

Is Buddhism a Science of Mind? – Against False Concepts of a Possible Reconciliation between Science and Religion

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Abstract

Since the commencement of the Age of Enlightenment, religion has unceasingly been challenged by upcoming science. Step by step, this science replaced once firmly believed doctrines with fact-based knowledge gained by proper methods of empirical research or derivation logic. After a long and conflictual history, during which many brave scientists were burned at the stake, today we witness sustained efforts to bring religion and science together again and to undo its historical separation. In particular, Buddhism is considered a candidate for a genuine religious belief that would make such reconciliation possible. This article shows the futility of such attempts at reconciliation and the fallacies on which they are grounded. The author pleads for a farewell to any oversimplified and harmonious concept of a possible reconciliation between science and religion. As science is reductionist by its very nature, neither Christianity nor Buddhism can overcome the cleavage between fact-based knowledge and that gained by spiritual insights.

Keywords

Religion and science; Buddhism and modern science; Science and Spirituality

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‘Search for truth’ is at the same time a universal and context-dependent endeavour

The purpose of this article is not to discredit Buddhist ways of gaining knowledge and insight. On the contrary, the author holds Buddhist wisdom and religious practice in very high esteem. It is also not about a supposed superiority of science against religion. Since Science and Buddhism are dealing with the same world we live in, both are doorways to reality, either by relying on sense data or meditative insight. Different ways and fields of application do per se not imply any ranking. It is not put into question that there are “potentially large areas of overlap that could lead to fruitful dialogues” (Hut 2003: 400). The only question discussed here is whether religious knowledge and insights should be considered a part of science in the conventional definition of this term. By science in the conventional sense, I mean science as defined in the terms found in common dictionaries and reference works, which distinguish between scientific and non-scientific methods.¹ Such definitions normally refer to a body of facts or truths systematically arranged and showing the operation of general laws. They display systematic knowledge of the physical or material world gained through observation and experimentation in particular subject areas. Within this framework, metaphysical questions are excluded from the world of proper science.

In the Confucian sense, search for truth is also about the “correction of names”, that is the agreement on proper definitions as the indispensable fundament of sound communication (see Loy 2003:19). The concepts of “science” and “religion” are not eternal. They have been changing during the course of history and are also related to questions of political power. It is true that they are “concepts of relatively recent coinage” emerging only in the past three hundred years (see Harrison 2015). While some scholars are focusing on cross-cultural differences in defining them, others criticize Western normativity as a big obstacle to gain common understanding (see Boon; van den Toren 2020: 173 et seq.). Without abandoning the complexity of the issue, I assume that there is a global understanding of both terms possible. Such an understanding might not encompass all facets and nuances in this conflicting relationship, but provides a basis for practical distinctions and middle-scale generalizations.

Science is based on the notion of truth as the possible general acceptance of propositions gained by transparent and comprehensible methods². By contrast, religious and spiritual truths can claim validity only within the scope of communities of believers and are based on realities of special consensus. While scientific knowledge about the universe is gained through empirical evidence, testable hypotheses, and reproducible experiments, religious knowledge stems from personal beliefs or commonly unobservable, supernatural phenomena. The latter cannot be objectively be measured or falsified. The claim of validity is the crux of the matter. The conflicting relationship between religious and scientific truths can be discussed within various dimensions and also refers to the conditions of human understanding in cross-cultural contexts. Corresponding notions of truth and their significance depend on historical and cultural determinants. At the same time, the search for truth is a universal goal transcending cultural borders, particularly in today’s globalised world.³ Going back to its roots, we can identify the notion of truth in Greek philosophy as the origin of our current understanding of the term. Ancient Greek thinkers drew a clear distinction

¹ See, e.g., <https://dictionary.cambridge.org/dictionary/english/science>.

² See, e.g., the definition of the British Science Council (2023): “Science is the pursuit and application of knowledge and understanding of the natural and social world following a systematic methodology based on evidence.”

³ I disregard in this context the view of postmodernism – namely, that due to the principle of cultural particularism, it was impossible to define the ‘truth’ of any particular worldview or vision, whether traditional or modern. Wallace (2003: 21) is right in his conclusion that in case of a self-application of this rule, such kinds of relativism would remain the only absolute truth in the universe. It is also based on the questionable assumption that none of us could ever really understand anyone else.

between myths and proper knowledge (e.g. Hintikka 1967; Woleński 2004). The term truth can be traced back to the Greek word *aletheia*, which is typically translated as ‘truth’. According to Heidegger’s interpretation, *aletheia* reveals what is hidden from someone (Heidegger 2021). In ancient times, the Greeks commonly believed in the existence of gods and a world beyond, but what motivated them even more was the non-acceptance of any teachings or stories violating logic and challenging reason. How could Gaia have created the whole world when everything the world consisted of was already there? Such considerations mark the natal hour of logical reasoning: A cause is prior to a result, and a premise cannot be identical with the outcome of a conclusion (e.g. Guthrie 1967). Therefore in the Greek tradition, there was a split between myth and logos resulting in the two spheres of search for pure truth and the large realm of mythological narratives. Later, a controversy arose between Plato and Aristotle regarding the most reliable source of the truthfulness of statements (e.g. Marian 2019; Szaif 2018). Plato claimed that the physical world was not as real or true as so-called timeless, absolute, unchangeable *ideas*. Therefore, according to him, the utmost source of truth can never be found in the world, as perceived by our senses.⁴ Already, his pupil Aristotle disagreed with his teacher on the fundamental question of *forms* or *ideas* and focused instead on studying the world around us as it appears to our senses. We have to understand the truth of statements, he claimed, based on sense data – ranging from physics and biology to mechanics. Sometimes our perceptions might be misleading and confusing, but nevertheless, they are still the most reliable basis for gaining all the knowledge available to us. In his studies on the natural world, Aristotle carried out research on a number of sea animals, among many other objects, and developed an elaborate system of classification.⁵ He criticised Plato’s eternal *ideas* as a misleading and unnecessary duplication of the world (e.g. Bolton 2012). The later controversy between rationalism and empiricism can be interpreted as a huge collection of footnotes on this original dispute (e.g. Markie 2021; Reichenbach 1948). What remains today is the antagonism between Plato’s religiously motivated metaphysical theory and the Aristotelian focus on empirical evidence as gained by our senses. During the course of history, the Aristotelian approach became prevalent, and as a result, in the European intellectual tradition, religion and philosophy were finally divided. In the following step, science was established in a clear distinction from metaphysics, and eventually, criteria were defined regarding the conditions that must be fulfilled to formulate scientific statements⁶.

