



## Protestant Theological University

### **The Nature of Material Reality: Interreligious Conversations at the Cusp of Modern Science in India**

Christian, C.S.; van den Toren, B.

*Published in:*  
Philosophy, Theology and the Sciences

Published: 01/01/2022

*Document Version*  
Publisher's PDF, also known as Version of record

[Link to publication](#)

*Citation for published version (APA):*  
Christian, C. S., & van den Toren, B. (2022). The Nature of Material Reality: Interreligious Conversations at the Cusp of Modern Science in India. *Philosophy, Theology and the Sciences*, 9(2), 173-196.

#### **Copyright**

Other than for strictly personal use, it is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license (like Creative Commons). You may freely distribute the URL identifying the publication in the public portal.

This publication might have been made available through the PThU Research Portal under the terms of Article 25fa of the Dutch Copyright Act, indicated by the "Taverne" license. More information can be found on the PThU website: <https://www.pthu.nl/over-ptthu/bibliotheek-ptthu/diensten/article-25fa-taverne-amendement-end-user-agreement.pdf>

#### **Takedown policy**

If you believe that this document breaches copyright, please contact us providing details, and we will investigate your claim and remove access to the work if necessary: [bibliotheek@pthu.nl](mailto:bibliotheek@pthu.nl).

Downloaded from the PThU Research Portal (Pure): <https://pure.pthu.nl>.

Charles Christian and Benno van den Toren

## The Nature of Material Reality

### Interreligious Conversations at the Cusp of Modern Science in India

In this paper, we take McGrath's concept of different readings of 'nature' as a point of departure for sketching a history of interreligious conversations between selected Advaitic thinkers and their Indian Christian interlocutors. We highlight contextual factors that have framed science-religion discourse in the interreligious context of India in a certain way. However, we also argue that the interreligious conversation between both the interlocutors disclose that they held their views not as mere constructions under contextual pressures, but as alternative perspectives on the same reality and that they held these perspectives with 'universal intent.' Discerning a certain dialectic relationship between contextual and universal factors can help to both understand the nature of interreligious dialogue and recognise its relevance for global discourse on science and religion.

*Keywords:* Science, Religion, Nature, Intercultural, Interreligious, Colonialism, Neo-Hindu, Indian Christian

### 1. Introduction

I (Charles) come from a region in Western India where rain is rare and is thus romanticised in people's lives and imaginations. For a country that is cursed with long, scorching summers and which largely depends on rain-water for its agriculture, rain is viewed as a sign of God's favour. Indian art and literature are infused with a romantic image of rain. When in India, the idea of going 'sun-bathing' during the summer holidays did not make sense to me; what, after all, could be romantic about the sun? Then we moved to the Netherlands, where frequent downpours made us long for sunshine, and rain no longer felt like a sign of God's favour. Sun-bathing began to make sense then. This rather simple illustration explains that how we engage with nature is shaped by our 'situatedness.'

Similarly, recent postmodern approaches to nature have disclosed that there is no single way of reading nature. Nature is rather so diversified that not only our approaches to it but also our representations of it are shaped

by what is available to us as ‘nature’ (Harding 1998, 67; 1991, 87). What we understand by ‘nature’ is “constituted in social thought” (Harding 1991, 165) and “socially mediated” (McGrath 2001, 87, 133). There are multiple conceptions of nature. Such a conclusion is both liberating and disconcerting: liberating because it creates space for alternative conceptions that do not simply view nature as ‘red in tooth and claw,’ and disconcerting because, as Alister McGrath puts it, “given that ‘nature’ is an interpreted and mediated notion, what interpretation is to be preferred?” (133). For McGrath, this opens a venue to present his Christian understanding of nature as creation, although he acknowledges that there are other religious understandings of nature and that a dialogue about how they ‘see’ nature could be enriching (McGrath 2017, 155). In this paper, we take McGrath’s concept of different readings of ‘nature’ as a point of departure to investigate a historical episode of interreligious conversation between selected Advaitic thinkers<sup>1</sup> and Indian Christians on the nature of nature or material reality. The objective is twofold. Firstly, we explore contextual factors that frame an interreligious discussion on the nature of material reality in a certain given way. Secondly, we argue that though men (and women) of their times and contexts, both Christian and Hindu interlocutors in the discourse under consideration, maintain their reflections to be part of a ‘catholic’ or ‘universal’ world in the sense that they consider their beliefs as alternative perspectives on the same reality, and hold them with ‘universal intent.’ Discerning this dialectic relationship between contextual factors and universal intent is helpful both to understand the nature of interreligious dialogue in a broader sense, and to recognise its relevance for the global discourse on science and religion.

## 2. Colonial and Intercultural Encounter as a Context for Interreligious Reflections on Material Reality

Modern Western science arrived in India as an alien concept through colonial channels, creating varied reactions. To the rising Indian middle class, the benefits of science and technology seemed promising. In his letter to Lord Amherst, Raja Rammohan Roy, known as the father of Modern India, implored the government not to invest in establishing a Sanskrit

---

1 Our selection of Advaitic thinkers is based on several factors: firstly, due to historical contingencies discussed later in the chapter, Advaita has become almost synonymous with Hinduism; secondly, and partly because of its popularity, it has enjoyed the widest and most eloquent conversations with natural sciences.

seminary that he believed would “load the minds of youth with grammatical niceties and metaphysical distinctions of little or no practical use to the possessors or to society” (Roy 1901b, 325). Instead, he advocated for a European model of college in English that would “promote a more liberal and enlightened system of instruction, embracing Mathematics, Natural Philosophy, Chemistry, Anatomy, with other useful sciences” (327). As Mackenzie Brown remarks, “in India the initial interest in science and especially technology in the colonial period was largely utilitarian rather than theological or moral” (Brown 2012, 87). The response to science was certainly more diverse and in proportion to Indian reactions to colonialism itself (Kulkarni 2015, 55–56).

In addition, science came with its own assumptions about nature, its ‘this-worldliness,’ and, equally importantly, because it came from the other, who was perceived to be dominant and more powerful precisely because of its scientific edge. Consequently, attempts were made to resist, reject, accommodate, and even sever science from its Western moorings, and to ground it in Indian soil. Given the traction it had gained, if wisely assimilated and domesticated, modern science could be used to turn colonial supremacy on its head. However, this was easier said than done, because India’s ‘other-worldly’ image stood in sharp contrast to the ‘this-worldliness’ of modernity (Gunton 1993, 74–75). Since this image was shaped in the crucible of inter-cultural encounters between the West and India, a brief historical investigation into its construction is appropriate here.

### **a) Anglicists, Romanticists, and Integrationists**

Several approaches are employed to describe Western reaction to India (Sen 2005, 141; Brown 2012, 69–75). A rather superficial, ‘Anglicists-Romanticists’ binary can be used as a heuristic device to provide a general overview of the two extreme Western reactions to the Hindu/Advaitic view of the material world, highlighted by their use of the phrase ‘other-worldly.’ ‘Anglicist’ here refers to a historical attitude that denies India any value that could contribute to human progress, while ‘Romanticist’ refers to an attitude that attributes everything required for human progress to India. The word ‘human progress’ is key here: for Anglicists, it often meant material progress, while Romanticists considered the kind of material progress modernity had inaugurated to be reductionist, excluding many other important areas of life. A third category can be introduced here of those who recognized that India and the West were essentially different, but that their differences could be integrated for common welfare. Needless to say, these are not watertight

categories, and reactions to India's religion were much more nuanced than this categorisation suggests.

