the cosmic order of the world” or the “constitution of existence.” It is taken for granted that the science of the day has uncovered this basic order and that there is a bedrock of scientifically discernible facts that are discoverable, provable, and undeniably true. “Scientific truths,” he claims elsewhere, “are such statements as are proved by undeniable evidence or by experiments and

formulated in exact and unequivocal terms” (1916: 28). For Carus “science is stern and unalterable; it is a revelation which cannot be invented but must be discovered” (1916: 46–47). Carus often insists that scientific truth and religious truth are one and the same—this means that truth is the correspondence of ideas and reality and that no matter the path to it, science or religious, truth is one. If a religion has any claim to truth, that truth must also be scientific—for Carus, there simply could be no other definition of truth. Furthermore, as was common in the late nineteenth century, his understanding of science assumed that it was inextricably linked to the progress of humankind as a species—that it would, as Carus puts it, “raise our civilization to a higher plane” (1916: 79).

Carus also refers in the passage above to the spiritual crisis of the educated (and no doubt his own spiritual crisis) and the problem of the disjunction between the order of things revealed by science and the doctrines and stories of the world’s religions that present an outdated worldview. This disjunction is mended by recourse to the ideas of symbolism, allegory, and mythology, loosely used, in Carus’s vocabulary, to indicate non-literal stories or ideas that nevertheless contain ethical meaning or point obliquely to literal truths. The recasting of ideas incompatible with a scientific worldview as having non-literal, symbolic meaning was and still is among the most common tools of the modernizing religious reformer. All discourse in a tradition that is obviously counter to the dominant—in this case, scientific—discourse is interpreted as non-literal, allegorical, and symbolic. In the case of Buddhism, miracle stories and pre-scientific cosmologies are erased from the realm of cognitive statements describing actual events or ontological facts about the world and translated into the realm of ethical, allegorical stories that can exist within the scientific conception of the world—or be dropped altogether as the “exuberance of wonder . . . put on to impress.” Like Rudolph Bultmann in his demythologization of Christianity over half a century later Carus attempted to find a home for Buddhism in the modern era by interpreting material unacceptable to science as mythological and symbolic. Carus, in fact, claimed that understanding such things literally was *irreligious*, a kind of “paganism.”

A religious truth symbolically expressed is called mythology, and he who accepts the mythology of his religion not as a parable filled with meaning but as a truth itself, is a pagan. Now we make bold to say, that no conflict is possible between genuine science and true religion. What appears as such is a conflict between science and paganism. (1916: 38)

Once material deemed unacceptable to science could be transposed into the realm of the symbolic, and thereby effectively neutralized, the

“essential” in a tradition could be extracted from the “accidental . . . the eternal from the transient, the truth from allegory.” Confident in his capacity to discern between the fundamental truths of Buddhism and its superstitious cultural accretions, Carus could then declare that Buddhism—no doubt, the “essence” of Buddhism—“knows of no supernatural revelation, and proclaims doctrines that require no other argument than the ‘come and see.’” Thus, all of religion is divided up into two realms consisting of the distinctions “between symbol and meaning, dogma and religion, metaphysical theories and statements of fact, man-made formulas and eternal truth.”

Finally, the passage discloses what Carus considered his ultimate purpose in presenting *The Gospel of Buddhism*: that it may further the development of a universal, cosmic religion. Carus proposed an evolutionary survival of the religious views most congruent with science until ultimately science and religion would merge.

