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# The Buddha's Empirically Testable "Ten Criteria" Challenges the Authenticity of Truth Claims: A Critical Review and Its Potential Applicability to Debunking the Various Post-Truths

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**Abstract:** Modern readers who investigate religious theories and practices are exposed to diverse truth claims and worldviews. Such claims are often conflicting and subject the readers to various misconceptions and misguidance. In Buddhism, the Buddha is said to have awakened to the true nature of existence and attained final liberation from suffering, referred to as "enlightenment." How was he able to convince his disciples of his self-claimed enlightenment? Can his reasoning be applied to modern readers, who are well-educated, but overloaded with the incessant proliferation of digital information? The Buddha, specifically in the *Kālāma Sutta*, presents empirically testable guidelines, termed the "Ten Criteria," which were formulated as an integrated interplay of reasoning and morality. This essay examines the Buddha's strategy, which is empirical and pragmatic in nature and embraces the fundamental principles of modern science. We contend that his proposed methodology is verifiably evocative of a moral discipline, while presenting a pedagogical approach to the teacher–student dynamic. Serving as a reference point, this view may help modern readers in differentiating the right truth from the biased post-truths, which appeal to emotion and personal belief.

**Keywords:** The Buddha's "Ten Criteria"; *Kālāma Sutta*; *Ehipassiko*; empiricism; pragmatism; Four Reliances; Four Assurances; Pascal's Wager; post-truth

## 1. Introduction

In recent years, media representation and the rampant spread of unverifiable misinformation have been posing new challenges to intellectual communities. Identifying such misinformation is vitally important to ultimately curbing its impact. It is striking that the neuroscientist Daniel J. Levitin states, "We've created more information in the past few years than in all of human history before us" (O'Kelly 2015). Levitin is primarily interested in peak performance, and explains how naps, calendars and periods away from the internet can help to focus our mind. However, one may question how effective the peak performance itself may be in sorting out meaningful verities from "post-truth," which is defined as "relating to or denoting circumstances in which objective facts are less influential in shaping public opinion than appeals to emotion and personal belief."<sup>1</sup> Further, how may modern readers approach these challenges within the context of a reasonably scientific perspective, which is

<sup>1</sup> Oxford Dictionaries has declared "post-truth" to be its international word of the year 2016. <https://www.theguardian.com/books/2016/nov/15/post-truth-named-word-of-the-year-by-oxford-dictionaries> (accessed on 28 May 2019).

subjected to testable and logical theory? One may wonder if any religious group or leader who has explored religious theories and practices has ever anticipated this issue and offered a rational solution.

Among the many religious leaders in history, the Buddha is uniquely known to have tackled the challenging issue of how to authenticate a truth claim. He is said to have awakened to the true nature of existence and attained final liberation from suffering, known as “enlightenment,” through the practice of *Satipaṭṭhāna*.<sup>2</sup> However, what is noteworthy here is how the Buddha presented the authenticity of his alleged “enlightenment” to convince his disciples. A series of questions can ensue from this. Given that the enlightenment experience is unique and personal for any religious practitioner, how can one determine if such a claimed truth experience commensurates with “right enlightenment”? How can “right enlightenment” be defined? Regarding anyone who claims to have attained such an enlightenment, how can we validate his/her claim? Can it be applicable for modern, rational readers who are often inundated with a plethora of digital information about how to discern the right truth?

We have attempted to instigate a critical review of the Buddha’s empirically testable “Ten Criteria”, as stated in the *Aṅguttara Nikāya*, specifically in the *Kālāma Sutta*,<sup>3</sup> which is said to have been presented by the Buddha. It is seen as based on an integrated unity of reasoning and morality in order to investigate the nature of reality. Many scholars generally agree that the *Kālāma Sutta*, or *Discourse in Kesamutta*, is considered one of the Buddha’s main discourses in the *Aṅguttara Nikāya*.<sup>4</sup> The *Sutta* advocates the use of both sound logical inference and dialectic principles in relation to the proposition of seeking the ultimate truth and wisdom. It is characterized by an appeal to the empirical verification of the Dhamma or truth. This reminds us of the fundamental basis of modern scientific principles, which are predicated upon universal applicability, methodological propriety and verifiability. It seems that the Buddha’s “Ten Criteria” illuminate a path by serving as a reference point, while allowing one to fully expand his/her autonomous reasoning power. Particularly for intellectuals with a scientific mindset, it may be challenging to adopt Buddhist concepts, which demonstrate a fusion of reasoning and moral practice, as this is deemed hardly reconcilable within the Cartesian–Newtonian dualistic framework.

This article does not aim to justify or authenticate the Buddha’s teaching in general, but to compare the Buddha’s teaching methodology, as revealed in the *Kālāma Sutta*, to the *modern* scientific principles beyond classical sciences. It is important to address the very assumption upon which this article is based, namely that the Buddha’s approach is in any meaningful paradigm compatible with modern science as well as with radical empiricism/pragmatism. While a comprehensive critical review of classical vs. modern science remains beyond the scope of this article, a brief explanation of the main themes may suffice here. Specifically, we examine the Buddha’s strategy, which espouses a combination of the element of morality and sound logical reasoning, and assert that his proposed method can be highly effective as a foundation for a moral principle. His view offers an empirical investigation into the teacher–student dynamic, and provides a virtual road map in a cogent and valid manner. Serving as a reference point, we will investigate whether this approach may be employed in differentiating the right truth from the diverse alleged post-truths of our modern times.

## 2. The Buddha’s “Ten Criteria” as Presented in the *Kālāma Sutta*: How Valid Is It for Modern Readers?

Bhikkhu Bodhi indicates that, in contemporary Buddhist circles, the *Kālāma Sutta* has been regarded as an essential Buddhist text, almost equal in importance to the discourse on the four Noble

<sup>2</sup> The Buddha’s original ‘Discourse on the Foundations of Mindfulness’ (*Satipaṭṭhāna Sutta*) appears in two versions in the Pāli canon: (1) a long account known as the *Mahāsatiṭṭhāna Sutta* in the *Dīgha Nikāya* (The Long Discourses of the Buddha) (Walshe 1995, chp. 22, pp. 335–50) and (2) a slightly shorter text simply called the *Satipaṭṭhāna Sutta* in the *Majjhima Nikāya* (The Middle Length Discourses of the Buddha) (Ñānamoli and Bodhi 1995, chp. 10, pp. 145–55).