Western exposure to Hinduism began soon after the West's contact with India, primarily through the reports of Franciscan, Dominican, and Jesuit missionaries (Halbfass 1990, 37). However, the attention of the West was really captured by Eastern philosophies from 1760 onwards due to growing body of work by English Orientalists, especially William Jones, Charles Wilkins, and Henry Thomas Colebrook, and their 'discovery' of the repository of Sanskrit literature. This contributed to what later became known as Hindu literature (Marshall 1970, 2), and shaped European perceptions of the religious life of India. Despite the diverse attitudes that these Orientalists held toward the culture and philosophy of India, Jones, Wilkins, and Colebrooke were all "advocates of the view that the mythological, religious and philosophical tradition of India was especially ancient and pristine" (Halbfass 1990, 205, 63). This romantic nostalgia for antiquity was itself a reaction against abrupt changes brought about by modernity in Europe, such as a break from the traditional way of life, economic upheavals, a general decline in religiosity, and other social modifications (73).

For those of the Anglicist persuasion (both European and Indian), India was "in a state of intellectual stagnation" (Marshall 1970, 3). Georg Hegel, Karl Marx, and Max Weber had pointed to India's 'other-worldly' metaphysics to explain its slow material progress (King 1985, 4). Hegel called Hinduism "The Religion of Phantasy" (Jon 2016) and famously said, "in India we see God in the delirium of his dreaming" (Hösle 2013, 433). Marx, who considered village communities the archetype of Indian identity, believed that "Hindu religion ... was a primitive worship of Nature and reflected man's *non-rational* attitude to Nature" (Ling 1980, 76; italics ours). Max Weber likewise argued that Hinduism "entailed a devaluation of the world and an absolute flight from the world. Whatever the means adopted for reaching the holy goal of salvation, all these Indian cults alike were characterised ... by irrationality" (89).

Debiprasad Chattopadhyaya, an Indian and Marxist historian of science, likewise believed that Hindu monism produced "lofty contempt for nature or material world" (Chattopadhyaya, Needham, and Jain 1996, 281).

At the centre of this charge of otherworldliness was the Advaitic doctrine of *maya*. The word Advaita, which literally means 'not two,' is generally translated as monism, whereas *maya* refers to the belief that the material world is an appearance, or, popularly translated, an illusion.

On the other hand, Romantics (most of them German) used this very notion of 'other-worldliness' to critique the 'this-worldliness' and the

plight of spirituality brought about by modernity in their own context (Halbfass 1990, 73). India occupied a space of “mythical proportions” in the imagination of German Romantics (72). Johann Gottfried Herder, considered as the pioneer of the Romantic movement, often compared India to the childhood of humanity, where innocence and wholeness reigned. The Schlegel brothers, Friedrich and Wilhelm, continued to project India as a place of pristine religiosity and wholeness that was endangered by the onslaught of modernity. Max Müller, the most celebrated German Indologist, often claimed in most striking terms that India was humanity’s original home (82).

Growing acceptance of evolutionary theory made it possible for both Anglicists and Romanticists to view history as gradually ‘progressing’ from least to more advanced ways of life, the former signified by India and the latter by Europe (King 1999, 118). However, it was Arthur Schopenhauer who turned the tables in favour of India and placed it at the pinnacle of civilization (Cross 2013, 14). Clarke comments:

Especially important for Schopenhauer was the Hindu concept of *maya* which for him indicated the illusoriness of the phenomenal world of multiplicity, and the Upanishadic teaching that all things are ultimately one appealed to him as the precise equivalent of his notion that the apparent separateness and individuality of things is a mind-made illusion (Clarke 1997, 68).

The doctrine of *maya* fitted well with the then popular German idealism of Schopenhauer and Kant. Thus, Paul Deussen, a German Indologist influenced by Kant and Schopenhauer commented that Indians

will be greatly astonished to find in Germany the scientific substruction of their own philosophy, of Advaita Vedanta! For Kant has demonstrated, that space, time and causality are not objective realities, but only subjective forms of our intellect, and the unavoidable conclusion is this, that the world, as far as it is extended in space, running on in time, ruled throughout by causality, in so far is merely a representation of my mind and nothing beyond it (Deussen 1907, 57).

The parallels between German idealism and Advaita were so striking that several Indian thinkers called Advaita “Indian Idealism” (Srivastava 1973; Radhakrishnan 1932). A giant leap in the scientisation of Advaita came when the correlation between science and Advaita-German idealism found its way into quantum physics via Wolfgang Pauli, Niels Bohr, and Erwin Schrödinger (Schrödinger 1964). Schrödinger not only read Paul Duessen and Schopenhauer, but also the Vedas and the Upanishads. The same correlation was later etched into popular imagination through the writings of Fritjof Capra (Capra 1982) and Gary Zukav (Zukav 1984; for a critique of Capra and Zukav, see Smith 2013), and continues to dominate the narrative

that subject-object non-duality of quantum mechanics is evidence supporting Advaitic monism (Panda 1991, 318, 335). For instance, Varadaraja Raman opines that when physicists such as Schrödinger, Eugene Wigner, and David Bohm saw

more than parallels between the collapse of the quantum mechanical wave function and the intertwining of *purusha* [consciousness] and *prakriti* [nature] ... it reflects as much the open-mindedness of the thinkers as the *intrinsic truth content of the matter interpreted* (Raman 2002, 89; italics ours).

Between the Anglicists (represented by Hegel) and the Romantics (represented by Schopenhauer) lay the integrationists. Albert Schweitzer recognized that the West and India are “entirely different” (Schweitzer 1960, I; King 1985, 4) from each other in that the former is life and world-affirming, while the latter is life and world-negating. However, he believed this could lead to a great synthesis towards “the attainment of a mysticism of ethical world and life affirmation” (Schweitzer 1960, 18). Aurbindo Ghose believed that “it may well be that both tendencies, the mental and the vital and physical stress of Europe and the spiritual and psychic impulse of India, are needed for the completeness of human movement” (Ghose 1972, 20; quoted in Raghuramaraju 2006, 103).

A related but more popular binary in the integrationist approach is that of the Materialistic West and the Spiritual East. Given that India’s “other-worldliness” was considered both its vice and virtue: a vice as per the Anglicists and a virtue as per the Romantics, these binaries were sustained, however unhelpful they were for India’s own scientific development (Kumar 1995, 229). In the integrationist camp, it was meant to support complementarity. However, in most Neo-Hindu ‘complementarian’ writings, Indian spirituality almost always trumped Western materialism (King 1985, 22). On the other hand, for those with Anglicist leanings, it fostered the contrast between the dynamic West and static East, thereby validating modernity, and sometimes even colonialism, as a just means to introduce progress from outside India (King 1999, 228; Inden 1990, 89–96). This Materialistic West and Spiritual East binary has become a dominating trope in science-religion discourse in India despite the fact that it is grossly generalised and unhealthy – not only it unfairly paints Westerners as more materialistic than Indians, and the Indian victims of forced poverty as those seeking spirituality, it also wrongly prescribes spiritual impoverishment as necessary to material progress, and material poverty as essential to spiritual well-being (see, for instance, Raman 2005; Paranjape 2009, 3–14).