Mankind is destined to have one religion, as it will have one moral ideal and one universal language, and the decision as to which religion will at last be universally accepted, cannot come about by accident. Science will spread, maybe, slowly but unfailingly, and the universal acceptance of a scientific world-conception bodes the dawn of the Religion of Truth—a religion based upon the plain statements of fact unalloyed with myth or allegory. (1897: 10)

Like many of his day, Carus applied rather promiscuously the broad contours of Darwin’s evolutionary theory to cultural phenomena, taking it for granted that religions “evolve” and will either continue developing to culminate in the Religion of Science or simply become anachronistic and die away. Religions as well as species were in a struggle of the survival of the fittest, and a religion that rejects science is “inevitably doomed. It cannot survive and is destined to disappear with the progress of civilization” (1916: 39). Eventually, he came to believe that Buddhism was the religion most likely to develop into the Religion of Science, for Buddhism, he claimed, “is a religion which recognizes no other revelation except the truth that can be proved by science” (1897: 114).

In contrast to Olcott, Carus represents an attempt to assimilate Buddhism with the positivistic scientism of his day. Although Olcott’s and Carus’s circles overlapped—both were associates of Dharmapala and Shaku—they had different views of science, if not Buddhism. Carus, in fact, was somewhat hostile toward “esoteric Buddhism” (Tweed: 60). Both, however, were responding in varying ways to a social crisis to which we now turn.

SCIENCE AND SOCIAL CRISIS

The discourse of scientific Buddhism as represented by these figures was part of a response to crises of legitimacy in their various cultural contexts that were at once personal, cultural, and political as well as religious. The development of the discourse among Europeans and Americans must be understood within the context of two widespread social phenomena of the late nineteenth and early twentieth centuries: the Victorian crisis of faith and the emergence of the immense symbolic capital of scientific discourse. Carus's embrace of Buddhism and his sacralization of science were occasioned by a sense of radical anomie attendant upon his loss of faith in traditional Christianity—a loss brought about in part by his belief in its incompatibility with science. Like many westerners attracted to Buddhism in his time, he had come to see orthodox forms of Christianity as deficient, effete, and pre-scientific. Although he found scientific accounts of the world irresistibly compelling, he still longed for a spiritual view of humanity and the cosmos. His loss of faith and attempts at reconstruction were not unique; a great deal of literature reflects similar crisis-of-faith experiences and religious disorientation, insecurity, and doubt among Victorians as well as new, skeptical modes of secular, religious, and quasi-religious life that arose in response (Helmstadter and Lightman). The reasons for this phenomenon are too complex to address here, but among those most important to our inquiry are the increasing dominance of scientific explanations for things formerly explained through religion and the growing distribution of scientific ideas, as well as those of non-Christian traditions, in the popular press. This crisis was also a reaction against a wave of religious revivalism and evangelical fervor in England and America and an associated increase in missionary activity (Turner: 9–38).

Carus's solution to his own crisis of faith was the valorization of the very science that had formerly robbed his world of meaning. His embrace of science as the road not only to absolute certainty but also to the progress of human civilization is clear throughout much of his writing:

Bear in mind that the nature of science is the endeavor to establish an unquestionable orthodoxy on the solid foundation of evidence and proof? (*sic*) (1916: 80)

Science has changed our life and is still changing it, raising our civilization to a higher plane, and making us conscious of the great possibilities of invention, which by far outstrip the boldest promises of the illusions of magic. (1916: 79)

To escape the moral degradation of religion, we can no longer shut out the light of science, we must learn to understand that God is a God of evolution, and the evolution means progress, and progress is the essence of life. (1916: 89)

Although extreme in contrast to today's understanding of the roles and possibilities of science, such pronouncements reflect the widespread confidence in science in the late Victorian era. The scientism of this time claimed for science not only the capacity to establish certainties about all questions that could reasonably be asked but also the ability to advance the material, ethical, and, for some, spiritual progress of humankind. Nor was Carus alone in giving a religious cast to science; religious interpretations of evolution linked with an optimistic view of inevitable progress along with religious or quasi-religious social forms were not uncommon. August Comte, the father of positivism, attempted to found a positivist church devoid of metaphysics. Henry Ward Beecher claimed that geological research had discerned "the long-hidden record of God's revelation in the material world" (quoted in Barbour: 67). Lyman Abbot referred to the scientific endeavor as describing the history of the outward signs of an "infinite and eternal energy from which all things proceed," an energy both immanent and transcendent (quoted in Barbour: 67).