<sup>3</sup> (Bodhi 2012), *Sutta* 65, *Kesaputtiya*. This discourse is best known under the name “The *Kālāma Sutta*.”

<sup>4</sup> The *Aṅguttara Nikāya* (Gradual Collection or Numerical Discourses) is a Buddhist scripture, the fourth of the five *Nikāyas*, or collections, in the *Sutta Piṭaka*, which consists of several thousand discourses ascribed to the Buddha and his chief disciples according to the number of discourses referenced in them.

Truths. The *sutta* is presented as an indication that the Buddha may have anticipated the Western empiricism of free inquiry and the scientific principle, and that he endorsed an effective personal investigation of truth. Since the beginning of the twentieth century, it has become one of the most commonly quoted Buddhist texts, providing a means of convincing those with modernist leanings that “the Buddha was their forerunner” (Bodhi 2012, p. 73).

In the discourse of the *Kālāma Sutta*, the Buddha is reported to have advised the Kālāmas not to be misled by ten specific items. Neither the Buddha nor his disciples proposed a specific title for the discourse; however, we may call it “the Buddha’s Ten Criteria.” The *Kālāma Sutta* describes that the discourse originated when the Buddha visited Kesaputta, a district of the Kosalans, while performing his rounds with a large group of mendicants. After the inhabitants, called the Kālāmas, greet the Buddha, they ask him for his advice:

Lord, there are some brahmins and contemplatives who come to Kesaputta. They expound and glorify their own doctrines, but they deprecate the doctrines of others, revile them, show contempt, and disparage them. And then other brahmins and contemplatives come to Kesaputta. They expound and glorify their own doctrines, but as for the doctrines of others, they do the same. They leave us absolutely uncertain and in doubt: Which of these venerable contemplatives are speaking the truth, and which ones speak falsehood and are lying?” (Thanissaro 2015)

In response, the Buddha delivers a series of recommendations that serve as an entry point to the Dhamma for those yet unconvinced; he proceeds to list the “Ten Criteria” by which any person with common sense can discern which teachings to accept as true. He exhorts the Kālāmas not to believe religious teachings just because they claim to be true, in spite of the application of various methods or techniques. Rather, “direct knowledge”, grounded in one’s own experience, must be applied. He counsels that the words of the wise should be heeded and goes on to advise them not to adopt an acquiescent acceptance, but to identify those truths through questioning and personal testing by direct knowledge. The Buddha concludes his message as being conducive to well-being and happiness while reducing harm and suffering in human life. The *Kālāma Sutta* states:

When there are reasons for doubt, uncertainty is born. So in this case, Kālāmas, don’t go [1] by unconfirmed reports, repeated hearing, [2] by legends, rumor, hearsay, [3] by traditions, [4] by scriptures, [5] by logical reasoning, conjecture, surmise, [6] by inference, an axiom, [7] by analogies, reflection on superficial, specious appearances, [8] by agreement through pondering views, delighting in opinions and speculations, [9] by the appearance of probability, another’s seeming ability or [10] by the thought, out of respect for a recluse, ‘This contemplative is our teacher.’ When you know for yourselves that these qualities are unskillful; these qualities are blameworthy; these qualities are criticized by the wise; these qualities, when adopted and carried out, lead to harm and to suffering—then you should abandon them. (Thanissaro 2015; Woodward [1932] 2006, pp. 170–75; Soma 2013; Wallis 2007, pp. 92–96)

The first four criteria are propositions based on tradition, the next four indicate various types of reasoning, and the last two provisions refer to two types of personal authority. It appears that the Buddha advocates free inquiry based on clear reference points. This in turn encourages practitioners to vanquish the three karmically unwholesome roots: greed, hatred and delusion. The discourse penetrates beyond its immediate overtones to the very heart of the Dhamma, that is, the necessity to confront and terminate such unwholesome states. These are not only the bases of wrongful misconduct, but also are the primary germs of future suffering. The entire purpose of the Dhamma is to eradicate these evil states through the practice and cultivation of generosity, kindness, and wisdom, respectively. For example, if any teaching is conducive to harm and suffering for oneself or others, it is to be abandoned, and contrarily, if it is beneficial to all, leading to their welfare and happiness, then it

is to be accepted and developed. Due to its unique characteristics, the *Kālāma Sutta* was named by Buddhist scholars as the Buddha's "Charter of Free Inquiry" (Soma 2013) or the "Buddhist Magna Carta" (Wallis 2007, p. 92). The discourse asserts that all decrees representing dogmatism or blind faith are to be vigorously rejected. Briefly, the Buddha proposes a teaching that is universal, proper, and immediately verifiable and valid for a life of moral discipline. He indicates that whether or not an afterlife exists, a life of moral purification and compassion produces its own intrinsic rewards: happiness and a sense of inward security. For those who are not yet persuaded, he declares that such a teaching will not only ensure their present welfare, but also their safe passage to a pleasant rebirth. It seems that, at the start of the discourse, the Kālāmas were not confirmed as being followers of the Buddha. The Buddha was merely esteemed as one of the passing sages who might help dispel their doubts.

Bodhi argues that the discourse to the Kālāmas offers an acid test for gaining confidence in the Dhamma as a viable doctrine of deliverance. The *sutta* begins with an immediately verifiable teaching for anyone with moral integrity. Bodhi supports the view that, from this starting point, one eventually arrives at a firm, experientially grounded confidence in the liberating and purifying power of the Dhamma, creating a deepened faith in the Buddha as a teacher. This marks the opening of right view as the forerunner of the entire Noble Eightfold Path. Bodhi maintains that to have the strength of accepting the Buddha's teaching as trustworthy is to set foot on a journey, one which transforms faith into wisdom, confidence into certainty, and culminates in liberation from suffering (Bodhi 1988).