Methodology and Source Materials

In contrast to the development in Europe, the Asian intellectual discourse was not circling around the questions of truth and how to gain knowledge for the purpose of ‘pure recognition’ as in ancient Greece. Neither in India nor in China were profound attempts made to free philosophy from religion and establish it as an independent discipline. True knowledge was the knowledge of salvation; anything else was considered nothing more than ‘mere erudition’ (Sandvoss 1979: 132). Such attitudes had a profound impact on how religion developed in the East and West. Truth itself is a multifaceted term, and the concepts and definitions of truth vary according to the

⁴ Wallace (2021: 216) sees in ancient Greek thinking the great *Fall of Man* and cause for all later calamities: ‘Ever since the ancient Ionian thinkers began to objectify the universe and to speculate on its nature as something radically independent of our experience of it, they opened the door to our viewing the natural world as being purely physical and devoid of meaning.’

⁵ See Kullmann 2014.

⁶ Immanuel Kant laid the foundations of this pioneering work by claiming that proper science requires the construction of a concept of the object in a priori. He asserts principles that enable us to perceive how matter in general must be introduced. This means that all true recognition of the world takes part within the conditions of space and time, and the concept of matter must be determined according to the Critique of Pure Reason’s categories of quantity, quality, relation and modality (Kant 1781; Watkins 2004).

purposes behind them. Religious truth and scientific truth do not have much in common; they differ and partly contradict each other. It is a commonplace that a distinction can be made between general and specific truths. Thus, at least two profoundly different ways of defining truth can be identified:

- a) ‘The truth’ (i.e. a statement about the world referring to the highest, absolute, eternal or non-refutable trueness);
- b) A specific truth (i.e. a statement expressing an appropriate and verifiable correspondence with the referring reality and valid only in that given context).

Many problems arise, as will be shown in what follows, because there is no proper distinction between these two levels. Sometimes, a specific scientific truth (e.g. parts of quantum theory) is taken or interpreted as a statement about the ultimate nature of reality. Most scientists hesitate to make generalising statements that are not based on their scope of research. Kant’s a priori focus on reason – within the limitations of space and time – is jeopardised by modern physics through the indication of the lack of universality of his categories of substance and causality. Similarly, there are premature conclusions stating that his account of the credibility of scientific knowledge is no longer valid. Such voices ignore that, according to Kant’s Copernican turn in metaphysics, objectivity does not refer to the world of objects but to the way in which we perceive them. He explicitly cautions us to take the form given by our intellectual faculties as phenomena for the things in themselves. As the transcendental object is beyond any possibility of knowledge, he warns of the ‘transcendental illusion’ (e.g. Bitbol 2002: 326, 328).

Most sciences deal not with the ultimate reality but with the phenomenal world in contexts where there is sufficient reproducibility to create probabilistic anticipation. Rather than questions of an ultimate reality, what characterises science and distinguishes it from religion is the consistency in the process of finding invariants and the forms of agreeing on them in an open process free from any ideological predeterminations⁷. Therefore, there are good reasons to maintain the ‘clean separation between your personal views and the objectivistic atmosphere in which science [is] performed’ (Hut 2003: 410). Science does not need the intervention of religion to expand further, and to increasingly reflect on the momentum of the subjective pole of experience, there are other instruments available.

As shown in the following, promoters of the reconciliation project take pure axioms as proven or valid scientific propositions. Due to such misunderstandings, a final and harmonious merge between science and religion is envisaged for the future. Profound methodological differences are ignored or played down, and as a result, a ‘contemplative science’ is considered equal to hard, fact-based and generally accepted knowledge. In doing so, it is widely neglected that the methodologies by which verifiable knowledge is gained are connected to the nature of truth. Condensing them in three fundamentally different ways, we might distinguish between the following⁸:

- 1. Intuitive knowledge gained by
 - a) meditative insight or
 - b) revelations transmitted by a superior being;

⁷ In most cases, it is sufficient to apply what Arthur Fine calls a ‘Natural Ontological Attitude’ (NOA) (Bitbol 2003: 342).

⁸ For this and similar classifications of the epistemology of knowledge see e.g. Fumerton 2006, pp.1-2; Moser 2005, p.4.

2. Empirical knowledge;
3. Knowledge generated by the application of logical conclusion.

While the latter two are indispensable prerequisites for formulating any scientific statement about the world, the former is the source of religious revelations of the truth – namely by a) Buddhist and other non-monotheistic religions and b) Christian or Islamic truth-seekers.

Can science ever be ‘holistic’?

Can there ever be anything like a ‘non-reductionist science’? If there existed a science not grounded on the isolation of the objects of investigation, then no proper distinction between scientific and non-scientific methodologies were possible. Personal experience and intuition would be treated on practically the same level as empirical research and logically stepped processes, and the formulation of testable hypotheses would not be considered as something of higher reference value than mere opinions and beliefs. The main difference between scientific and non-scientific knowledge lies in their respective approaches to acquiring and validating knowledge. Scientific knowledge is based on the scientific method, a systematic and empirical approach to studying the natural world. It involves the formulation of testable hypotheses, rigorous experimentation, data analysis, and peer review. Scientific knowledge aims to be objective, verifiable, and universally applicable.