Indeed, a new scientific religiosity was emerging that conjoined the scientific confidence of the time with a spiritualized optimism derived from modernist Protestantism. Accounts even of skeptics who rejected religion completely suggest that their unbelief mirrored in important ways the religious life they rejected, often involving "anti-conversion" narratives, a sense of renewed moral commitment, dedication to human welfare, and a kind of evangelical desire to promote their new views (Turner: 16–17). Thomas Huxley described the scientific establishment as the "Church Scientific" and preached what he called "lay sermons" popularizing science as well as condemning organized religion (Knight: 3–4). Carus's sacralizing of science, then, was a radicalization of tendencies well ensconced in late Victorian thinking. His attempt to merge Buddhism with science, although unusual, was a part of the wider religious experimentation not uncommon among those affected by the Victorian crisis of faith. For him science promised the certainties that religion had failed to deliver, not because religion could not access those certainties but because it was diluted by superstition and "paganism." Now that science provided the standard by which all religious claims could be checked and verified, humanity had an inerrant tool for discerning spiritual truth.

BUDDHISM AND UNIVERSALISM

Among Britishers and Americans who were becoming increasingly aware of cultural and religious diversity through the popular press, an important aspect of the Victorian crisis of faith was the challenge of religious pluralism and conflicting truth claims among the world's religions. Although the late nineteenth century was a time in which missionary expansion was at its height and traditional forms of Christianity thrived, many were profoundly challenged by the relativization occasioned by the unprecedented awareness of the profusion of worldviews. For some, including Carus and Olcott, the solution to the problem of pluralism lay in a universalist interpretation of religion in which the conflicting claims of the various philosophies and religions could be reconciled by their own self-transcendence. Theosophy's motto, "There is no religion higher than Truth," illustrated a common universalist theme: that the individual religious traditions were partial and incomplete reflections of a hidden, transcendent Truth that no one historical religion could claim exclusively. This idea was an important, albeit minority, position among Victorians and was a crucial element in the increasing acceptance of Buddhism and other non-western traditions. Its early expressions were those of James F. Clark, in his 1871 work *Ten Great Religions* and Samuel Johnson's ambitious three-volume *Oriental Religions and Their Relation to Universal Religion* published in 1872. Although they were quite informed by Christian presuppositions, both affirmed the essential unity of all religions. Although Olcott and Carus seemed to believe that Buddhism—albeit a heavily edited and revised version—was the best window on this Truth, neither saw any tradition as having exclusive possession of it. For Olcott, Buddhism was the best expression of the primordial esoteric tradition that infused all religions. Although he considered himself a Buddhist and had taken refuge in the three jewels, this identity was subsumed under his allegiance to the more universal vision of Theosophy. Olcott's Buddhism was not just a tradition among traditions but the best representative of the primal, perennial tradition:

Our Buddhism was that of the Master-Adept Gautama Buddha, which was identically the Wisdom Religion of the Aryan Upanishads, and the soul of all the ancient faiths. (Olcott 1974–1975, vol. 2, 168–169)

For Carus, Buddhism was the most promising pointer to the Religion of Science, not Olcott's ancient, primal tradition but an emerging universal religion science that would retain what is true in historical religions and discard the rest as nature casts off species no longer viable. Carus's

primary existential commitment was clearly to this grand narrative of scientific religion rather than to Buddhism *per se*. His enthusiasm for Buddhism lay in his interpretation of the Buddha as the “first prophet of the Religion of Science” (1897: 309). Insofar as Buddhism—as well as a similarly demythologized Christianity—could be integrated into the totalizing discourse of religious scientism, it could help to elevate science to the status of a religious revelation rather than the cold, harsh destroyer of religion that it had seemed in his initial crisis of faith.