Soma Thera emphasizes that the Buddha's instruction to the Kālāmas is justly famous for its encouragement of free inquiry, and the spirit of the *sutta* reflects a message devoid of fanaticism, bigotry, dogmatism, and intolerance (Soma 2013). Thus, the *Kālāma Sutta* discourages blind faith, prejudice, and belief spawned from specious reasoning. The evidence presented here highlights the fact that it does not allow dogmatism to stand in the way of one who seeks ultimate wisdom, which is also essential to scientific truth. This is not only empirical, but also practical in nature; one decides for oneself based on one's own verifiable experience, rather than on a pre-existing authoritative belief and its granted social structural norms.

### 3. Buddha's Strategy: The Element of Morality within the Framework of Quantum Mechanics

On what basis does the Buddha advise one to rely on the ten criteria? The Buddha's specific approach is illustrated as follows:

Kālāmas, when you know for yourselves, these teachings are unprofitable, these teachings are blameworthy, these things are censured by the intelligent, these things when performed and undertaken, conduce to loss and sorrow, then indeed do ye reject them. <sup>5</sup>

The Buddha continues:

When you yourselves know: 'These things are good; these things are not blamable: these things are praised by the wise; undertaken and observed, these things lead to benefit and happiness,' enter on and abide by them. <sup>6</sup>

For the Buddha, the element of morality or compassion cannot be separated from truth, but is rather amalgamated into it. This is strikingly different from the philosophy of the classical Cartesian–Newtonian dualistic perspective, in which the issue of morality, which is so vital to the Buddha's thought, has not been incorporated into the field of science, probably due to its being considered non-objective and therefore non-scientific. Can modern intellectuals understand the Buddha's rationality comfortably as it encompasses compassion? Recently, a novel conceptual

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<sup>5</sup> (Woodward [1932] 2006, p.172.)

<sup>6</sup> (Soma 2013).

approach to this question was developed in order to address a broader understanding and acceptance of morality within the framework of modern science beyond classical physics. A discovery in quantum mechanics supports the view that physical reality may be arguably *nonlocal*, which means a movement from point A to point B without going through intermediate steps (signal-less communication). Classical physics portrays the view that physical reality is local, which means that a measurement at one point in space cannot influence what occurs at another beyond a fairly short distance. Until recently, this had been perceived as an immutable truth. However, the amazing new aspect of nature known as *nonlocality* was revealed in a series of experiments which took place in 1982. These experiments tested predictions, proposed in a theorem developed by the Irish theoretical physicist John S. Bell, in response to a number of questions raised by Albert Einstein and others in 1936 (Bell 1964, pp. 195–200). Thus, has new scientific evidence regarding nonlocality made possible an insightful understanding of *nonduality* and *wholeness*.<sup>7</sup> Choo and Choi have concluded from the rational perspective of quantum physics that the concept of nonlocality, with its expansion into the sequence of *nonlocality–nonduality–wholeness* (NNW), enables the Buddha’s espousal of morality, specifically Amitābha’s wisdom and its complementary counterpart, compassion, to fit reasonably within the framework of modern quantum mechanics.<sup>8</sup>

It seems apparent that even without any knowledge of modern quantum mechanics, the Buddha presented a remarkably similar basic principle to evaluate and thereby confirm the worthiness of any given teaching. When a teaching or truth becomes conducive to harm and suffering, no matter where it originates, he advises one to reject it. If it serves no practical purpose, then it should be deemed as dysfunctional. The Buddha explains how such teachings can lead to “harm and suffering”:

‘Now what think ye, Kālāmas? When greed arises within a man, does it arise to his profit or to his loss?’ To his loss, Sir. . . . ‘It surely becomes conducive to harm and suffering.’ The Buddha expounds the reason. ‘Being overcome by greed and losing control of his mind, does he not kill a living creature, take what is not given, go after another’s wife, tell lies and lead another into such a state [alcohol intoxications] as causes his loss and sorrow [prompts another too, to do likewise] for a long time?’ (Woodward [1932] 2006, p. 172)

The Buddha expands his discourse on the consequences of hostility and delusion in a manner similar to his discussion on greed, as cited above. Thus, he connects the consequences of wrong teachings with an unwholesome, harmful and ill moral life, one that is overpowered by greed, hostility, and delusion. Comparatively, he indicates that wholesome moral actions will eventually lead to a profitable and happy life:

‘When freedom from greed arises in a man, does it arise to his profit or his loss?’ To his profit, Sir. ‘Does not this man, not being greedy, not overcome by greed, having his mind under control,—does he not cease to slay and so forth: does he not cease to mislead another into a state that shall be his loss and sorrow for a long time?’ He does [cease to slay and so forth], Sir. (Woodward [1932] 2006, p. 173)

Thus, the Buddha connects the consequences of freedom from wrong teachings with the wholesome moral life, and declares why one should not follow these wrong teachings. He then provides this rationale:

<sup>7</sup> These revolutionary discoveries were derived directly from quantum mechanics; it has been demonstrated that entangled photons (light particles) located about seven miles apart were able to interact or communicate with one another instantaneously and simultaneously. These results have verified a level of correlation that supports “action at a distance,” leading to the revelation that physical reality is indeed not local, but rather *nonlocal*. See further details in (Choo and Choi 2017, pp. 61–62).

<sup>8</sup> Amitābha Buddha is a trans-historical Buddha, described as the Buddha of Infinite Light and Infinite Life, and venerated by all Mahāyāna schools and particularly the Pure Land School. Amitābha Buddha, similar to Śhākyamuni Buddha, often appears as part of a triad: Avalokiteśvara on the left represents Amitābha’s great compassion; and Mahāsthāmaprāpta on the right represents Amitābha’s wisdom (Choo and Choi 2017, p. 68).

Be ye not misled . . . but ye know for yourselves: These things are profitable . . . and conduce to happiness . . . do ye undertake them and abide therein, such was my reason for uttering them. (Woodward [1932] 2006, p. 174)

He proceeds to elaborate the Four Immeasurable Minds (*Bramavihāras*).<sup>9</sup> The *sutta* states:

Now, Kālāmas, he...freed from coveting and malevolence, who is not bewildered, but self-controlled and mindful, with a heart possessed by good-will, compassion, sympathy, equanimity . . . abides suffusing the whole world with a heart possessed by . . . equanimity that is widespread, grown great and boundless, free from enmity and oppression. (Woodward [1932] 2006, pp. 174–75)

The Buddha thus motivates and encourages the practitioner to cultivate these four affective qualities for building a sublime mind-set by avoiding the wrong “alleged truth” and practicing the right teaching. These qualities are considered essential to social harmony and individual well-being (Woodward [1932] 2006, p. 96). In the Mahāyāna tradition, the *Brahmavihāras* seem to have been incorporated into the six perfect virtues (S. *pāramitās*),<sup>10</sup> which pertain to “that which has reached the other shore.” Although the four *Brahmavihāras* and the six *pāramitās* seem similar, a different emphasis is placed on their various aspects. An element of wholeness in the sense of the nonduality of compassion and altruistic joy is emphasized in the former, whereas the practice of wisdom appears to be emphasized in the Mahāyāna, and its spirit is later sustained in Chinese Buddhism.