## b) Evolutionary Theory and Growing Realism

Hindu philosophical speculation on the nature and creation of the material world goes back centuries. From the thought-provoking ‘creation hymn’ of Nasadiya Sukta, with its sceptical tone towards the Creator, to the more systematic speculation articulated in six different schools of Hinduism, the origin of the material world has remained a subject of philosophical interest. Early Hindu schools fiercely discussed and defended their position on how the universe was created and the relationship between material reality and the Ultimate following creation. Both Samkhya and Yoga<sup>2</sup> believe in the dualism of *prakriti* (nature) and *purusha* (Brahman) and argue that the world was manifested by a disturbance in the balance of *prakriti* caused by the gaze of *purusha*. Nyaya and Vaisheshika espouse that the world was manifested by the organisation of eternal atoms. Purva-Mimansa considers the world to be eternal and does not feel the need to posit the existence of a Creator God. Among the sub-schools under Vedanta, both Advaita and Vishishtadvaita believe that the world is the manifestation of Brahman. However, they differ in terms of how the creation is related to Brahman. While Advaita holds that the new material reality, being *vivarta* (an illusory manifestation), did not affect Brahman in any way, Vishishtadvaita believes that Brahman experienced real transformation as a *parinama* (consequence) of creation. The Dvaita sub-school of Vedanta believes in three realities, that of Brahman, *atman* (souls), and *prakriti* (nature), while also postulating Brahman to be the only independent reality.

Although there had been an ongoing discussion about the nature of material reality, what changed with the arrival of Western science and modernity as a whole was a further push towards a realistic understanding of material reality. The intercultural encounter had resulted in the essentialisation of Hinduism as Advaita and the popularisation of its idealistic tendencies. However, the immense material benefits yielded by modern science and technology, and the rise of evolutionary theory led to a new focus on material reality, challenging the very idealism of Advaita. According to Ripusudan Srivatsava, evolution established the following:

Man [sic] is a complex being and that all his ingredients are equally real and important. When life was first introduced, it did not throw away matter but chose to transform it into the body of plants. Similarly, mind appeared at the stage and was introduced to the living human body which contains matter and life, of course in a transformed state. Thus one should not assume that the body is the lower element from which evil arises. Here a marked departure from illusionistic philosophy is obvious (Srivatsava 1973, 180).

2 Yoga here refers to a Hindu school of philosophy and not the contemporary method of physical exercise.



Thus, evolutionary theory raised the issue of the spirit-matter integration, which forced Indian idealists to assess its theory of *maya* and rethink their faith in the context of emerging stress on the material world.

Advaita thinkers and their Indian Christian interlocutors operated in the context of colonialism and intercultural encounter, where ‘other-worldliness’ of Hinduism was emphasized and contrasted against modernity’s ‘this-worldliness,’ and the focus on the material world brought by the economic benefits of science and the ascending acceptance of evolutionary theory. Naturally, these strong influences had some repercussions on inter-religious dialogue.

### c) Implications for Interreligious Dialogue

This intercultural encounter between the West and India charted out a definite path for interreligious discussion between Hindus and Indian Christians on the nature of material reality, and thereby, for science and religion.

Firstly, through its influence on Oriental writers, the Romantic imagination had essentialized India and Hinduism in certain ways. The Upanishads became the Hindu scriptures, ‘mysticism’ was perceived as the nature of Hinduism, and Vedanta<sup>3</sup>, by which most Western scholars meant Advaita, was firmly established as the culminating point of all Hindu thought (King 1999, 119, 128). Indian Christian thinkers also had to navigate within this milieu. Although there were several attempts by both Western and Indian Christians to engage with other schools of Hinduism (Banerjea 1861; Goreh 1911; Ballantyne 1859), the territory in which the interreligious dialogue could take place, especially that on material reality, remained thoroughly permeated by Advaita.

Secondly, from its very inception, the science-religion discussion in India was an interreligious conversation. This was partly because as Hinduism was emerging as a religion that seemed to unify India in a colonial setting, it was imperative that it be contrasted against other religions. Christianity’s colonial image naturally positioned it against Hinduism. What came to the aid of Neo-Hindu thinkers was the Western critique of modernity and modern Christianity by Romantic and other thinkers, such as Schopenhauer (Schopenhauer 1915, 105–17). Moreover, criticism of Christianity was popularised by movements such as Theosophy, which had most zealously

---

3 Vedanta, literally meaning ‘end of the Vedas,’ originally referred to the emergence of the Upanishads as the authoritative text of Hinduism largely due to its philosophical teachings.

pursued the Romantic ‘turn to the East.’ Helena Blavatsky, founder of Theosophy, condemned both the “theological dogmatism” of Christianity and the “narrowness of spirit ... rigid materialism ... [and] sectarian dogmatism” of modern science (Blavatsky 1931, 152, 20, 84; Moulton 1997, 112). This led Vivekananda to claim that

[m]odern science has undermined the basis of religions like Christianity ... Europe and America are now looking towards India with expectant eyes: this is the time for philanthropy, this is the time to occupy the hostile strongholds (Vivekananda 1972, 485).

Thus, Neo-Hindu engagement with science was infused with an awareness from the beginning that, in the words of Dermot Killingley: “Christianity’s difficulty was Hinduism’s opportunity” (Killingley 1990, 155). Lynette Thistlethwayte has similarly argued that the issue in India was

not so much a matter of reconciling religion and science, as it was of using what advantages they could find in Hinduism’s adaptability to combat the arguments of Christianity and Islam. Their real theological problem was not so much against the inroads of western science, as against the possible inroads of other religions (Thistlethwayte 1998, 88).

By domesticating science, Neo-Hindu thinkers were turning the tables against missionaries, many of whom had regarded science as *preparatio evangelica* for the Hindus in India. One acknowledged example of such a missionary hope is John Muir’s *Matapariksha*, which attempted to put both Hinduism and Christianity to the ‘test of reason’ with the hope to discredit the former and validate the beliefs of the latter by establishing its compatibility with findings in modern science (Young 1981, 54).

Thirdly, and importantly, by presenting the Vedas as Hindu scriptures and Advaita as the paradigmatic expression of Hinduism, the Romantics and Neo-Hindus had framed the discussion in such a way that most Hindus and Indian Christians were already marginalised from it. This was because many Indian Christians had converted from poor and downtrodden communities, who neither had the access to education, of either the Vedas or science, nor the luxury of contemplating the nature of material reality for the purpose of philosophical discussions. This is not to say that such conversation was trivial to them. In actuality, any discussion that tried to lay theoretical foundations for relating material reality to the spiritual would have benefited immensely by drawing on their experiences of suffering, and, in turn, could have also provided an impetus to their liberation aspirations<sup>4</sup>. Instead, such

4 The first author of this article, in fact, comes from a community that is identified as a ‘low caste.’ This perception is aggravated by his identity as a Christian. Behind the effort to engage in the discussions described in this article lies his bias and motivation

discussions remained confined to a minority from high castes that was well-versed in the Vedantic philosophy. This was the case on both sides, which led Bishop M. Azariah to question the relevance of Indian Christian interlocutors, whom he rather unfavourably called “Dialogue theologians” (Azariah 1990, 86).

### 3. Advaita-Christian Interlocutors on the Nature of Material Reality

In this section, we briefly explore some themes that Neo-Vedantic thinkers reformulated in their conception of material nature in light of modern pressures, such as placing an emphasis on the reality of nature and how Indian Christian thinkers could take up these changes in Advaita as opportunities for dialogue.