This commitment to a notion of religious truth that transcends any historical religion was a crucial theme in the western interpretation of non-western traditions. Few Europeans and Americans in the Victorian era embraced Buddhism exclusively; rather, they saw it as a compelling part of a larger picture. Then, as well as today, the allegiance of many western Buddhists or Buddhist sympathizers was not to Buddhism as such but to a truth to which they believe Buddhism is one path among many (Gregory). Themes from Buddhist scriptures such as the metaphor of the raft and skillful means (*upāya*) are easily interpreted in such a light. This solution to the problem of pluralism, however, is less an adaptation of Buddhist ideas than a further elaboration of issues at the heart of the European Enlightenment and the very birth of modern scientific discourse itself. Stephen Toulmin convincingly demonstrates that the opening gambits of the Enlightenment—Descartes’s attempts to establish a totalizing discourse of truth and a method that would ascertain certainties transcending sectarian differences—were themselves rooted in an earlier crisis of religious pluralism: the Thirty Years’ War. The project of modernity itself, Toulmin argues, was founded on a reaction against the tolerance of ambiguity and uncertainty characteristic of Renaissance writers such as Montaigne and the pressing need to overcome the doctrinal differences and pluralism perceived to have caused these wars. Truth, on this model, must transcend specific cultural contexts, religious positions, and political agendas; it must establish universal laws, ethical norms—in Carus’s words, establish an “unquestionable orthodoxy on the solid foundation of evidence and proof” (1916: 80).

The desire for transcendent certitude and universal truth is, however, inevitably shaped by particular traditions and cultural conditions, and this apparently universalist position was from the beginning a part of the pluralistic mix. Moreover, despite its disaffection with western modes of thought and practice and its frequent appeals to the wisdom of an exotic tradition, it was a position grounded in western modernity. As Prothero shows, however much Olcott distanced himself from traditional Christianity, the deep structure of his Buddhism remained embedded in Protestantism (7–9, 176–177). Olcott and Carus were anxious to

fit Buddhism into the late-nineteenth- and early-twentieth-century metanarrative of modernity with its themes of Enlightenment reason, scientific and social progress, optimism, and activism. Nevertheless, just as Descartes's dream of establishing indubitable foundations of philosophic and scientific discourse failed to banish ambiguity and plurality, Carus's and Olcott's universalism could not escape becoming one position among others; nor could it avoid clashing with modernizers with somewhat different interests—most notably, Dharmapala.

INDIGENOUS MODERNITY AND INVERSE CHRISTIANITY

If Carus's and Olcott's contributions to the discourse of scientific Buddhism were inextricably intertwined with the scientific triumphalism of their time and place, Dharmapala, as well as some other modernizing Asians like Soyen, used scientific rhetoric to legitimate his own triumphalist Buddhist–nationalist discourse. Despite the considerable influence of Olcott and Protestantism on Dharmapala, his partnership with Olcott and the Theosophical movement could not ultimately withstand their fundamental differences. One of the important factors in Dharmapala's rejection of Theosophy centered on this issue of universalism; the price of Buddhism being assimilated into a non-Buddhist model of truth was ultimately too high for him. Theosophy's main tenet, "There is no religion higher than Truth," necessarily subsumed living religious traditions beneath a supposed abstract, universal religion transcending all of its imperfect and fragmentary reflections. Olcott had already acutely experienced the practical problems of approaching adherents of living traditions with this idea; Dayananda Saraswati, whose organization, the Arya Samaj, had once merged with the Theosophical Society, eventually renounced his ties to it because he saw Olcott as being too Buddhist and not accepting the higher revelation of the Vedas. Dharmapala, in turn, broke with Olcott, asserting that Theosophy was "only consolidating Krishna worship" and that because "theosophy enunciates the existence of the Great Lifegiver, the fundamental identity of all souls with the Universal Soul, emanation of souls from the Central Logos, etc.," Theosophy was not Buddhist (Henry Steel Olcott correspondence; quoted in Prothero: 167). "To say that all religions have a common foundation only shows the ignorance of the speaker . . . Dharma alone is supreme to the Buddhist" (Henry Steel Olcott correspondence; quoted in Prothero: 172). Furthermore, he was incensed by Olcott's suggestion that the famous tooth relic of the Buddha at Kandy was really an animal bone. Olcott, in turn, was disturbed by Dharmapala's