Science, by its very nature, is specific and context-focused, and therefore necessarily applies a reductionist approach. Therefore, it is difficult to imagine something like a holistic or non-reductionist science. Scientists isolate their objects to produce verifiable proofs or, at least, that such proofs withstand an easy refutation⁹. In contrast to most religions, science is open to correction and change. All theories immunised against possible falsification are scientifically useless. As statements about the true qualities of God, the Nirvana or the ultimate reality cannot be proved or rejected, they are by their nature excluded from the scope of science. Reductionism, as a fundamental scientific methodology, has been created to generate pragmatic and applicable knowledge. Its basis is a mechanic idea of reality and a mono-causal observation of the phenomena in question. This idea can be traced back to René Descartes (1596–1650), one of the founders of modern scientific methodology. In his *Meditations*, he concluded with a strict division of the sphere of mind (*res cogitans*) from the sphere of the material world (*res extensa*)¹⁰. It is clear that mono-causal models can only be applied for investigations on isolated objects as long as the causal relationships are manageable. The extreme precision of detail is achieved at the expense of fading out overarching factors. In recent decades, there have also been approaches raving about a *holistic science*¹¹, whose representatives emphasise the failure of reductionism when it comes to the study of complex systems. Because such perspectives are often used in cases of conflicting interpretations of experimental findings, they refer to contexts of justification and the application of scientific research rather than the actual research process. Nevertheless, we find this approach in some areas of psychology (transpersonal psychology and gestalt therapy), and even some anthropologists claim that their discipline is intrinsically holistic. Critics, however, call much of this *pseudoscience*. Without deepening the issue at this point, it is helpful

⁹ However, scientific statements must be formulated in a way that allows possible falsification – for example, by experiments, empirical findings and logical reasoning (see Popper 2002: 33). It follows that metaphysical statements are not falsifiable and therefore cannot be considered scientific.

¹⁰ For Descartes’ *Meditations* see, for example, Hartfield (2014).

¹¹ See, for example Capra (1997); Harding (2022).

to delineate *holistic science* from interdisciplinary, cross-disciplinary and transdisciplinary methodologies. While the latter rely on proven and well-established methods of science but combine them in new ways, the holistic approach faces the challenge of providing proof that its methods can stand up to critical scrutiny and strict scientific reviews. There are many ways to explore reality in all its facets, and science is only one set of tools to do so. To avoid a confusion of terms, we might, if necessary, classify *holistic science* – due to its obvious lack of methodological rigor – at most as a special manifestation of a *soft science*, or simply science in a weaker form.

Science as a threat to the authoritative legitimation of religion and the responses to this challenge

For already more than one century, Western and Asian Buddhists have been trying to identify common characteristics between Buddhism and modern science as described in the following section. In view of the broad spectrum of current science, it is highly problematic to compare Buddhism (or religion in general) and science without taking into account the distinguishing features between different branches of science. There are worlds – both in terms of the objects dealt with and the methodologies applied – between the mathematical exactness of natural sciences and the fuzzy-set models in sociology or psychology, not even considering hermeneutics or fields such as *understanding sociology* as developed by Max Weber. With the dissemination and widespread acceptance of fact-based scientific knowledge, religion has had to abandon more and more fields. Protestantism finally made the breakthrough to modern thinking possible by separating the sphere of the sacred from the sphere of the secular. This did not mean that science refuted religion, but rather that the two spheres have their own rights and should not mutually intervene. Descartes, for example, was during his lifetime a pious person who never questioned the existence of God. However, his creator did not intervene in the world via miracles or wondrous deeds. After finishing his creation, he lay back like a successful watchmaker and viewed his work with satisfaction. In Buddhism, we also find the phenomenon of integrating scientific discoveries into religious teachings. Recent studies on co-operation and symbiosis in ecological systems, for instance, are being declared as manifestations of *paṭiccasamuppāda*, or a compassionate view of human nature, and are thereby being instrumentalised to support the Buddhist worldview and conception of man (e.g. Ekman 2010).

Incommensurabilities

Regarding current views on the relationship between science and religion, we I detected three basic approaches:

1. The strict division hypothesis. As both deal with different phenomena and spheres of life, their statements can claim validity only within their respective fields. Consequently, there is neither competition nor any clash of interests between them;
2. The mutually complementary hypothesis. Here, both deal with similar aspects of the same reality but use different approaches. Thus, they actually complement each other and should not be viewed as competitors;
3. Superiority claims. Such claims are sometimes formulated by representatives of both sides: Scientists, due to a lack of evidence, deny the scientific value of any religious statement, while religious people, claiming to possess higher or divine insight, classify science as a system of lower and mere mundane knowledge.

A fundamental problem in dealing with the issue of comparison is the appropriate comparison of categories that are incommensurable by their very nature. Scientific categories operate on a different level than those used to explore the dimensions of ethical conduct. Even though there should be no general taboo to compare objects of disparateness, causation in the material world and ‘the law of karmic retribution’, for example, cannot be easily brought together in only one simple scheme¹². It is even worthwhile to reflect for a moment on the purpose of such comparisons. Who needs whom more: religion science or science religion? Does a scientific argument increase credibility if it is supported or corroborated by the wisdom of ancient religious texts? Does quantum physics theory gain persuasive power if physicists can show that their experimental findings are confirmed by ancient religious scriptures? Rather, the opposite is the case: religion benefits when being able to show that in some cases its knowledge is at least partly in line with the results of modern scientific research.

Can Buddhism solve the dilemma Christianity could not resolve?