#### 4. The Buddha’s Four Assurances [*Caturasukhas*]<sup>11</sup> Reminiscent of Pascal’s Wager

The Buddha fosters a pragmatic insight into the “Four Immeasurables,” specifying that when a practitioner gradually pervades the world with an awareness imbued with good will, compassion, sympathetic joy and equanimity, thus becoming kind and gentle, such a person is to be assured as embodying the ensuing Four Assurances; these virtues are to be virtues naturally accrued from the boundless practice of the four positive states of mind, that is, the four *Bramavihāras*. They are said to radiate in all directions, and issue forth the rewarding quality of comforting assurance and solace. The *sutta* states:

Now, Kālāmas, one who is a disciple of the noble ones—his mind, thus free from hostility, free from ill will, undefiled, and pure—acquires four assurances [comforts, solaces] in this very life, here and now.<sup>12</sup>

The Four Assurances are as follows:

If there is a world after death, if there is the fruit of actions rightly and wrongly done, then this is the basis by which, with the break-up of the body after death, I will reappear in a good destination, the heavenly world. This is the first assurance he acquires. But if there is no world after death, if there is no fruit of actions rightly and wrongly done, then here in the present life I look after myself with ease—free from hostility, free from ill will, free from trouble. This is the second assurance he acquires. If evil is done through acting, still

<sup>9</sup> S. Four *Bramavihāras*, “Four Immeasurables”; the contents of meditation practice in which the practitioner arouses four positive states of mind: *mettā* (loving-kindness) toward all beings; *karuṇā* (limitless compassion) toward those who are suffering; *muditā* (altruistic joy) over the salvation of others from suffering; *upekkhā* (limitless equanimity, even-mindedness), the state of mind that regards others with impartiality, free from attachment and aversion (Fischer-Schreiber 1991, p. 28).

<sup>10</sup> The *pāramitās*, translated as “perfections,” are the virtues perfected by a bodhisattva in the course of his/her development: generosity, discipline, patience, energy or exertion, meditation, and wisdom.

<sup>11</sup> The Pāli term to designate this word is hard to locate in the available literature, as it may have been coined at a later time. *Caturasukhas* (or *Caturassāsas*) is a suggested rendering by the authors: *catur*, four; *sukha*, comfort; *assāsa*, solace.

<sup>12</sup> “Comfort,” rendered by (Woodward [1932] 2006, p. 175), “Solace,” by (Soma 2013).

I have willed no evil for anyone. Having done no evil action, from where will suffering touch me? This is the third assurance he acquires. But if no evil is done through acting, then I can assume myself pure in both respects. This is the fourth assurance he acquires. (Thanissaro 2015)

Why did the Buddha associate the element of “assurance” with his criteria? He appeared to be interested in one’s mental well-being as attained through freedom from greed, hatred, and delusion. Concerning these four assurances, Soma Thera encapsulates the Buddha’s intention, indicating that the *Kālāma Sutta* reflects the basic framework of the Dhamma, and that the Four Assurances point out the extent to which the Buddha advocates suspension of judgment in matters beyond normal cognition. The assurances demonstrate that the motive for living a virtuous life does not necessarily depend on belief in rebirth or retribution, but rather on mental well-being, acquired through the overcoming of greed, hatred, and delusion (Soma 2013). It is notable that the Buddha utilized a strategy of pragmatism by stressing practical experience and action, rather than merely being concerned with the justification of rational ideation. This will be further elaborated on later.

Interestingly, more than two millennia later, the Buddha’s Four Assurances are reminiscent of Pascal’s Wager, which is the name given to Pascal’s proclivity for believing in the existence of God. He asks us to suppose that we weigh the gain or loss in wagering on whether to believe in God.<sup>13</sup> He draws the conclusion that rationality persuades one to wager in favor of God: “Wager, then, without hesitation, that He is.” However, what is distinctive about his conclusion is that the formulation of probability and considerations of wagering play a crucial role in his arguments. Pascal maintains that one is incapable of knowing whether God exists or not, yet one may “wager” one way or the other by means of a reasonable consideration of the relevant outcomes.<sup>14</sup>

Similarly, cultivating the Four Immeasurable minds leads to a fortuitous result concerning the fruit of actions: the worst outcome associated with cultivating these is at least as good as the best outcome associated with practices by those who are subject to hostility, ill will and trouble. If there is a world after death, and if one’s actions bear the fruit rightly, the result of active cultivation will engender a good destination. The Buddha points out here that rationality should convince one to adopt the practice of building the Four Immeasurable minds.

The modern multiple criteria for decision making (MCDM) discipline, a paradigm developed by a number of contributors since the early 1930s, demonstrates that structuring complex problems and evaluating multiple conflicting criteria lead to more informed and better decision making (Köksalan et al. 2013, p. 87). This model involves structuring and solving problems utilizing multiple criteria. Thus, one is free to select the preferred alternative from a set of available choices. In terms of the MCDM discipline, the Buddha’s strategy may be seen to present three premises: the first concerns the decision matrix of rewards based on certain decision criteria, the second concerns the viability of cultivating the Four Immeasurable minds, and the third is a maxim about rational decision-making. Specifically, rationality inclines one toward performing the act of maximum expected utility or reward, which is of a pragmatic empirist flavor. The Buddha avers that certain decisions are worthy of choice by this criterion, thus providing a kind of vindication of the Four Immeasurable minds.

<sup>13</sup> Blaise Pascal (1623–1662) was a French mathematician, physicist, inventor, writer and Christian philosopher. Following a mystical experience, he devoted himself to philosophy and theology. Pascal presents the so-called “Pascal’s Wager” in his “Pensées.” It contains a confluence of several important strands of thought: the justification of theism, probability theory and decision theory (Hájek 2012).