encouraging of Sinhalese Buddhists to go on pilgrimages and attend festivals (Obeyesekere: 239).

Especially after his break with Theosophy, Dharmapala was often vitriolic in his discussions of other religions, vilifying Christianity, Judaism, and Islam. His critiques frequently used terms of opposition common to European and American literature of the time—civilized vs. primitive, Aryan vs. Semitic. Such oppositions were used to advance the idea that “Semitic religion,” be it Christianity, Judaism, or Islam, was archaic, pre-scientific, and “unsuited for a civilized Aryan community” (Dharmapala: 400). “The Semitic religions,” he claimed, in contrast to Buddhism, “have neither psychology nor a scientific back ground (*sic*)” (439). Although conciliatory toward Christianity while in America and toward Hinduism while in India, by the 1910s his writings were increasingly intolerant of both. Apparently no longer concerned with allying himself with liberal Christians, as he had at the Parliament, he portrayed Jesus as a “personality of an irritable temper,” whose “turbulent behavior at the temple . . . aroused the passions of the mob”; who preached of a god who sent people to eternal fire; demonstrated his lack of compassion by “sending 2000 hogs to be drowned in the sea”; had “unclean habits”; associated with the “socially and morally low”; and was rude to his own mother (439–440).

Crucial to Dharmapala’s attacks on Christianity was the fact that it was Semitic rather than Aryan and was rooted in the worship of the anthropomorphic “tribal god of Horeb.”

The British people today take pride in calling themselves Aryans. There is a spiritualized Aryanism and an Anthropological Aryanism. . . . Buddhism is spiritualized Aryanism. The ethics of the Bible are opposed to the sublime principles of the Aryan Doctrine promulgated by the Aryan Teacher. We condemn Christianity as a system utterly unsuited to the gentle spirit of the Aryan race. (442)

Along with references to the violent nature of both the Jews of the Hebrew Bible and European Christians, who had plundered the world in a crass grab for wealth and power, is the pervasive opposition of Christianity and Buddhism with regard to science.

With the spread of scientific knowledge, Christianity with its unscientific doctrines of creator, hell, soul, atonement, will be quite forgotten. With the expansion of knowledge Europeans may come to know more of evolution, of the laws of causation, of the changing nature of all phenomena, of the divisibility of matter, of the progressive nature of the animal and human consciousness, then will Buddhism meet with a sympathetic reception. (465)

Through the rhetoric of scientific Buddhism Dharmapala was able to embrace and yet deflect the racist themes widely accepted in European culture at the time. Appealing to the image promulgated by the Romantics of an ancient, cultured, and advanced, but now lost, Indo-European civilization, he could present not only the “Aryan” element as the noblest in European civilization that was overshadowed by the Semitic element but also Buddhism as the true antecedent to the most impressive of modern western accomplishments, the rise of science. In contrast to the often-stated formula that nineteenth-century authors characterized “the East” as primitive and mystical compared to the modern, rational West, Dharmapala presented Buddhism as quintessentially modern and rational in ancient times. Europe, in contrast, was a kind of lost tribe of the Aryans who had been seduced into primitivism and barbarism by the Semitic religions and only now were becoming modern and scientific.