Our choice of these developments is constrained by Neo-Hindu thinkers who actively engaged with science, and, as a result, whose ideas invited considerable response from Indian Christian thinkers. Due to space limitations, we constrict our deliberations to Swami Vivekananda (1863–1902), Sri Aurobindo (1872–1950), and Sarvepalli Radhakrishnan (1888–1975), three pioneers in establishing an “apologetic pattern” that was seminal to the Hindu renaissance and Hinduism’s relationship with science (Bharati 1970)<sup>5</sup>. Likewise, our choice of Indian Christian voices is limited to those who responded to the Neo-Hindu voices on the nature of material reality.

#### a) Many Meanings of Maya

From the time of Raja Rammohan Roy, there were efforts to rid Advaita of illusionistic tones. Neo-Vedanta thinkers, including Roy, Vivekananda, Aurobindo, and Radhakrishnan had concluded that the illusory nature of material universe attributed to Advaita was both “crypto-Buddhistic” and an Oriental mistake made by connecting Advaita and Buddhism too closely (Roy 1901a, 219; Radhakrishnan 1914, 433).

For Vivekananda, in the past, the theory of *maya* could have meant magic or illusion, but it has now evolved into its fuller meaning. According to Advaita its fuller meaning was to plainly state the facts, a rather blunt

---

to explore theories that provide a robust framework to relate the material and the spiritual for human liberation and well-being.

5 Of Vivekananda’s influence, Bharati says: “Modern Hindus derive their knowledge of Hinduism from Vivekananda, directly or indirectly” (Bharati 1970, 278).

acknowledgement of the contradictions evidenced in human experience of the world: the inexplicable differences between the poor and the rich, life and death, justice and injustice (Vivekananda 1976b, 88–89, 105). Vivekananda acknowledged: “In my opinion the external world is certainly an entity and has an existence outside of our mental conceptions” (Vivekananda 1973b, 312). However, Aurobindo took the charge of illusory existence of world more seriously and traced them back to Shankara’s one-sided picture of Brahman as static, and thus not involved in creation. He found it “hardly possible to suppose that the Divine Reality has no power or force or that its only power is to create a universal falsehood, a cosmic lie” (Aurobindo 1950, 57). He urged that the creation of matter be seen as a manifestation of dynamic Brahman’s inconscient energy, which evolves progressively through matter, life, mind, and eventually as spirit. Thus, the reality of the world lay in the reality of Brahman (55). *Maya* did not refer to world, but rather to Brahman’s power to conceal Itself in matter, and evolution as a gradual process of finding Itself back. Aurobindo preferred to use the word *lila* (sport), and called creation a cosmic *lila*, or a world-play (Aurobindo 1949, 106). For him, this not only solves a metaphysical problem of relating creator and creation, but also adds an aesthetic shade by imagining it as a relationship between the artist and her art.

Radhakrishnan also realised that modern science’s realism raised difficulties for the doctrine of *maya*. In his *Idealist View of Life*, he clarifies: “The human mind is responsible for the concept of matter, but it is not the creator of the matter as well” (Radhakrishnan 1932, 245). And he writes: “There is an ultimate decency in things. Even as scientific understanding starts with the assumption that our powers are trustworthy, and will lead to a system of truth which will make the universe intelligible” (155). Rather, he argues that the doctrine of *maya* is not integral to the Vedanta, but a later growth (Radhakrishnan 1914, 451). Instead, the “world is the product of Brahman, and, therefore, Brahman. Hence, instead of being an illusion, the world is the sole reality” (437). The Vedantic stress is rather that the world has a ‘dependent reality.’ This means that “[the] finite world is not absolutely real, for it demands something else on which it depends. It is Brahman that imparts its being to the world” (441, 444). Moreover, to argue that the world is unreal, one has to begin with a dualistic framework and cast the ‘unreal’ world against the ‘real’ Brahman, which is not what monism teaches (445). Donald Braue has argued that Radhakrishnan developed six different meanings of *maya* in his writings that are far removed from its traditional understanding as illusion (Braue 1984). In this, Radhakrishnan was deliberately going against Paul Duessen’s idealism mentioned earlier.

Indian Christians generally agreed that *maya* is one of the greatest differences between Christianity and Hinduism. It was Paul David Devanandan (1901–1962), an avant-garde in envisioning interreligious dialogue in India, who made the most systematic evaluation of *maya* in Hinduism, tracing it through the long history of Hinduism and agreed with Neo-Hindu thinkers that *maya* had different meanings throughout history. Yet, he concluded that “the whole attitude which is associated with the word *māyā* is unfavourable to any vigorous belief in conditions of progress, and the goal is conceived in such a way as to diminish the importance of the process towards it” (Devanandan 1954, 219).

However, since the notion of *maya* itself was going through a process of reinterpretation under the pressures of modernity, several thinkers were keen to use it to build bridges. For instance, Brahmabandhab Upadhyaya (1861–1907) agreed with the Neo-Hindus that *maya* refers to the fact that “The universe is not unreal but contingent” (Upadhyaya 1991, 203). This was an understanding of the material universe that he found closer to the Christian tradition, especially to Thomas Aquinas, whom he deeply admired.

## b) Realism and Orders of Reality

Regardless of what *maya* meant, what persisted was the struggle to accommodate the material world in a monistic framework. One way to achieve this was to fall back to Shankara’s division of reality into two spheres: provisional reality of the material world called *vyavaharika* (commonly translated ‘practical’) and the Ultimate Reality of Brahman known as *paramarthika* (literally meaning ‘that of ultimate meaning’). What makes *paramarthika* ‘real’ and *vyavaharika* ‘unreal’ is their relationship to time: the former is eternal, while the latter is time-bound. Traditionally, this two-tier reality has been reified into a diversity of epistemic methods: knowledge of the natural or *vyavaharika* world known as *apara vidya* (literally knowledge of the mundane world), and knowledge of Brahman or *paramarthika* reality as *para vidya* (literally knowledge of the Ultimate). This division is taken from Mundaka Upanishad I.1.4, wherein Shankara defines *para vidya* as the knowledge of absolute truth, and *apara vidya* as “the means and the results of good and bad actions.” Importantly, a few verses later Shankara mentions that “Apara vidya is ignorance that ought to be dispelled” (Sastri 1905).

With growing realism, Neo-Hindu thinkers found such a bifurcation of reality, and the resulting consequential belief that *paramartha* can only be achieved by negating the *vyavahara*, disconcerting. For Vivekananda, its predicament lay in its ability to generate “engines of tyranny” by “the Pharisees

and Sadducees in Hinduism” (Vivekananda 1976a, 154). In Radhakrishnan’s Advaitic scheme aimed at providing a theory for moral and political action, a construct that would place the material world at a mere *vyavahara* level remained marginal for obvious reasons (Halbfass 1990, 254).

Aurobindo also found Shankara’s conception of two-tiered reality problematic (Aurobindo 2003, 497). He himself brilliantly employed the theory of evolution to posit his integration of material and spiritual realities. In his grand scheme, Aurobindo imagined that the only one reality, Brahman, ‘loses itself’ in creation or manifestation (Nikam 1960, 146), much like a player who is completely lost in his game (Srivastava 1973, 97). Evolution then is the process of becoming, constantly transforming the inconscient matter to the ever-growing divinity until the entire creation has once again transformed into the life divine. Ghose called evolutionary theory a progress of three dominant principles: matter, life, and mind. He argued that each of these principles establishes itself not by discarding the preceding one, but by transforming it. This is why “when Life was first introduced in the plants it did not throw away Matter but transformed it instead into the body of plants so as to become fit to hold the first glimmer of life” (83). This means that the *telos* in Aurobindo’s scheme is not the disintegration of an individual into Brahman, as in monism, but rather to live a divinised life as an individual here on earth<sup>6</sup>. This is a significant move away from Advaitic eschatology, but essential for Aurobindo to ascribe value to the material body, and thereby, to the material universe. This evolutionary progression from one stage to another was then held by Radhakrishnan as well (Schilpp 1952, 30), though, in his eschatology, he still remained a traditional Advaitic (Srivastava 1973, 135–36).