<sup>14</sup> Edward McClennen summarizes Pascal’s argument as presenting the following decision matrix:

	God Exists	God Does Not Exist
Wager for God	Gain all	Status quo
Wager against God	Misery	Status quo

(McClennen 1994, pp. 115–37).

Although both models share the common element of making a wager by creating prudential reasons for doing so, the Buddha's message is radically different from that of Pascal's, in that the Buddha's approach seeks human welfare and positively avoids suffering. Comparatively, Pascal is motivated by the issue of whether to believe in God. The Buddha asserts that a happy and moral life would be sufficient and correct even if there is no ensuing karma or reward. It is obvious that the reward would not be of a materialistic kind.

A unique strength of the Buddha's teaching in the *Kālāma Sutta* is that he presents various means to systematically and critically evaluate his own message. Specifically, for this purpose, he appears to have utilized a strategy of pragmatism and voluntarism—the thesis that belief is a matter of free will—without using the nebulous concept of eternity. Thus, intellectuals with a scientific mindset, who are familiar with logical reasoning and empiricism in the philosophy of science, can be induced to explore rational steps to cultivate the Four Immeasurable minds by employing the Buddha's proposal.

### 5. The Ultimate Attestation, the *Vīmaṃsaka Sutta* through the Eye and the Ear

It is interesting to note that the Buddha's Four Assurances begin with suppositions in a subjunctive mood: "If there is a world after death, if there is the fruit of actions rightly and wrongly done . . . with the break-up of the body, after death. But if there is no world after death, if there is no fruit of actions rightly and wrongly done..." However, the *Nikāya* describes on many occasions the Buddha's recounting his experience of own manifold past lives, as well as the karmic consequences upon the dissolution of the body according to one's actions. If the Buddha was aware of his own experiences, why did he resort to expressing "suppositions" in describing the Four Assurances? He appears to have intended to satisfy the rational doubt of the empiricist; evidently, the Buddha exercised a fair and reasonable means for convincing the disciples to vindicate or justify the validity of his teaching by applying the Ten Criteria, even *vis-a-vis* his own teaching. This is elaborated step-by-step in the *Vīmaṃsaka Sutta*, which presents a distinctive strategy of strict investigation as to how one may examine the status of his/her own enlightenment. The Buddha's mind-set seems to have been sympathetic with the unenlightened ones who had yet to experience the "Three True Knowledges",<sup>15</sup> which lie beyond normal cognition. It is to be recalled that, at the time of the Buddha's preaching, the Kālāmas were not yet convinced of the truth of his message. Suppose there were an imaginary interlocutor asking, "What you are explaining may sound reasonable, but may we apply your criteria to your assertions in order to test the validity of your claims?" The Buddha offers a systematic method of judging one's own teacher from an inductive empiricist viewpoint. His innovative teaching arguably illustrates one of the most unique and reasonable declarations ever made by any religious or spiritual leader in recorded history. In the *Vīmaṃsaka Sutta*, the Buddha states:

Bhikkhus, a bhikkhu who is an inquirer, not knowing how to gauge another's mind, should make an investigation of the Tathāgata in order to find out whether or not he is fully enlightened. (Ñānamoli and Bodhi 1995, chp. 47, *Vīmaṃsaka Sutta*, pp. 415–41)

He advises bhikkhus to investigate the *Tathāgata* with respect to two kinds of states, cognizable through the eye and through the ear: "Are there any defiled states cognizable through the eye or through the ear found in the *Tathāgata* or not?" He goes on to ask specific questions related to various states cognizable through the eye or the ear in the *Tathāgata*:

Are there found in the Tathāgata or not any mixed states, cleansed states cognizable through the eye or the ear. Has this venerable one attained this wholesome states over a long time or

<sup>15</sup> These are classic descriptions of the Buddha's enlightenment experience involving the attainment of the four *jhānas* or meditative absorptions, followed by the three *vijjās* or higher types of knowledge: the first is knowledge of the recollection of his manifold past lives, the second is knowledge of the passing away and rebirth of beings, how beings pass on according to their actions, and the third is knowledge of the destruction of the taints on the eve of his enlightenment (Ñānamoli and Bodhi 1995, chp. 4, *Bhayaḥherava Sutta*, pp. 102–7, chp. 36, *Mahāsaccaka Sutta*, pp. 332–43).

did he attain it recently? Has he acquired renown and attained fame, so that the dangers [connected with renown and fame] are found in him? Is he restrained without fear, and does he avoid indulging in sensual pleasures through destruction of lust? What are the venerable one's reasons and what is his evidence? (Ñānamoli and Bodhi 1995, p. 415–16)

If asked as such, the *Tathāgata* would answer: “Cleansed states cognizable through the eye or through the ear are found in the *Tathāgata*. They are my pathway and my domain, yet I do not identify with them” (Ñānamoli and Bodhi 1995, p. 1243). Only after confirming all these states, may a disciple place confidence in the teacher thus:

As the Blessed One taught the Dhamma to me in this way, through direct knowledge of a certain teaching, I came to a conclusion about the teachings: The Blessed One is fully enlightened, the Dhamma is well proclaimed by the Blessed One, the Sangha is practising the good way. Thus, the Buddha proclaims how to plant, root, and establish anyone's faith in the *Tathāgata* through these reasons, terms, and phrases; his faith is said to be supported by reasons, rooted in vision, firm. That is how, bhikkhus, the *Tathāgata* is well investigated in accordance with the Dhamma. (Ñānamoli and Bodhi 1995, p. 418)

Additionally, we need to pay attention to the Buddha's last remark, “They are my pathway and my domain, yet I do not identify with them.” The Buddha states that this is his approach, and makes it clear that he does not identify himself with these states of purified virtue. He maintains the objective role of a third-party empiricist observer.<sup>16</sup> It is interesting to note that the Buddha's remark presents a striking contrast to Jesus' proclamation, “I am the way and the truth and the life. No one comes to the Father except through me.”<sup>17</sup>

Time and time again, the Buddha is said to have urged his disciples not to accept his teachings out of blind faith or simply because he is revered as the Buddha. In actuality, the Buddha presents this systematic manner of investigation of the *Tathāgata* in order to allow the disciples to test for themselves as to whether the *Tathāgata* is indeed fully enlightened. The Buddha emphasizes that it should be on the basis of valid reasoning and direct personal experience that a practitioner accepts the teachings of any notable teacher, including the Buddha himself. Regarding the search for truth, no such methodology has ever been previously cited. This appears to be an unprecedented proclamation, that is, the declaration of a means of testing even one's own validity. This evidence highlights that it is a straightforward method of rigid testing that proves the presence or absence of genuine enlightenment. Therefore, the application of his proposed method in the ensuing appraisal of the ultimate truth offers a convincing model: the resulting judgments may help debunk and demystify the thicket of contorted views and various post-truths that proliferate in our modern times.