Dharmapala’s vitriol against other religions and his continued reverence for many traditional aspects of Sinhalese Buddhist culture turned the universalism of Olcott and Carus on its head, claiming scientificity for Buddhism alone. His rejection of the assimilating tendencies of religious universalism and his rootedness in the social and religious world of Ceylon, while at the same time incorporating modernist themes into this tradition, constitute an aspiration to a type of modernity different from that of the West. Rather than submitting Buddhism to the logic of western modernism, he strategically appealed to science in order to reinforce what he perceived to be the inviolable truths of the Dharma. In this sense his Buddhist modernism, though it employed the same discourse of scientific Buddhism used by Carus and Olcott, represented an *indigenous modernity*—one that selectively utilizes distinctively modern western discourses but incorporates them into indigenous discourse to form a unique hybrid that refuses to be fully assimilated to western philosophical, social, and praxeological formations.

Finally, it is important to draw out explicitly what is implicit in this article: that the discourse of scientific Buddhism emerged in direct relation to Christianity and that the questions each of our authors asked of Buddhism were framed in terms of Christianity. It is hard to overestimate the extent to which the early discourse of scientific Buddhism was inextricably intertwined with Christianity. Although it adopted the Protestant emphasis on text, personal experience, social activism, and Victorian Christian social mores, it was also in many respects a point-by-point negation of elements of the Christianity that Victorian skeptics questioned. Buddhism had no cumbersome concept of a personal god; it presented a universe run by “natural law” and “cause and effect” rather than the capricious dictates of a creator; its founder encouraged skeptical

questioning and experimentation rather than blind faith; it anticipated recent psychological discoveries in the West rather than embracing naïve theories of a soul; its ideas of karma, rebirth, and the continuity of species anticipated, rather than clashed with, evolutionary theory; it had no morally repugnant eternal hell, no divine incarnation, no miracles. It became, in effect, an inverse reflection of what skeptics and liberal Christians believed to be problematic about orthodox interpretations of Christianity in light of scientific developments and biblical criticism. This, perhaps more than any other factor, was the reason for the effectiveness of this discourse. For spiritually unmoored Victorians it offered the hope of a religion that did not conflict with the dominant discourse of science. For the colonized it offered a tool by which to critique the hierarchical taxonomies implicit in the colonial project and the dominant worldview of the colonists.

The story of the early development of the discourse of scientific Buddhism, therefore, suggests that it emerged out of two intertwining crises in different cultural contexts: the Victorian crisis of faith in England and America, and the crisis of colonialism and western hegemony in Asia. It also drew on the immense prestige and legitimizing potential of science in the late nineteenth century. Although the discourse promoted by all three of our figures was relatively homogenous with respect to Buddhism's "scientific" aspects, their divergent motivations and allegiances revealed the fissures in the discourse between the universalist approach and indigenous modernist approaches—fissures that continue till today.

A NOTE ON THE DISCOURSE OF SCIENTIFIC BUDDHISM TODAY

The discourse of scientific Buddhism, despite these rather inauspicious beginnings, is no less powerful now than it was a century ago. Although the nineteenth-century optimism regarding the unmitigated goodness of science is now but a distant dream, the transformative power of science and its dominance regarding claims of truth remain virtually unchallenged. The discourse of scientific Buddhism, moreover, has changed significantly in recent decades, in part because of the far greater knowledge of Buddhism those involved in the discourse have and because of the empirical component that has emerged in recent decades. Contemporary researchers hook up meditating monks to functional magnetic resonance imaging (MRI) machines mapping their brain states and physiological functioning and do long-term studies on the health benefits of Buddhist mindfulness practices to heart patients. Thus, in contrast to one hundred

years ago, the forefront of the discourse of scientific Buddhism is now the laboratory, where scientists perform experiments informed by Buddhist-inspired questions.² Although these empirical studies are sometimes nestled within the same vague assertions of scientific Buddhism we have examined, they tend to explore more specific questions related to health and psychology and, at their best, can rightly claim a far more extensive and mature understanding of both textual and living traditions of Buddhism. My purpose in this final note, however, is not to evaluate this new phase of the discourse or its place in the academic study of Buddhism but rather to ask, as a historian of Buddhism, what is its possible historical significance to Buddhism itself.