According to the contemporary Advaitic thinker, Arvind Sharma: “The main point to be recognized here is that whereas Western philosophical thought seems, on the whole, to contrast reality with falsity, Advaita recognizes ‘orders of reality’” (Sharma 1995, 172). In other words, *vyavaharika* and *paramarthaika* need not be positioned against each other. Instead, while the former can only be considered ‘real’ at its own level (like a dream that is real when dreaming), the latter is always real. Varadraja Raman suggests that such diversification is helpful for conceiving of science

6 Peter Heehs traces the origin of ‘divine life,’ or its inverted form ‘life divine,’ primarily to nineteenth century Protestant literature and hymns, but also to non-Christian spiritual writers such as Ralph Waldo Emerson and Annie Besant. Heehs suggests that it must have reached Aurobindo either through Keshub Chandra Sen, or during his childhood in England while under his guardian Reverend William H. Drewett, or both (Heehs 2020, 177–78).

and religion as two distinct fields with their own objectives and methods (Raman 2012, 161). However, perceiving reality at the two different levels of *vyavaharika* and *paramarthika*, as suggested by Sharma and Raman, is not as contentious as is the inherent radical discontinuity between the two, as is argued by Devanandan.

Devanandan agrees that since “scientific categories are insufficient for the interpretation of reality,” such divisions of reality are helpful (Devanandan 1954, 219). However, he also recognizes that in the Advaitic scheme of two-tiered reality, the disconnect between the realms is too decisive and abrupt. He writes:

If we think of the two orders as separate in the same way as dreams are different from facts, and if the transition from the one to the other is so abrupt, the danger is always there of our being tempted to leave unsolved the difficulties which arise in the lower sphere (219).

This, he says, generates “a lack of faith in the activity of reason as a possible means of progressive perfection. Consequently the only solution seems to be to adopt an attitude of passivity and indifference” (219).

### c) *Satkaryavada* and *Creatio Ex-Nihilo*

In the earlier Hindu philosophical discussions, the issue of the reality of material reality was ultimately related to how it was created. Since Advaita, and other Hindu philosophical schools, and Christianity offered two different ‘theories of originative causality,’ a discourse on this difference was natural (Lipner 1978). All Hindu schools of philosophy hold to the doctrine of *Satkaryavada*, originally espoused by Samkhya, which argues that the “effect pre-exists in its cause, causation is merely a transformation from one state to another, while the original ‘thing’ remains constant and unchanging” (Matilal 1975, 43). One oft-used example of this is sesame seed, which when pressed produces oil, an effect that resides as potential in the seed until pressed, in contrast to sand, which does not produce oil as it does not have oil as its potential property. According to Vivekananda, modern science proves that cause and effect are connected: “effect is cause in another form, a readjustment of the cause, and the cause takes the form of the effect” (Vivekananda 1976b, 331). Likewise, the second law of thermodynamics postulates that nothing new can come into existence. That is why, for Vivekananda, *creatio ex nihilo* is not only unscientific, because it invokes a God who works from outside the structures of causality (330), but is also a “most crude idea” (Vivekananda 1973a, 123) that has “disgusted all the educated,” (Vivekananda 1972, 362), was rejected early by

all Indian thinkers and is now rightly “laughed at by modern scientists” (Vivekananda 1976b, 331).

Aurobindo also accepts *satkaryavada*, and rules out *creatio ex nihilo*:

It is not possible that they [real creations] are made out of a Nothing, a Non-existence other than the Absolute; for that will erect a new dualism, a great positive Zero over against the greater indeterminable x we have supposed to be the one Reality (Aurobindo 1949, 284).

Though Radhakrishnan does not delve deeper into critiquing *creatio ex nihilo*, his Advaitic framework, and particularly *vivartavada* (the belief that the emanation of material world from God does not change God), does not allow him to embrace the idea (Radhakrishnan 1959, 228–29).

In contrast, Indian Christian thinkers, such as Nehemiah Goreh (1825–1895), a Christian apologist, considered *creatio ex nihilo* a unique Christian contribution since no sect of Hinduism believes it (Sumithra 1990, 78). Krishna Mohan Banerjea (1813–1885), who believed Christianity to be the fulfilment of Vedic religion (Sumithra 1990, 151), presented an astute defense of *creatio ex nihilo* through a Christian character named Satyakama in his *Dialogues on Hindu Philosophy* (1861). For Banerjea, the verse “In the beginning God created the heavens and the earth” stands in contrast

to the Nyāya in its theory of eternal atoms, the Sāṅkhya in that creative Prakṛiti, and the Vedant in its denial of a duality of substance. The universe is neither an illusion nor self-formed, but was called into being, out of nothing, by the one only Eternal and Supreme Intelligence, the author of all things in heaven and in earth (Banerjea 1861, 511–12).

Banerjea lamented that despite their genius Hindu thinkers had failed to understand the material world as the creation of a personal God because of their undue obsession with the question of material cause (a concern “uppermost in Śankara’s mind”) rather than focusing on efficient cause (130). He also argued that to regard substance of a thing also its cause leads to two of the “most dangerous theological errors” (134): firstly, it eclipses the glory of God by diverting our attention and energies to the question of what God created the material world out of, and secondly, it goes against our moral intuition. Here he modifies the watchmaker argument to posit that when a complex watch or a piece of art is found, the first question asked intuitively is not what material is used to create it, but who created it. Therefore, to imagine God as a human artist in need of material to create something is to restrict God (133–34). According to Banerjea, these restrictions on Hindu imagination were the result of a belief in *Satkaryavada* (88).

Brahmabandhab Upadhyaya (1861–1907), a former classmate of Vivekananda and a Christian convert, argued that limiting God to the material



available for creation is “to predicate limitation of him” (Upadhyaya 1991, 208). Upadhyaya also argues that *creatio ex nihilo* cannot be denied solely on the basis of the evidence in nature, as Vivekananda had done, for if that be the case, the changelessness of God, which many Hindu schools hold firmly to, is not evident in nature either. However, he agreed that

though reason is competent to show that every other explanation of the origin of the world is attended with contradictions ... unaided by revelation, human intelligence would never have come to a great certainty at this point (204).

However, unlike Goreh and Banerjea, Upadhyaya calls all Hindu speculative theories of creation “of later origin” (204). The ancient traditions always held the notion “of a God who is not a mere architect and fashioner, but a producer and creator” (204). Thus, since *creatio ex nihilo* is based on “the primitive revelation as well as upon the Jewish revelation and that of Christ” (204) it need not be a stumbling block for Hindu-Christian dialogue.

#### d) Cycles and Telos of the Material World

However, if the material world is a mere play of name and form, it was the questions about the destiny of the material world that sparked rich conversations.

In his works, Vivekananda introduced the notion of involution, most probably borrowed from English poet Gerald Massey, as an inversion of evolution (Heehs 2020, 170). To use his phraseology, if evolution explains how gross matter becomes fine, involution describes how we had gross matter in the first place, or how fine matter had become gross before beginning to become fine again. Thus, involution and evolution form an eternal cycle.