## 6. The Pragmatic Empiricist Approach of Early Buddhism through the Eye of the Pāli Buddhist Scholars and Others

As presented in the *Aṅguttara Nikāya*, the Buddha elaborated a specific empirically testable guideline in the *Kālāma Sutta*, which many scholars have likened to the modern scientific, inductive method with its use of personal observation and testing. Beyond logic and initial deductive faith, the Buddha states, “It is one's own personal investigation that is most crucial.” The term “specious reasoning” means accepting mere interpretive logic or inference, which the Buddha considers

<sup>16</sup> One of the reviewers comments that, while there may be some merit to this characterization, the Buddha's non-identification with these virtuous states may simply be an expression and consequence of his realization of selflessness, i.e., the non-identification with any and all mental and physical states, which could serve as the basis for the erroneous notion of a self from a Buddhist perspective.

<sup>17</sup> John 14:6, *Holy Bible*, 1986. This is one of the seven “I am” statements of Jesus. “I am” is an exclusive way of referring to oneself. Jesus used the definite article to distinguish Himself as “the only way” to the Father in Heaven, to emphasize Himself as “the only truth” and the source of both physical and spiritual life.

insufficient. He advises that one should use reason and logic and then put it to the test by practice, and know by direct experience for oneself. It is apparent that Buddhism does not purport to maintain the strict principles of classical science, thus the Buddha cannot be considered a research scientist as defined by modern terms. However, his essential teachings in the *Kālāma Sutta* are empirical and pragmatic in nature and correlate, at least in part, with the fundamental principles of modern science, which are subjected to testable and logical theory.

Such an empiricist approach on the part of early Buddhism has been well documented among major Buddhist writers. Pāli Buddhist scholars, in particular K.N. Jayatilleke, David J. Kalupahana and Gunapala Dharmasiri, have interpreted early Buddhism as reflecting an empirical viewpoint: Jayatilleke holds that early Buddhism is a sort of empiricism (Jayatilleke 1964, pp. 463–64); Kalupahana compares early Buddhism with logical positivism (Kalupahana 1975; 1976, pp. 3–24, 185); Dharmasiri highlights the rational, scientific, and empirical orientation of early Buddhism (Dharmasiri 1988, pp. 298–99). These scholars assert that the concept of a “Buddhist” empiricism is a justifiable extension, in which the mind is included as a sixth sense and possesses superknowledge (P. *abhiññā*, Skt. *abhijñā*). The term *abhiññā* is translated as “superknowledge” to indicate a range of supranormal abilities acquired through virtuous living and intense meditation practice, as generally possessed by the Buddha or an arhat. These feats embody the ability to go anywhere at will, clairaudience (the heavenly ear), the cognition of others’ thoughts, the ability to know one’s former existences, clairvoyance (the heavenly eye), and the attainment of the extinction of all outflowing taints.

Jayatilleke and Kalupahana assert that there are two types of so-called “personal knowledge”: that which is acquired through perception, both ordinary and extra-sensory, and that gained by inference derived from such perceptions (Jayatilleke 1964, p. 416; Kalupahana 1975, p. 185). The difference between the two forms of perception seems to be a difference in the degree of penetration. Kalupahana indicates that extrasensory perceptions have corresponding objects, which are not perceived by the normal senses. Thus, the Buddha seems to have accepted a form of empiricism, based broadly on both ordinary sense experience and extrasensory perceptions (Bodhi 2000, p. 1140). Kalupahana concludes:

Rejecting an absolute (such as the Brahman or Ātman of the Upaniṣads) or a transempirical reality, the Buddha confined himself to what is empirically given. Following a method comparable to that adopted by the modern Logical Positivists (Empiricists), he sometimes resorted to linguistic analysis and appeal to experience to demonstrate the futility of metaphysics. As a result of his empiricism, he recognized causality as the reality and made it the essence of his teachings. Hence his statement: ‘He who sees causality sees the dhamma.’ (Kalupahana 1975, p. 185)

However, Kalupahana indicates that the Buddha did seem to understand the limitations of such an empirical approach based on ordinary sense perception. For example, let us consider the silence of the Buddha with regard to the “ten questions” concerning the extent and duration of the universe, the nature of the soul, and the destiny of the saint (Kalupahana 1975, p. 178). Kalupahana asserts that the Buddha’s refusal to answer these ten questions is entirely due to the limitations of empiricism, and not to the inability of concepts to describe a transcendental reality (Kalupahana 1975, p. 183). Earlier, Edward Conze indicated that “some propagandists have overstressed its rationality and its kinship with modern science...the Lord Buddha finds himself conscripted as a supporter of the British philosophical tradition of ‘empiricism.’ But who can do the testing?” (Conze 1962, p. 26). In light of this claim, Frank J. Hoffman argues that early Buddhism is not a form of empiricism, based on Locke’s writings in which the mind is thought of as a blank slate, which is written on by means of sensory activity. He denies the notion that Buddhist teaching is a justifiable extension of the concept of “empiricism”, which includes the mind as a sixth sense encompassing extrasensory power (Hoffman 1982, p. 155). Hoffman’s view was shared by other scholars—David Montalvo, for example, who held the view that the “Buddhist Empiricism Thesis” is most certainly false (Montalvo 1999).