In the twentieth century, Buddhadasa P. Kirthisingke¹³ and Gerald Du Pré acted as two protagonists of harmony between Buddhism and science. Both demanded that Buddhism should at last take its place within the world of science, which had been refused due to a lack of understanding on the part of some scientists. Paul Dahlke (1865–1928), a doctor, writer and one of the pioneers of Buddhism in Germany, tried to reconcile Buddhism and science by declaring that in the final analysis, Buddhism was a *teaching about the real world*¹⁴. Another forerunner of Buddhism in the West, Henry Steel Olcott (1832–1907), attempted in his ‘Buddhist Catechism’ to demonstrate that there is no principal contraction between this religion and modern science. He stated that Buddhism was in reconciliation with science because it was based on the same root idea. As an ‘interior science’ of the mind, it was complementary to ‘real’ science. However, his examples, reaching from the emanations of the Buddha body to aura radiations and the magic power of Buddhist saints (*siddhis*), are hardly in line with acceptable facts and the methods of modern science¹⁵. Dr. Suriyabongse went even further in a study published by Bangkok University and declared that Buddha is the greatest discoverer and natural scientist of all time¹⁶. From this strand of thought, there are often disagreeable oversimplifications – for example, ‘Science deals with matter, Buddhism with mind’ (see Cabezon 2003: 50) or that Buddhism was a ‘mind science’ rather than a religion (see Thompson 2020: 20, who strongly rejects this view). Many such considerations that attempt to make Buddhist teachings a science stem from *Buddhist Modernism*, a political reform movement in Sri Lanka, and other Theravada–Buddhist countries trying to shape a Buddhism of political activism and social responsibility in striving for political liberation from colonialism over the last century (e.g. Bechert 1966: 40). In the meantime, Westerners and Asians alike constructed, in the name of Buddhist modernism, new features of the ancient teachings to address the current problems of mankind and claim that Buddhism could contribute substantially to their solution (e.g. McMahan 2008).

Approaches claiming the scientific nature of Buddhism do justice neither to Buddhism nor to modern science. Even if we assume that there is a Buddhist concept of science, its origin and purpose are very different from the Western one. In the Buddhist tradition, there has never

¹² Regarding the problems of corresponding dimensions of comparison, see Baatz (2013: 48).

¹³ ‘Buddhist philosophy blends well with science in its various fields (...) the Buddha proved that he was indeed a scientist’ (Buddhadasa P. Kirthisingke, in Guruge 2008: 140).

¹⁴ *Lehre vom Wirklichen*

¹⁵ For Dahlke’s and Olcott’s notion of science, see Cabezon (2003: 44, 48) and Guruge (2008: 131–133).

¹⁶ Suriyabongse quoted from Kitagawa; Reynolds (1970: 44). This view is also held by some current Theravada monks. Bhikkhu Sujata (2021: 16) explains that the Buddha had access to substantial laws of nature in a way much deeper than modern science.

been a split between philosophy and science. While the Greek philosophers, as mentioned previously, took truth-seeking as a valuable goal by itself, Buddhists searched for truth mainly to identify the roots of suffering and pave the way to spiritual liberation. In this context, the superiority of religious knowledge has been widely recognised. The later Mahayana Buddhists founded an elaborated philosophical system based on the division of two kinds of truth: the conventional or surface level of truth and the ultimate truth. While *conventional truth* refers to the ordinary world as perceived by our senses, *ultimate truth* refers to the emptiness of all objects at the highest level of reality. As only the enlightened being is able to gain experience in the ultimate regions of reality, it goes without saying that absolute truth in this sense can never be a subject of possible agreement within a scientific community, as there are neither tools of proper measurement nor any way of objective verification. Due to its orientation towards salvation and its religious focus on overcoming suffering, the overall classification of Buddhism as a science is indefensible. However, one could ask whether at least some of its teachings could claim a scientific character. Buddhist cosmology, for instance, with its idea of an open and borderless universe, does not contradict the knowledge of modern astronomy¹⁷. At the same time, Buddhism contains a cosmogony with Mount Meru as the central world-mountain, a notion adopted from Hindu religions. Therefore, in Buddhism, there is actually a co-existence of scattered scientific thoughts blended with mythological images of the world. Thus, at most, only a few selected parts of its teachings might claim scientific evidence. It is worth noting that evidence is not only defined as a clear or plausible reason but also by its acceptance by a scientific community.

The line of argument given by B. Alan Wallace

Some scholars already are discussing a ‘Buddhist Science’ or, at least, the striking similarities between both: ‘Buddhism and science are two ancient traditions that have embraced the ideals of open-mindedness, empiricism, and rationality to explore the nature of reality’ (Wallace 2021: 213). However, can a ‘Buddhist Science’ ever be more than an oxymoron, pretending an alchemy of the impossible? It is clear that there is no possible unification between (a reductionist) science aiming at the explanation of phenomena congruent with respective underlying facts and the Buddhist teachings of salvation and otherworldliness. So far there are no common standards we can set to decide on right or wrong and acceptable or unacceptable views. Despite those reservations, bold pioneers of such an attempt had already formulated a corresponding programme (e.g. Wallace 2008: 167) but failed to consider its implications. Especially for Tibetan Buddhism, radical criticism of science has been formulated. In the name of ‘ontological reliability’, the Kantian difference between *noumenon* and *phenomenon* is bluntly rejected; instead, blurred concepts, such as ‘participatory centrism’, are presented (Wallace 1996: 109; Wallace 2007: 71). Wallace calls for a new ‘science of consciousness’ to replace ‘objectivism’, ‘monism’ and the ‘reductionism of scientism’ (Wallace 2000). Traditional sciences, he states, are designed to measure only physical phenomena. They were based on the ‘metaphysical dogma of scientific materialism’, which appears to be a ‘modern kind of nature religion’ (Wallace 2003: 13, 16 et seq.). In his view, today’s scientists are real ideologists, whereas Buddhism appears as ‘a form of empiricism’ (ibid.: 8), and in the end, Buddhists are the only true scientists in their exploration of the mind and the true nature of things.