Vivekananda’s notion of involution is based on at least two premises: human experience and science. We experience cycles in nature: seed growing into tree and producing new seeds before dying, humans procreating and dying, rivers returning their water to the ocean, and so on (Vivekananda 1976b, 227–28). Cycles are accepted by science as well: the world came into existence via an explosion, is now expanding, and will eventually collapse. However, “the particles will all remain to form the material out of which another earth will be projected. Again that will disappear, and another will come out” (426–27). While Hinduism could explain these cycles, Christianity invoked a personal God who worked from outside of nature, which he felt was a “very unscientific theory” (330).

Aurobindo believed that evolutionary theory had failed to provide a sufficiently satisfying explanation for the birth of the soul in matter. Therefore, he posited a more integrated approach to reality that included both matter and soul. To explain this, he employed a seven-stage process that begins with One Consciousness becoming involved in unconscious matter, evolves through different stages of life and mind, emerges as a supermind, finally leading to the transformation and divinisation of life (Heehs 2020, 169).

One does not find any new building blocks in Radhkarishnan's ideas of involution or evolution, though he was convinced that the idea of evolution as a "metaphysical hypothesis" was known to earlier Indian thinkers (Schilpp 1952, 27).

Though ingenious, these attempts were not without problems. According to Dermot Killingley, while 'evolution' in the popular accounts of the evolutionary theory would mean 'progress,' in Hindu mythology, the increasing difference between Brahman and *Prakriti* (nature) was considered decline. In Hindu understanding, progress towards *moksha* is made by 'the rare individual' and not the entire cosmos. Likewise, in Hindu mythology, it is humans, in contrast to other creatures, who alone can achieve *moksha*, this contrasts with evolutionary theory, which does not add any special role to man (Killingley 1990, 153–54). Moreover, in Hindu accounts of evolution, there is no mention of the struggle for survival that goes along with natural selection.

However, for Indian Christian thinkers, the problem was not the cyclic understanding of time as much as the lack of purpose it rendered to history. This is because, in Christianity, it is through the unique incarnation of Jesus Christ that history finds its redemption and purpose. Joshua Russell Chandran (1918–2000), a prominent Christian theologian, considered this a "fundamental conflict" between the Hebraic-Christian and the Hindu and Greek apprehensions of reality. The tension arises because one considers "history as 'a real and purposive unity in the hands of God'" while the other interprets history "in terms of meaningless repetition of cycles" (Chandran n.d.; quoted in Thomas 1969, 134–35).

Commenting on Vivekananda's involution-evolution cycles, Madathilparampil Mammen Thomas (1916–1996), a prolific Christian writer and theologian, agrees that nature supports a cyclic understanding of life and argues that Christian thought does not deny this. In fact:

The Christian view of history need not be crudely linear because it conceives of the fulfilment of the goal of history as having happened not at the end but in the middle of

the movement so that it is possible to conceive this purpose either as the Beyond (Transcendence) or the End (Eschatology) in real relation with the empirical self and the process in which it is involved, cutting across its cycles and bringing into being spiritually purposeful persons realizing themselves in an ultimately meaningful history. It is only within such framework of understanding that we can speak intelligently of a unique revelation of the divine purpose of the world (Thomas 1969, 147).

Thomas felt that the divergence regarding *telos* is linked to how both religions relate to the more pertinent issue of the moral regeneration of society. Commenting on Chandran's work, he writes, "Where there is a religious sense of historical purpose, the 'moral conflicts' of contemporary society acquire religious significance" (136). Likewise, Devanandan argued that the Advaitic understanding of reality "makes almost impossible belief in a doctrine of creation, especially such as would do justice to the reality of God's purposive work in world-life as directed towards an End" (Devanandan 1961, 4; quoted in Thomas 1969, 166).

#### 4. Concluding Remarks

What has transpired suggests that modern science's trajectory in the inter-religious context of India sparked trends and discussions that were deeply influenced by its context.

This reveals that science and religion discourse is deeply entrenched in the socio-political realities of a context, which affect the way it is constructed and how the relationship between science and religion is perceived. In a colonial context, for instance, engagement with science is often driven by anti-colonial sentiments and rebellion against hegemonic representations of one's faith, as seen in the 'other-worldly' conceptions of Hinduism.

In the same line, assimilation and domestication of science, as seen in the case of evolutionary theory, could well be a device to challenge the presence of an alien power. In such a scenario, modern science's Western origins are more contested than its anti-religion crusade, which, at least in popular imagination, is regarded to be a problem of the West. This also means that any attempt of cross-pollination between science and religion itself becomes vulnerable to being dragged into the colonial or anti-colonial grid.

These sentiments similarly also shape interreligious dialogue, wherein Christianity is naturally placed side by side with colonial powers, and dialogue with it is constantly constructed by this perceived alliance between Christianity and colonial power. To add, in an inter-religious context, science is not pitted against religion *en bloc* but often derives its legitimacy from its

consonance with a religion, often that of the majority – a consonance that is constructed under the shadow of various socio-political, cultural, and personal pressures. Under this, then, it is largely assumed rather than debated that science and religion can coexist well. What is argued, instead, is how they always have and/or can amicably coexist within a certain religious framework rather than another. Any meaningful dialogue between science and religion should be sensitive to these contextual factors.

However, this raises a question: are the views of Neo-Hindu thinkers and their Indian Christian interlocutors on material reality mere ‘constructions’ under socio-cultural and contextual pressures, or is there something more to these discussions? This is important because if all our beliefs are mere constructions that are products of social and contextual pressures, what are we left to dialogue about? Is interreligious conversation about science and faith merely an effort to ‘dominate’ or ‘to resist’ the other? Should science-religion dialogue on the nature of material reality stop at describing the socio-cultural factors that influenced it, or should it, having taken socio-cultural factors in its stride, also move beyond it? Even though socially located, can we also engage in a critical conversation about the nature of reality itself and the place of science and religion in our understanding of the world *as it is*? The interreligious discourse between the Neo-Hindu and Indian Christian thinkers discussed, in fact, indicates that such a conversation on the nature of material reality is possible, and it does so in at least three ways.

*Firstly*, neither of the interlocutors believed their views to be mere cultural constructs but held them to be truthful depictions of material reality. This is why, despite the given context of coloniality, Advaitic thinkers did not remain passive onlookers, but deliberately reverted to notions as *satkarya* in their own traditions and constantly challenged the Western interpretations of their beliefs and ensured that their distinct positions were understood clearly.

Moreover, the interlocutors in this discussion also did not believe their perspective on material reality to be an isolated belief in the collection of loosely connected beliefs malleable to external pressures, but held it to be part of “an integrated perspective on reality” (Van den Toren and Tan, forthcoming) with grave implications for other areas of life. Accordingly, the Advaita-Christian discourse neither remained constrained to nor was even primarily focused on the discussion concerning the relationship between, what are generally understood by the two clearly demarcated spheres of natural science and ‘religion,’ but frequently crossed over into other areas of more urgent concerns, such as nationalism, questions of ethics and human destiny. For Indian Christian thinkers, the weakness of Advaitic understand-

ing of the material universe was not just its precarious position for the development of empirical science, but its repercussions on how human history, matter, and its destiny are perceived. Likewise, for Neo-Hindu thinkers, the primary concern remained to provide Advaitic foundations for growing moral consciousness.

Additionally, the confidence of these interlocutors suggests that they view their perspective on reality as their contribution to a shared commonwealth of human knowledge. This confidence emerges out of their belief that they have been in touch with reality all along (Van den Toren 2011, 128) and that there is a certain unity of knowledge (Torrance 1969, 112) wherein the contribution of their perspective should fit. This is also why contextual discourses can contribute to global discussions.