There have been a number of proponents as well as critics with regard to the so-called Buddhist empiricism thesis. First and foremost, it should be remembered that one must take into consideration the vast time span between the period of the Buddha and the appearance of empiricist philosophy, which is well over two thousand years. The bold attempt to compare the 5th century BCE Buddha's teachings to the 17th century British empiricists in order to investigate how the former relates to the latter may seem a *prima facie* case of "putting the cart before the horse." It would be more reasonable if the effort were made the other way around; there may be some aspects of both similarity and disparity in empiricism as compared to Buddhist ideas, which are described as practical, pragmatic or even scientific in orientation, that make comparing them a useful enough exercise to warrant closer examination (Hayes 1995, p. 75).

However, as cautioned by Bodhi, it must not be construed that the Buddha's teaching was intended as an endorsement for either radical skepticism or for the creation of unreasonable personal truth: "On the basis of a single passage, quoted out of context, the Buddha has been made out to be a pragmatic empiricist who dismisses all doctrine and faith, and whose Dhamma is simply a freethinker's kit to truth which invites each one to accept and reject whatever he likes" (Bodhi 1988).

### 7. The Buddha's Teaching in the *Kālāma Sutta* from the Perspective of Pragmatic Empiricism

What is often referred to as the "Noble Silence" or "refusal to answer irrelevant questions" of the Buddha has become widely known by academic scholars and Buddhist practitioners in general. For instance, a few passages in the *Nikāyas* mention the Buddha's silence with reference to his dialogue with the wandering ascetic Vacchagotta, who asked the Buddha a series of questions: Is the world eternal or not? Is the world finite or infinite? Are the soul and the body the same or different? Does Master Gautama, after death, exist or not exist, neither exist nor not exist? In response, although this dialogue is hardly exemplary of the Buddha being silent, the Buddha clearly explained that he has no specific answer concerning these metaphysical issues, saying that it would not be conducive to the attainment of Nibbāna, and thus any possible considerations would represent a view that is as incorrect as any other speculation:

Vaccha, the speculative view that the world is eternal is a thicket of views, a wilderness of views, a contortion of views, vacillation of views, a fetter of views . . . . It is beset by suffering, by vexation, by despair, and by fever, and it does not lead to disenchantment, to dispassion, to cessation, to peace, to direct knowledge, to enlightenment, to Nibbāna. Seeing the danger, I do not take up any of these speculative views. (Ñānamoli and Bodhi 1995, pp. 591–92)

How can modern intellectuals interpret the above statements within the context of a scientific, pragmatic worldview? Do the Buddha's teachings and the scientific disciplines share a strategy to any viable extent? If so, as Richard P. Hayes questions, "Will the marriage between Buddhism and Pragmatism last?" In his final verdict, Hayes concludes, "I cannot claim to have answered that question. In fact I believe it is still much too soon to know the answer to that question. It is something that we must all wait to see" (Hayes 2009).

Here we would like to cautiously present a positive answer; the marriage will most likely endure based on the most current scientific perspective, beyond the Cartesian–Newtonian dualism. It is intriguing to examine how current scientific methodology and philosophy, especially pragmatic empiricism, can parallel that of the Buddha's discourse. In order to validate any alleged truth, intellectuals are often accustomed to adopting a logical and scientific method. An emphasis is placed on "antiauthoritarianism" in order to confront the issue of the authenticity of a truth claim. All data need to be subjected to an empirically testable proof, and the truth may be verified favorably or unfavorably based on the outcome of the test. It is striking that the *Kālāma Sutta*, in which the Buddha espouses religious truth or wisdom in the pursuit of seeking valid knowledge, appears to be congruent with current scientific principles and pragmatic empiricism. However, some clarification is needed concerning the similarity and disparity between the Buddha's teaching and scientific methodology.

Empiricism, the study of human knowledge, holds that knowledge is derived primarily from sensory experience, especially experimental sensory experience (Curd and Psillos 2008, pp. 129–38). Similarly, the proponents of the scientific method maintain that all hypotheses and theories must be tested against observations of the natural world rather than relying solely on *a priori* reasoning or intuition. Specifically, a central concept of the scientific method is that a statement of the truth must be empirically based on the evidence of the senses, which can be tested only by observation and experimentation. Peter Markie states that philosophical empiricists hold no knowledge to be properly inferred or deduced unless it is derived from one's sense-based experience, while rationalism asserts that knowledge may be derived from reason, independent of the senses (Markie 2017). While a comprehensive review of empiricism/pragmatism remains far beyond the scope of this article, a brief explanation of their contextual background may suffice here.

The empirical method of science has been a basic cornerstone of modern scientific methodology, which was initially formulated by Francis Bacon (1561–1626) as an explicit, inductive method, as set forth in his philosophical work *"The Novum Organum."*<sup>18</sup> According to Bacon, the correct procedure is to perform experiments, draw general conclusions, and test their reproducibility through further experiments. The theory that all knowledge is derived from sense experience, which was stimulated by the rise of experimental science, was developed in the 17th and 18th centuries and expounded in particular by John Locke, George Berkeley, and David Hume. The most elaborate and influential presentation of empiricism was achieved by John Locke (1632–1704), an early Enlightenment philosopher. He held that all knowledge derives from sensation or reflection, namely, the introspective awareness of the workings of one's own mind.

Starting from around 1870 to the early 20th century, a philosophical tradition, "pragmatism," related to but not identical to empiricism, was set forth by Charles Sanders Peirce (1839–1914), William James (1842–1910) and John Dewey (1859–1952). James popularized the term "pragmatism," giving Peirce full credit for its earlier development. The maxim of pragmatism, a regulative principle in the normative logic of science, was formulated by Peirce as a recommendation to guide the conduct of thought, proposing an optimal way of "how to make our idea clear" in his original 1878 statement:

It appears, then, that the rule for attaining the third grade of clearness of apprehension is as follows: Consider what effects, that might conceivably have practical bearings, we conceive the object of our conception to have. Then, our conception of these effects is the whole of our conception of the object. (Peirce 1878, p. 293; Buchler 2018, p. 31)