Wallace’s starting point is the core concept of Buddhist philosophy, namely that everything in the world is devoid of an inherent nature or identity – that is, everything exists only relative to our sensory faculties (Wallace 2007: 72). In the Tibetan ‘Dzogchen’ practice of

¹⁷ Regarding such parallels, see Guruge (2008, log. cit.: 199).

meditation, he sees the possible unification of physics and consciousness resulting in a final convergence between a globalised Tibetan Buddhism and a postmodern science of consciousness. One can agree with Wallace that there exists no ‘absolute frame of reference’ (2007: 71), but it is not possible to accept his conclusions of founding science on personal introspection. Aiming at the ‘experience (of) the ultimate nature of mind directly’ (Ricard 2003: 264), ‘contemplative science’ is actually a new ‘form of religion’ (Yong 2008: 13). When presenting personal insights as equal to scientific statements, even if they are gained at the group level, Wallace faces the same problem as many contemporary parapsychologists. Although they try their best to apply scientific methods to prove their hypotheses with empirical evidence, most scientists put the results into question due to serious methodological concerns¹⁸. As a matter of fact, the final acceptance of scientific statements is based on intersubjective discourses within scientific communities. They cannot be grounded on pure beliefs or a merely *felt truth*. Wallace attempts to circumvent the problem cleverly by declaring Buddhism itself as fully permeated by *radical empiricism*:

‘As scientists and Buddhists alike return to the radical empiricism that was central to their origins and their many subsequent moments of greatness, this may trigger the first true revolution in the mind sciences and a renaissance in contemplative enquiry. It is the way forward’ (Wallace 2021: 228).

One might agree that compared with the other world religions, Buddhism is strongly based on empiricism. However, empirical experience is also mixed with mysticism (particularly in the case of tantric visualisations). Against Wallace’s claim of genuine Buddhist empiricism, another objection is that Buddhist knowledge is constructed only through doctrinal speculation and internal logic and can therefore not be verified through scientific modes of inquiry¹⁹. Some academics seem to be deluded by an inappropriate romantic notion when they believe Buddhist empiricism could be a match for objective science. In addition, all religions contain some elements of empiricism without being founded on empiricism, as science is. Wallace refers to William James – who attempted to make religious and mystical experience a subject of scientific research more than 120 years ago – and Wallace aims to transfer his approach to Buddhism in our times. However, he ignores that such an experience is unassailable by an external authority and cannot be carried into ordinary consciousness without losing its elementary features (see Sobisch 2021: 286, with reference to Dirnberger). It is an open and unsolved question of how to bring such individuals with social dimensions in line.

Time and again, Wallace refers to quantum theory – today the great place of longing for spiritual seekers and often used when more promises are made than can be fulfilled. First, the relevance of processes that occur within fractions of milliseconds in experimental settings for our everyday life, actions and moral considerations is not always self-explanatory. Furthermore, his claim that quantum physics demonstrates that the universe requires the participation of an observer for its existence brings him close to solipsism, with the idea that reality is not more than a purely subjective human concept. He ignores the fact that the respective ways of knowing are very different. Modern physics evolved through experiments and mathematical theory under reproducible conditions. This is quite far from the Buddhist means of meditative practice and

¹⁸ Thus far, scientific research into phenomena such as rebirth, telepathy or telekinesis has not delivered research results meeting the criteria of falsification. In singular cases, there might have been convincing results, but as soon as the experimental arrangement was repeated, or other scientists conducted the experiments, all the ghosts disappeared and refused any further co-operation.

¹⁹ See Sobisch (2021: 287), referring to Sharf (1995) and Christof Spitz at the conference ‘Buddhism in Dialogue with Contemporary Societies’ held at the Academy of World Religions and the Numata Center for Buddhist Studies at the University of Hamburg (Germany) in June 2018.

scholastic debate²⁰. Moreover, consciousness-only physics is not the only option. There are many other ways to understand quantum theory, and alternative realist models are capable of explaining quantum phenomena. Regarding features such as the wave-particle dualism, the question of uncertainty or indeterminacy, the non-locality and the quantum measurement problem, there is considerable disagreement about what the theory actually says about the way the world is (see Ames 2003: 293; Pepper 2018). Wallace's attempts to reconcile science with religion are based on a simple scheme of arguments. Most scientists hardly speak about the problems of a final truth, and this causes Wallace's discomfort. His realm is, first and foremost, the ultimate reality by which he is trying to measure everything. He does not do it below 'the supreme reality' and blames current scientists for being *materialistic* in their views and turning a blind eye to the higher realms and reality as a whole. However, his recommendation to them – namely, to consider Buddhist wisdom in this respect – would not improve their specific research in any substantial way but only add an ideological burden to their work. The Periodic System of Elements, for example, is extremely helpful to understand the world and to solve countless problems in physics, chemistry and biology. Neither for theoretical coherence nor for its practical relevance does it play any role in whether the periodic table is based on a materialistic or dual view of the world. Buddhists, Christians and Atheists can all use it in the same way. Buddhism (and other religions) can play a constructive role when it comes to the application of scientific knowledge and its ethical implications because such questions are not of a scientific nature.