*Secondly*, both interlocutors conversed on the presupposition that natural science indeed offers a trustworthy account of material world – a presupposition that is often fostered by its success in effectively explaining and predicting regularities in nature and the economic benefits its approach to material world yields.

For most practitioners of modern science itself, however, its success rests on a certain realistic understanding of material universe (Polkinghorne 1991, 5; McGrath 1998, 143, 154; Ratzsch 2000, 70, 81). This ‘critical realist’ understanding acknowledges the role of contextual factors in the scientific enterprise, but also argues that the material world has its own structure that is to be respected if scientific experiments were to achieve anything.

*Thirdly*, openness to learning insights about material world offered by natural sciences for the purpose of interreligious dialogue also indicates that, similar to natural sciences, a critical realist understanding is inevitable for a genuine interreligious dialogue to take place. This is why both groups hold their metaphysical framework with what Michael Polanyi, an eminent philosopher of science, calls ‘universal intent’ (Polanyi 1958, 68; Van den Toren 2011, 128), and try to convince their interlocutors of the universal applicability of their perspective. This is further seen in the fact that both interlocutors believed that new knowledge of reality had also created a “divergence” in the other’s perspective, opening up new vistas where dialogue can be pursued, even with colonial powers (Devanandan 1954, 229).

What is the one to make of these insights? To return to McGrath’s question: “given that ‘nature’ is an interpreted and mediated notion, what interpretation is to be preferred?” (McGrath 2001, 133). What these conversations affirm is that our interpretations of nature themselves are embedded in a context and are part of larger metaphysical frameworks, which cannot be overlooked in selecting a preferred interpretation. Nevertheless, their appeal

to be included in global discussions on science and religion lies in the fact that, whatever else they might be, they are also efforts to answer universal questions raised by reality available to us all. If this shared presupposition of the religious interlocutors is true, as one engages in the process of dialoguing with different interpretations of nature with a genuine openness towards reality, reality may actually confront and surprise us, guiding us to the interpretation that indeed should be preferred.

## References

- Aurobindo, Sri. 1949. *The Life Divine*. New York: The Sri Aurobindo Library.
- . 1950. *Letters of Sri Aurobindo*. 2nd ed. Bombay: Sri Aurobindo Circle.
- . 2003. *Isha Upanishad*. In *The Complete Works of Sri Aurobindo*. Vol. 17. Pondicherry: Sri Aurobindo Ashram Publication Department.
- Azariah, Masilamani. 1990. “Doing Theology in India Today.” In *A Reader in Dalit Theology*, edited by Arvind P. Nirmal, 85–92. Bangalore: Gurukul Lutheran Theological College & Research Institute.
- Ballantyne, James R. 1859. *Christianity Contrasted with Hindū Philosophy*. London: James Madden.
- Banerjea, Krishna M. 1861. *Dialogues on the Hindu Philosophy*. Calcutta: Thacker Spink and Co.
- Bharati, Agehananda. 1970. “The Hindu Renaissance and Its Apologetic Patterns.” *The Journal of Asian Studies* 29:267–87.
- Blavatsky, Helena P. 1931. *Isis Unveiled: A Master-Key to the Mysteries of Ancient and Modern Science and Theology*. Los Angeles: The Theosophy Company.
- Braue, Donald A. 1984. *Māyā in Radhakrishnan’s Thought: Six Meanings Other Than Illusion*. Delhi: Motilal Banarsidass.
- Brown, Cheever Mackenzie. 2012. *Hindu Perspectives on Evolution: Darwin, Dharma and Design*. London: Routledge.
- Capra, Fritjof. 1982. “The New Vision of Reality: Parallels between Modern Physics and Eastern Mysticism.” *India International Centre Quarterly* 9:13–21.
- Chandran, Joshua R. n.p. *Christian Apologetics in Relation to Vivekananda in the Light of Origen, Contra Celsum*. Unpublished thesis. n.d.
- Chattopadhyaya, Debiprasad, Joseph Needham, and Ashok Jain. 1996. *History of Science and Technology in Ancient India: The Beginnings*. Calcutta: Firma KLM.
- Clarke, John J. 1997. *Oriental Enlightenment: The Encounter between Asian and Western Thought*. London: Routledge.
- Cross, Stephen. 2013. *Schopenhauer’s Encounter with Indian Thought: Representation and Will and Their Indian Parallels*. Honolulu: University of Hawaii Press.
- Deussen, Paul. 1907. *Outlines of Indian Philosophy*. Berlin: Karl Curtius.
- Devanandan, Paul D. 1954. *The Concept of Maya*. Calcutta: YMCA Publishing House.
- . 1961. *Christian Concern in Hinduism*. Bangalore: Christian Institute for the Study of Religion and Society.
- Ghose, Aurobindo. 1972. “Is India Civilised? Vol. 14.” In *Foundations of Indian Culture and the Renaissance in India*. Pondicherry: Sri Aurobindo Birth Centenary Library.

- Goreh, Nehemiah Nilkanṭha Śāstri. 1911. *A Mirror of the Hindu Philosophical Systems*. London, Madras, Colombo: The Christian Literature Society.
- Gunton, Colin E. 1993. *The One, the Three and the Many: God, Creation and the Culture of Modernity. The 1992 Bampton Lectures*. Cambridge: Cambridge University Press.
- Halbfass, Wilhelm. 1990. *India and Europe: An Essay in Philosophical Understanding*. Delhi: Motilal Banarsidass.
- Harding, Sandra G. 1991. *Whose Science? Whose Knowledge?: Thinking from Women's Lives*. Ithaca, N.Y.: Cornell University Press.
- . 1998. *Is Science Multicultural?: Postcolonialisms, Feminisms, and Epistemologies*. Bloomington: Indiana University Press.
- Heehs, Peter. 2020. "Sri Aurobindo's Theory of Spiritual Evolution." In *Asian Religious Responses to Darwinism: Evolutionary Theories in Middle Eastern, South Asian, and East Asian Cultural Contexts*, edited by Cheever Mackenzie Brown, 167–84. Cham: Springer.
- Hösle, Vittorio. 2013. "The Search for the Orient in German Idealism." *Zeitschrift der Deutschen Morgenländischen Gesellschaft* 163:431–54.
- Inden, Ronald B. 1990. *Imagining India*. Oxford: Blackwell.
- Jon, Stewart. 2016. "Hegel's Criticism of Hinduism." *Hegel Bulletin* 37:281–304.
- Killingley, D.H. 1990. "'Yoga-Sutra' IV, 2–3 and Vivekananda's Interpretation of Evolution." *Journal of Indian Philosophy* 18:151.
- King, Richard. 1999. *Orientalism and Religion: Post-Colonial Theory, India and "The Mystic East"*. London: Routledge.
- King, Ursula. 1985. *Indian Spirituality and Western Materialism: An Image and Its Function in the Reinterpretation of Modern Hinduism*. New Delhi: Indian Social Institute.
- Kulkarni, Sameer G. 2015. "Philosophy in Colonial India: The Science Question." In *Philosophy in Colonial India*, edited by Sharad Deshpande, 55–66. New Delhi: Springer India.
- Kumar, Deepak. 1995. *Science and the Raj, 1857–1905*. Oxford: Oxford University Press.
- Ling, Trevor Oswald. 1980. *Karl Marx and Religion: In Europe and India*. London: Macmillan.
- Lipner, Julius J. 1978. "The Christian and Vedāntic Theories of Originative Causality: A Study in Transcendence and Immanence." *Philosophy East and West* 28:53–68.
- Marshall, Peter J., ed. 1970. *The British Discovery of Hinduism in the Eighteenth Century*. Cambridge: Cambridge University Press.
- Matilal, Bimal Krishna. 1975. "Causality in the Nyāya-Vaiśeṣika School." *Philosophy East and West* 25:41–48.
- McGrath, Alister E. 1998. *The Foundations of Dialogue in Science and Religion*. Massachusetts, Oxford: Blackwell.
- . 2001. *A Scientific Theology: Nature*. Vol. 1. Grand Rapids: Eerdmans.
- . 2017. *Re-Imaging Nature: The Promise of a Christian Natural Theology*. Chichester, West Sussex: John Wiley & Sons.
- Moulton, Edward C. 1997. "The Beginnings of Theosophical Movement in India: Conversion and Non-Conversion Experiences." In *Religious Conversion Movements in South Asia: Continuities and Change, 1800–1990*, edited by Geoffrey A Oddie, 13th ed. 109–72. Surrey: Curzon.