For the historian of religion the question of whether two very complex and internally variegated phenomena—Buddhism and science—are compatible is rather unwieldy. It posits a monolithic “Buddhism” as well as a monolithic “science,” reduces Buddhism to its highly philosophical elements abstracted from any living context, and further reduces these to “general principles,” which are then rendered compatible with scientific principles (Leidecker: ix). Like Dharmapala’s “generalized idea of Buddhism” (see his first quotation in this article) such reductions create an abstract Buddhism already constituted by modernist presuppositions. The wealth of Buddhist scholarship in the last few decades has made it clear that Buddhism is too complex and diverse to be reduced to such generalities. This does not mean, however, that fruitful work cannot be done in the sciences with questions derived from Buddhist perspectives and practices—after all, much of western science has developed within the rubric of implicit Christian assumptions—rather, it means that the discourse is not the best one to inform the historian about Buddhism as a historical and cultural phenomenon, because the Buddhism in question is already reconfigured in terms of modern scientific thinking. Yet, what historians and cultural critics are liable to miss in their rush to dismiss the discourse of scientific Buddhism as an orientalist or “occidental” representation is that it is not simply a matter of *representation* but rather is a concrete and highly significant transformation of Buddhist traditions themselves. It is not *just* a western orientalist representation of the eastern Other, nor is it *just* a native strategy of legitimation for Asian Buddhists, though it does involve both. It is rather a part of the ongoing hybridization

² At the forefront of these studies is the Mind and Life Institute, which hosts conferences and sponsors empirical research on the scientifically discernible effects of Buddhist meditation and contemplative practices. Participants have published a number of books on the Institute’s conferences with the Dalai Lama and on the results of empirical research. (See Davidson and Harrington; Goleman: 1997, 2003; Hayward and Varela; Houshmand, Livingston, and Wallace; Varela.)

of certain forms of Buddhism with distinctively modern cultural formations and intellectual practices. The historical question regarding contemporary Buddhism, then, is not “Is Buddhism scientific?” but “How is Buddhism transforming itself through its engagement with science?” Rather than telling us “what Buddhism is,” this discourse is itself constitutive of novel forms of Buddhism with shifting epistemic structures and criteria for authority and legitimacy.

Daniel Goleman, one of the leading popularizers of research involving Buddhist meditation practices, illustrates this shift with an offhand comment in an interview for a popular Buddhist magazine. Discussing empirical studies of experienced meditators performing compassion meditation, Goleman reports that MRI machines showed that areas of their brains associated with joy were highly active—more than any others that had ever been measured (Goleman, “Taming Destructive Emotions,” 2003]; Davidson and Harrington). When asked about the significance of this he said of traditional Buddhist approaches to overcoming *kleśas* negative psychological states: “[I]t’s beginning to look like the Buddha just might have had it right” (Goleman, “Taming Destructive Emotions,” 2003: 78). This research itself is interesting from both a scientific and religious point of view, but it is this statement that is compelling from the perspective of the history of Buddhism. It suggests that the epistemic authority of the sutras, the purported words of the Buddha (*buddhava-cana*), which have been authoritative for virtually all Buddhists, is now being subsumed beneath the epistemic authority of the scientist.³ For we can assume that honest scientific investigation may find that in some respects the Buddha, as it were, got it wrong. This suggests that some of the tensions present in the early development of the discourse of scientific Buddhism are still at work today. Although some Buddhists may simply be looking for legitimation of the Dharma through science, and may lose