Perhaps unfamiliar with the vast literature on scientific methodology, Wallace developed no metalanguage when speaking about science and the objects of scientific discovery. Therefore, he is rather unaware of the kinds of statements he actually makes. For example, is the proposition that all things lack inherent nature a personal conviction, a scientific truth, or (more likely, but not suggested by Wallace) an axiom we accept as a condition for the study of reality (i.e. something we regard as being established and accepted despite it is unprovable)? Instead, he claims that Buddhist insights into the nature of the mind and consciousness could be presented in a scientific way: 'They can be replicated by any competent researcher with sufficient prior training' (Wallace 2003: 8 et seq.). In Tibetan Buddhism, such training starts with 'Ngöndro', the preliminary exercises consisting of taking refuge in the Buddha and his teachings: 100,000 prostrations accompanied by reciting mantras and mandala offerings (e.g. Lama Zopa 2023). Such training creates and shapes the mode of experience and is far from anything that can be called *scientific* in the common understanding of the term. While assuming that scientists were only asking physical questions and performing exclusively physical measurements, he refers to ancient Tibetan sources giving 'detailed instructions' presented in 'hidden treasure' texts (*terma*) (Wallace 2021: 216, 222). Because he claims scientific validity for religious statements, the ground is prepared for a totalitarian ideology where, in the end, only the elite of *enlightened beings* is entitled to decide on right and wrong.

Thomas Metzinger's approach

A different attempt to reconcile science with faith was made by Thomas Metzinger (2013). Instead of juxtaposing science and religion, he contrasts religion with spirituality. In religion, he sees the great stronghold of backwardness and fossilised traditions. Metzinger argues in favour of a new spirituality encompassing a scientific approach to reality and being in line with those of modern science. In his ideal-typical comparison, religion is associated with fideism

²⁰ Despite the different sources and methodological tools, there are undoubtedly interfaces between both when it comes to general philosophical reflections. Finkenstein (2003: 381) mentions (with reference to Th. Stcharbatsky) among others the indecomposability of the world and the general incompleteness of any representation of the world. Nevertheless, the fact that in this respect they both differ from Cartesian philosophy does not make Buddhism a science.

and fundamentalist beliefs, resulting in the cultivation of an illusionary system based on intellectual dishonesty. Metzinger portrays spirituality in a benign way and bright colours, aiming at gaining insights and driven by the search for direct experience as well as open to rational arguments. Instead of maximising emotional profits (as religions do), true spirituality opened the way to dissolving the phenomenal self. Therefore, Metzinger sees great interfaces with modern science. By juxtaposing the spiritual search for direct experience with the scientific search for empirical evidence, he concludes that, in their purest forms, they were both based on the same normative idea. In the unconditional will for truth and an attitude of inner decency, he identifies their greatest common feature²¹. Spirituality, at its core, is an epistemic stance: ‘Spiritual persons do not want to believe, but to know’ (Metzinger 2013: 6).

Albeit of a different logical calibre than Wallace’s reconciliation attempts, Metzinger’s view is still based on questionable premises. Acknowledging his fine intentions, I see at least four general problems in his approach:

1. There exists no clear concept of spirituality, as there is no single, widely agreed-upon definition of it. The term has developed over the course of time and changed its meaning. While in early Christianity, spirituality referred to a life guided by the Holy Spirit, today it is frequently used in contexts where formerly the term ‘religious’ was employed. Spirituality actually denotes a wide range of spiritual phenomena and experiences, including esoteric and religious traditions. Sometimes, the term is only used to describe certain dimensions of personal growth, while in other contexts it is linked with the quest for ultimate or sacred meaning. To a wider public, it is sometimes even synonymous with spiritualism and associated with phenomena such as apparitions, hauntings, materialisation and apportation. As spirituality is something not detached from religious institutions per se, it is only a weak counter-term to differentiate it from religion.
2. Metzinger’s entire line of reasoning is based on an idealised model of spirituality. A Weberian ideal-type is created that can hardly be found in real life. It is then presented as a great miracle cure to heal all the epistemological problems arising from the impossibility of making spiritual insights a workable object of a scientific discourse aimed at the formulation of statements with a truth claim.
3. His whole concept rests on the belief that even experience beyond the realm of the senses is essentially a genuine subject to reach common sense and specific agreements. This belief is combined with a confident attitude – namely, that, via spirituality, all the differences between theists and atheists could be wiped out simply by a rhetoric of immediacy and direct experience.
4. By referring to *intellectual honesty*²² or *truthfulness* as a common denominator between science and spirituality (sometimes he uses the word *veracity*), Metzinger uses moral terms to discuss the application of academic standards. When focusing on an ‘unconditional will for truth’ or ‘inner decency’, he obviously ranks motives and intentions higher than facts and faculties.

A ‘fruitful interchange’ with benefits and knowledge production for both sides? – Some remarks on the current discourse

²¹ The radical empiricism that Metzinger claims for spirituality is of the same kind that Wallace claims for Buddhism.

²² *intellektuelle Redlichkeit*

Starting in 1987, a series of ‘Mind & Life Conferences’ took place under the patronage of the Dalai Lama. In October 1987, in Dharamsala, the first conference was held on the topic ‘Dialogues between Buddhism and the Cognitive Sciences’. The perspective, both at that time and later frequently repeated, was to open up a large and fruitful debate between science and Buddhism, covering diverse areas. The Dalai Lama expressed the hope that ‘both neuroscientists and Buddhists may benefit from such collaboration’ (Dalai Lama 2003: 91). He also considers Buddhism a kind of ‘science of the mind’ and frequently asks the question of the ‘nature of mind’ and the ‘nature of objective reality’. His search for ‘valid recognition’ is based on a typology of cognitions distinguishing positive and negative mental states by which ‘those types of cognition that lead to suffering are mistaken cognition, which do not accord with reality ...’ (Dalai Lama 2003: 94). Does this mean that personal suffering should function as a criterion to decide on the correctness of scientific findings? It is hardly imaginable that scientific agreement is possible regarding, for example, the 89 *Consciousness Aggregates*, as described in the *Vissuddhimagga* (2010: 790) and divided into profitable and unprofitable ones. Nevertheless, some Buddhists exude confidence in their reconciliation project. Wallace demands a ‘mutually respectful dialogue and a collaboration in empirical and theoretical research’ (2003: 26). According to him, research should take the experiences of Buddhist practitioners fully into account. The aim should be not only to learn about Buddhism but also from Buddhism (ibid). The organisers of the ‘Mind & Life Conferences’ are deeply convinced about the constructive and gap-bridging results of their gatherings: ‘Over three decades, Mind & Life convenings have brought diverse perspectives to bear in informing and advancing the nascent field of contemplative science and its application to real-world challenges...’²³.