- Nikam, Narayanrao A. 1960. "The Problem of Creation: Concepts of Māyā and Līlā." In *The Integral Philosophy of Sri Aurobindo: A Commemorative Symposium*, 143–48. London: George Allen & Unwin.
- Panda, Nrsimha C. 1991. *Maya in Physics*. Delhi: Motilal Banarsidass.
- Paranjape, Makarand. 2009. "Science, Spirituality and Modernity in India." In *Science, Spirituality and the Modernisation of India*, edited by Makarand Paranjape, 3–14. New Delhi: Anthem.
- Polanyi, Michael. 1958. *Personal Knowledge: Towards a Post-Critical Philosophy*. Chicago: University of Chicago Press.
- Polkinghorne, John C. 1991. *Reason and Reality: The Relationship between Science and Theology*. London: SPCK.
- Radhakrishnan, Sarvepalli. 1914. "The Vedanta Philosophy and the Doctrine of Maya." *International Journal of Ethics* 24:431–51.
- . 1932. *An Idealist View of Life*. London: George Allen & Unwin.
- . 1959. *Eastern Religion and Western Thought*. New York: Oxford University Press.
- Raghuramaraju, Adluru. 2006. "Sri Aurobindo and Krishnachandra Bhattacharyya: Relation between Science and Spiritualism." In *Debates in Indian Philosophy: Classical: Colonial, and Contemporary*, edited by Adluru Raghuramaraju. New Delhi: Oxford University Press.
- Raman, Varadaraja V. 2002. "Science and the Spiritual Vision." *Zygon* 37:83–94.
- . 2005. "Scientific Reductionism and Holism: Two Sides of the Perception of Reality." *Theology and Science* 3:250–53.
- . 2012. "Quantum Mechanics and Some Hindu Perspectives." In *The Routledge Companion to Religion and Science*, edited by James W. Haug, Gregory R. Peterson, and Michael L. Spezio, 156–68. Abingdon, Oxon: Routledge.
- Ratzsch, Delvin Lee. 2000. *Science & Its Limits: The Natural Sciences in Christian Perspective*. Downers Grove: InterVarsity.
- Roy, Raja Rammohun. 1901a. *The English Works of Raja Rammohun Roy*, edited by Jogendra Chunder Ghose. Vol. 1. Calcutta: Srikanta Roy.
- . 1901b. *The English Works of Raja Rammohun Roy*, edited by Jogendra Chunder Ghose. Vol. 2. Calcutta: Srikanta Roy.
- Sastri, Sitaram. 2005. "Mundaka Upanishad with Shankara's Commentary." Accessed September 30, 2022. <https://www.wisdomlib.org/hinduism/book/mundaka-upanishad-shankara-bhashya/d/doc145078.html>.
- Schilpp, Paul Arthur. 1952. *The Philosophy of Sarvepalli Radhakrishnan*. In *The Library of Living Philosophers*. New York: Tudor.
- Schopenhauer, Arthur. 1915. *Religion: A Dialogue, and Other Essays, Selected and Translated by T Bailey Sanders*. 6th ed. London: George Allen & Unwin.
- Schrödinger, Erwin. 1964. *My View of the World*, edited by Cecily Hastings. London: Cambridge University Press.
- Schweitzer, Albert. 1960. *Indian Thought and Its Development*. Bombay: Wilco.
- Sen, Amartya. 2005. *The Argumentative Indian*. New York: Farrar, Straus and Giroux.
- Sharma, Arvind. 1995. *The Philosophy of Religion and Advaita Vedānta: A Comparative Study in Religion and Reason*. Pennsylvania: Pennsylvania State University Press.
- Smith, Bradon T.L. 2013. "Indeterministic Metaphors: The Popular Science Books of Fritjof Capra and Gary Zukav." *Public Understanding of Science* 22:538–45.



- Srivastava, Ripusudan Prasad. 1973. *Contemporary Indian Idealism: With Special Reference to Swami Vivekananda, Sri Aurobindo and Sarvepalli Radhakrishnan*. Delhi: Motilal Banarsidass.
- Sumithra, Sunand. 1990. *Christian Theologies from an Indian Perspective*. Bangalore: Theological Book Trust.
- Thistlethwayte, Lynette E.L. 1998. "The Role of Science in the Hindu-Christian Encounter." In *Religious Traditions of South Asia: Interaction and Change*, edited by Geoffrey A. Oddie, 81-90. Surrey: Curzon.
- Thomas, Madathilparampil Mamen. 1969. *The Acknowledged Christ of the Indian Renaissance*. London: SCM.
- Torrance, Thomas F. 1969. *Theological Science*. London: Oxford University Press.
- Upadhyay, Brahmabandhab. 1991. *The Writings of Brahmabandhab Upadhyay*, edited by Julius Lipner and George Gispert-Sauch. Vol. 1. Bangalore: The United Theological College.
- Van den Toren, Benno. 2011. *Christian Apologetics as Cross-Cultural Dialogue*. London: T&T Clark International.
- Van den Toren, Benno, and Kang-San Tan. forthcoming. "Humble Confidence: A New Model for Interfaith Apologetics."
- Vivekananda, Swami. 1972. *The Complete Works of Swami Vivekananda*. Vol. 4. Calcutta: Advaita Ashrama.
- . 1973a. *The Complete Works of Swami Vivekananda*. Vol. 3. 5th ed. Calcutta: Advaita Ashrama.
- . 1973b. *The Complete Works of Swami Vivekananda*. Vol. 5. Calcutta: Advaita Ashrama.
- . 1976a. *Teachings of Swami Vivekananda*. Calcutta: Advaita Ashrama.
- . 1976b. *The Complete Works of Swami Vivekananda*. Vol. 2. 13th ed. Calcutta: Advaita Ashrama.
- Young, Richard Fox. 1981. *Resistant Hinduism: Sanskrit Sources on Anti-Christian Apologetics in Early Nineteenth-Century India*. Vienna: Institut für Indologie der Universität Wien.
- Zukav, Gary. 1984. *The Dancing Wu Li Masters: An Overview of the New Physics*. London: Fontana Paperbacks.

Charles Christian

Protestant Theological University (Groningen, NL)

orcid.org/0000-0001-7772-5884

Benno van den Toren

Protestant Theological University (Groningen, NL)

orcid.org/0000-0003-2214-8463