³ The issue of epistemic authority in Buddhism is complex and variegated. The *Kalama Sutta*, which is often cited by Buddhist modernists to show the compatibility of Buddhism with modern scientific and rationalist modes of inquiry, presents the Buddha telling his disciples to accept his teachings only when they have verified them personally. Yet some schools have accepted the “reliable testimony” (*śabda*) of the Buddha as a means of valid knowledge (*pramāṇa*), making the words of the Buddha as authoritative as perception and inference, the other two universally accepted *pramāṇas*. Even among those who rejected reliable testimony it is difficult to find evidence that the word of the Buddha was not held supremely authoritative, both in the texts and certainly on the ground. Dignāga, the sixth-century master of Buddhist epistemology, rejected reliable testimony as a *pramāṇa*, not because he held the words of the Buddha as less than authoritative but because, he argued, they themselves were based on the Buddha’s perception and inference; adding reliable testimony to the list of *pramāṇas* acceptable to the Buddhist, therefore, was redundant. I believe that one would be hard pressed to find a “non-modern” Asian Buddhist, living or in the ancient texts, who did not consider the words of the sutras all but supremely authoritative. For a further discussion of Buddhist *pramāṇas* see Hattori; McMahan: 47–51; Mohanty.

interest if science fails to deliver, others no doubt see scientific experimentation as the ultimate arbiter of what is the case and, like Carus and Olcott, are willing to subject Buddhist claims to a non-Buddhist standard of truth.

That Goleman and other western scientists, *qua* scientists, do this is not surprising. What is extraordinary, however, is that the fissure between indigenous modernists like Dharmapala and those maintaining a universalist discourse (in this case, contemporary science) has been recently transgressed by prominent Buddhists, notably the most prominent one in the world, the Dalai Lama, who has actively encouraged much of the aforementioned research. The Dalai Lama has famously said that if there are Buddhist doctrines found definitively to contradict established scientific conclusions, then these doctrines must be abandoned. Taken at face value this would seem to signal a profound change in the structure of Buddhist claims to authority if the Dharma itself is subject to scientific epistemic authority. To my knowledge, however, there has been no large-scale jettisoning of Buddhist doctrine; Buddhists have not suggested that the pre-scientific cosmologies and miracle stories be expurgated from the canon. Rather, these elements are either ignored or become reinvested with meanings that are viable within a modern worldview. Many modern Buddhist teachers, for example, present the wheel of rebirth, the traditional doctrine of the various realms into which beings are reborn, as neither obsolete nor literal cosmology but as a psychological reality, with each realm representing a state of mind. Chögyam Trungpa, for example, claimed that an individual might enter each realm in a single day. The realms of rebirth, then, become psychological realms representing greed or jealousy rather than actually places in which hungry ghosts or jealous gods dwell. The discourse of scientific Buddhism, therefore, has become an important part of how Buddhists address a question that permeates religious thought in the modern world: how to decide what is to be understood as literal and what is to be reinterpreted as myth, symbol, or allegory. In some respects this is a modern transformation of a traditional Buddhist hermeneutical issue regarding literal or allegorical meaning—indeed, the distinction was not invented by modern westerners (Lamotte). The contemporary hermeneutic situation is unique, however, in that for the first time a non-Buddhist discourse is increasingly used to decide this question.

The unique and prominent place of scientific discourse in Buddhism, therefore, is not just a representation of Buddhism but a powerful constituent of what certain forms of modern or postmodern Buddhism are becoming. It is an important aspect of the continuing hybridity between modern, western thought and Buddhism and a part of the

ongoing negotiation regarding what claims can still be maintained ontologically and what must be construed as mythic, symbolic, or psychological in significance. Such questions already cause a fair amount of contestation, and the discourse of scientific Buddhism, having arisen out of crisis, may well provoke its own crises as traditions struggle over what points of Dharma are negotiable and what are not. Again, this process is in no way unique to Buddhism—virtually all historical religious traditions go through such processes in their encounters with modernity. Because science has had such an important legitimating role in modern Buddhism, however, it will likely play an unusually powerful constitutive role in what modern Buddhism is to become.

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