Despite this claim, an unbiased review of the various agendas shows that there is no broad participation of scientists from various disciplines. Most presenters are psychologists, neurologists and people from helping professions. The available video recordings document meetings of kindred spirits. There are barely any controversial discussions or clashes of conflicting paradigms. To date, the actual results of such discourses between Buddhists and scientists are rather meagre and sobering. Critics claim that there is not much more than truisms and banalities (e.g. Funk 2016). Nonetheless, it is astonishing that a number of scientists are quite open to these dialogues, while on other occasions, the same group placed great importance on a clear demarcation from all non-scientific approaches (that is, from everything not clearly in line with their methodological standards and the indispensable criteria of reproducible truth). There are clearly pragmatic reasons behind this, as there are barely any reports regarding critical disputes occurring at such events. Instead, they appear as ceremonial happenings, where white scarfs (*khata*) are handed over and where participants mutually assure their fine and noble intentions. Constantly, one can hear a murmur of all-encompassing views and greater future collaboration (Funk 2016: 246). However, the reality is rather sobering. Sebastian Riemer reports on a meeting with the Dalai Lama and scientists in Heidelberg (Germany) in September 2018, attended by 1,400 participants. The meeting revealed more misunderstandings than fruitful exchanges. Participants’ questions about the moral principles of science remained unanswered, and his Holiness had difficulties in understanding an important question about borderline situations of life as dealt with within the existential philosophy of Karl Jaspers (see Riemer 2018).

Look for differences rather than supposed common features

²³ Source: <https://www.mindandlife.org/events/event-history/> (accessed on 2nd February 2020).

To support the idea of convergence, some people argue that neither in ancient Egypt nor in the Sumerian cultures was there a confrontation between science and religion and that the conflict only arose during the 16th century (e.g. Sandvoss 1979). This is also true for India and China (e.g. Wagner 2020). However, there is a marked difference in the current discourse: in ancient cultures, scientists never formulated their findings in opposition to the prevailing religious attitude. Furthermore, with Christianity, there appeared a religion based on monotheism, which claimed a comprehensive entitlement to explain the world and demanded a monopoly on truth. For centuries, European universities have had to fight to get rid of religious guardianship. Should they now tolerate reestablishing it through the back door when Buddhists recommend themselves as a proper partner for a project of reunification?²⁴

It is also worth considering the actual benefits of classifying Buddhism as a kind of science. Is the aim to *upgrade* Buddhism so that it no longer appears as a mere belief but as a teaching endowed with the power to announce objective and therefore truthful statements about the world and human life?²⁵ This would actually counteract the original intention of Buddha Shakyamuni, whose greatest aspiration was to point out the path of liberation from worldly suffering, but he showed no ambition either to explain the natural world or to solve the metaphysical miracles of his time. In the ‘Parable of the Poisoned Arrow’, Buddha taught that in the face of all-pervasive suffering, one should not waste time and energy on metaphysical speculations. Instead, practical efforts are the right way to improve life and finally attain Nirvana peace²⁶.

In today’s world, it is not self-explanatory that there is a real need to dissolve the contradiction between science- and salvation-oriented approaches. The starting point and the premises seem to be wrong. Why look for similarities when the differences are much more striking? Buddha did not primarily teach the skills of mastering the world but the knowledge and the way of salvation in the inner universe of the mind. In the famous Kālāma Sutta (2022), Buddha encourages a spirit of free enquiry and formulates principles that should be followed by a seeker of truth – for example, a critical examination and analysis of things instead of blind faith. However, it is often ignored that this wise advice was given to follow the path of salvation and was not meant to establish Buddhism as a science.

In the Vedic scriptures, there is already a distinction between religious knowledge (*parā vidyā*), which is classified as the highest form, and all other forms of ‘correct’ knowledge (*aparā vidyā*) (e.g. Harshananda 2023). In Buddhism, the ranking is less explicit, but there is also a difference made between knowledge of the worldly sphere (*lokiya*) and knowledge of the transcendent realms (*lokuttara*)²⁷. On this basis, the spheres of science and religion could also be divided accordingly. Following this historical line to the present, it would be much more fruitful to ask for dissimilarities than to quickly identify supposed common goals.

Most scientific research is embedded in contexts of interest and various utilisations of the knowledge gained. Pure research is an exception. As academic communities are oriented, in addition to truth-seeking, towards material benefits and prestige gains, their internal dynamics are not always beneficial for society as a whole. Instead of self-enthronement as a science, the genuine task of religion should be to focus on the moral and ethical aspects of science and its

²⁴ For a critical approach on Buddhist attempts for such projects, see Funk (2016: 372).

²⁵ There is a report about the aforementioned meeting of Western scientists, headed by Francisco Varela, with the Dalai Lama in Dharamsala in October 1987, which states that each presentation of scientists were immediately met with the phrase ‘and in Buddhism we have already the same’. Attempts were made to derive whole scientific branches or areas of research from Buddhism (see Trimondi 1999: 768 et seq.) There are also attempts to derive Buddhism from teachings not in line with modern science. For a rejection of such attempts, see Sobisch (2021: 289).

²⁶ See *Sallatha Sutta* transl. by Thanissaro Bhikkhu 1997.

²⁷ See Wisdom Library (2023). It was later refined by concepts of ‘valid knowledge’ (*pramāṇa*) and ‘reliable testimony’ (*śabda*), but these categories rather refer to the origin of statements as being in line with the ‘authentic’ teachings of the Buddha than issues of pure epistemic authority (e.g. McMahan 2008: 270).

applications. Keeping in mind that today, a few scientists stay in service of barbarian dictators, conduct cruel animal experimentations, justify racism or work as torture specialists for the U.S. and other governments, the moral voices of religions can function then as essential countermeasures.

Thompson (2020: 50) states that ‘the term “Buddhist science” is a misnomer’. The unsolved question in the various attempts to reconcile science and religion (whether Christianity, Buddhism or any other belief) lies in the impracticality to bring the results of introspection – which is always a very personal experience – systematically in line with empirical knowledge and experience about the laws and functionalities of the external world. There are also Buddhists realising the impossibility of such an alchemical marriage (e.g. Sharf 2007; Sobisch 2021):

‘Objectivity in a modern scientific sense [...] probably cannot be achieved, because today’s science is materialistic and tries to find reality on an external material basis, while Buddhists seek it in their own mind’ (Sobisch 2021: 293).

In my view, however, the biggest difference between science and religion is not an assumed materialistic orientation of science and its negligence towards the mind, but the claim of validity of the respective statements made. Around us, there is the material world and all our sense data are based on it. Therefore, it is quite natural that this is taken as the common reality to which we refer. Through reference to the sense data accessible to everybody, we construct a common world. The worlds of religion, however, are based on agreements of shared beliefs, not traceable facts. There is a fundamental difference between science whether it uses, on the one hand, analytical–empirical methods, logic derivations or even normative propositions (such as in law and partly in economics)²⁸ and, on the other, meditative awareness and understanding gained by contemplation. As the Buddhist canon is vast, Robert Sharf once stated, ‘... you can always find passages here and there to support whatever reading of the tradition you prefer’ (Sharf 2007).

Conclusion

Scientific methods aim at a consistent explanation of phenomena and events and, as a result, make predictions and control possible, whereas meditation and introspection provide insights that enable the individual to master life accordingly. Scientific knowledge is always subject to discussion, whether in academic communities or in the broader public. Its validity comes from a process of communication in which statements are either accepted or disputed, but they are always based on corresponding facts, observations or applied methods. By contrast, meditative intuition is personal and cannot be made subject to any criteria of scientific truth. It is unlikely that this threshold will never be surmounted. Spiritual experience is embedded in personal or religious contexts. As most religions claim that their spiritual knowledge and wisdom were higher than those of their competitors for salvation, there is no ground for a common understanding open to discursive rationality. Openness to counterfactual results is considered a potential threat to institutional stability.

There are as many subjective realities as there are human beings on this planet. Spiritual experience takes place inside and outside of institutionalised religious institutions, and science cannot say much substantially about matters of transcendence. Whether the afterlife will offer us a *bardo* state, the Christian heaven, the Hindu-Moksha, the Buddhist Nirvana-peace, Wotan’s Valhalla, a variety of cold and hot hells, something similar to a psychedelic experience or only a

²⁸ For a widely accepted classification of such kinds, see Habermas (1970). This classification of methods can also be related to widespread and commonly accepted division of modern science into the three major branches: natural sciences, social science and the formal sciences and their respective axioms and rules (e.g. <https://en.wikipedia.org/wiki/Science>, accessed 2nd June 2023).

sober Existential nihilism, it is far beyond science to create truthful statements on this matter. Regarding these questions, science can only conduct studies on the systematic comparison of the doctrines and practices, themes and impacts of religions and spiritual traditions. Science explains by creating models and generalisations, while Buddhist teachings are largely based on illustrations and metaphors (Cabozón 2003: 51).

The experience of non-duality might be the greatest thing that happens to an individual, but the communication about it – not even to speak of claims of truth that might arise from it – cannot be presented in a scientifically acceptable way. As it cannot be fully shared with others, metaphors, symbolic expressions or religious terms are the most adequate language to speak of it. Thus, we must bid farewell to an oversimplified and harmonious concept of a possible reconciliation of science and religion. Unless we completely redefine the term ‘science’, even Buddhism cannot solve the problem. While a sharp distinction between observer and observed object is the prerequisite for any scientific statement, the individual experience of non-duality cannot be presented in scientifically valid ways. Such experiences have to remain within the spheres of religion, art or poetry.

Nevertheless, I am convinced that dialogue between Buddhism and modern science is both necessary and fruitful in at least three areas: First, science conceptualises the world using terms that are generated through collective processes of understanding. However, new discoveries in the natural sciences and within the humanities, as well as changes in ways of thinking lead to a constant revision of our conceptual frameworks. Science is not an accumulative process of the steady amassing of knowledge, like a building erected brick by brick; rather, it is a process of constant revision and negation of former certainties. The edifice of science is therefore, to a large extent, repeatedly torn down and then rebuilt from scratch. Here, Buddhist thought, in its constructivist aspects, encourages a constant reflection on our axioms and the concepts that guide our academic thoughts and actions.

Buddhism’s second contribution lies not so much in shaping the process of knowledge itself, but rather in the application of scientific knowledge and scientific methodology to daily life and society. Modern knife-sharpening technologies, for example, result in knives makes it easier to kill someone, just as better scalpels can be used in the hands of a surgeon to save a life. Buddhism’s contribution therefore lies in the reflection of ethical and responsible use of the results of scientific research. Linked to this is a third aspect, namely the well-considered selection of the subjects with which scientists decide to engage. For example, far more funding is channelled into armaments research than into peace and conflict studies. When it comes to the question of what kind of research serves humanity best, liberates people from suffering and leads to happiness and enlightenment, Buddhists have some very clear answers to offer.

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