The philosophy of pragmatism emphasizes the practical application of ideas by acting on them, in order to actually test them in human experience, and focuses on a changing universe rather than an unchanging one (Guttek 2013, pp. 76, 100). Teddy Ward states that Peirce adopted the main ideas of rationalism, most importantly the idea that rational concepts can be meaningful and necessarily extend beyond the data gathered through empirical observation. Peirce contributed to the placing of inductive and deductive reasoning in a complementary mode rather than a competitive one (Ward 2015). To this, he added the concept of abductive reasoning, which is a form of logical inference to find the simplest, "best available" and "most likely" explanation for the observations; thus, it reaches a plausible conclusion, rather than a positive verification (Sober 2013, p. 28). The most important extension Peirce made of his earliest views regarding deduction, induction, and abduction was the integration of the three argument forms into his view of the systematic procedure for seeking truth. He called this the "scientific method," which serves as a primary conceptual foundation for today's empirically based scientific method (Burch 2014). In developing these ideas, Peirce emphasizes that in making every

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<sup>18</sup> *The Novum Organum* (The New Organon), translated as "new instrument," was published by Francis Bacon in 1620 as a reference to Aristotle's work *Organon*, a treatise on logic and syllogism. In *Novum Organum*, Bacon details a new system of logic, now known as the Baconian method. For Bacon, finding the essence of a thing was a simple process of reduction through the use of inductive reasoning (Spedding et al. 2010, p. 149).

conception equivalent to a conception of “conceivable practical effects,” the maxim of pragmatism reaches far beyond the merely practical and allows for any “flight of imagination,” provided only that this imagination “ultimately alights upon a possible practical effect” (“Pragmatism as the Logic of Abduction”, Lecture VII of the (Peirce 1903, p. 226) Harvard lectures on pragmatism).

Along with Peirce, William James was one of the founders and leading advocates of pragmatism. Around the beginning of the 20th century, James started using the term “radical empiricism,” or “logical positivism,” sometimes called “logical empiricism”, as the opposite of rationalism, in order to establish his version of the pragmatic theory of truth. Radical empiricism consists first of a postulate, only definable in terms drawn from experience, next of a statement of fact in terms of direct particular experience, and finally of a generalized conclusion: the parts of experience are held together by relations that are themselves parts of experience (James 1909, p. 138). He maintains, “To be radical, an empiricism must neither admit into its constructions any element that is not directly experienced, nor exclude from them any element that is directly experienced.” For such a philosophy, the relations that connect experiences must themselves be experienced relations, and any kind of relation experienced must be accounted as “real” as anything else in the system (James 1904, p. 315). He observes that “the directly apprehended universe needs, in short, no extraneous trans-empirical connective support, but possesses in its own right a concatenated or continuous structure” (James 1909, p. 138).

While pragmatism stresses the involvement of ideas in practical experience and action, James’ logical positivism is more concerned with the justification of scientific knowledge (Fumerton et al. 2016). James thus extended pragmatism to the meaning of truth beyond a mere theory for analyzing philosophical disputes. He enumerated a series of questions in relation to true ideas, which may be posited between an idea and the object:

Grant an idea or belief to be true, it says, what concrete difference will its being true make in any one’s actual life? What experiences [may] be different from those which would obtain if the belief were false? How will the truth be realized? What, in short, is the truth’s cash-value in experiential terms? It sees the answer: True ideas are those that we can assimilate, validate, corroborate, and verify. False ideas are those that we cannot. James claims that the truth of an idea is not a stagnant property inherent in it. Truth happens to an idea. It becomes true, is made true by events. Its verity is in fact an event, a process, the process namely of its verifying itself, its verification. Its validity is the process of its validation. (Pragmatism’s Conception of Truth (James 1907a, p. 88) and The Meaning of Truth (James 1909, p. 135))

In his second lecture on pragmatism (James 1907b), entitled “What Pragmatism Means,” James elaborates on this term:

The pragmatic method is primarily a method of settling metaphysical disputes that otherwise might be interminable. Is the world one or many?—fated or free?—material or spiritual?...; and disputes over such notions are unending. The pragmatic method in such cases is to try to interpret each notion by tracing its respective practical consequences. What difference would it practically make to anyone if this notion rather than that notion were true? If no practical difference whatever can be traced, then the alternatives mean practically the same thing, and all dispute is idle. Whenever a dispute is serious, we ought to be able to show some practical difference that must follow from one side or the other’s being right. ((James 1907b, p. 25). What Pragmatism Means)

If this pragmatic method were applied, James goes on to say, a great deal of philosophical disputation would simply disappear: “It is astonishing to see how many philosophical disputes collapse into insignificance the moment you subject them to this simple test of tracing a concrete consequence . . . The whole function of philosophy ought to be to find out what definite difference it will make to you and me, at definite instants of our life, if this world-formula or that world-formula be the true one” (James 1907b, p. 27). James focused on what he called the cash-value, or usefulness, of

a philosophical idea, by which he meant the noting that many irrelevant philosophical disputations often collapsed into insignificance and thus had no cash-value. This is remarkably reminiscent of the Buddha's remark seeking the significance of many futile philosophical debates by discerning whether they are "leading toward Nibbāna or not." Here, one may substitute James' term "useful cash-value" for the Buddha's "Nibbāna."

However, James seems to rule out the Buddhist perception that may be obtained by seeking supernatural explanations for natural phenomena. His denial here is fairly consistent with the strict principles of classical science, in which higher or supernormal knowledge is considered scientifically invalid. The allowance of supernatural causes is still readily debated within both scholarly and non-scholarly circles today, because it endorses the transcendental domain, which is conceived as existing outside of ordinary human perception. How may modern readers rebut such a common allegation within the context of a reasonably scientific perspective? This will be elaborated further below.

John Dewey was a philosopher, psychologist, and educational reformer whose philosophical concerns reached deep into social and political issues. He modified James' pragmatism to form his version, known as "instrumentalism" or "experimentalism." He used the term only as a tool for making observational predictions for future experimentation, thus alluding to the pragmatist question of "how thought functions in the experimental determination of future conduct" (Haack 2006, p. 34). Dewey's theories and practices retain the empiricist flavor in that they are described as *a posteriori*. Over a period of several decades, Peirce's pragmatic maxim had been broadened to include both James' Radical Empiricism and Dewey's Instrumentalism, and came to exert a powerful influence in laying the groundwork for today's empirically based scientific method. Thus, the pragmatic movement appears to have brought the practical application of its utilitarian ideas one step closer to the empiricist approach of early Buddhism.

In summary, the view that knowing must be based on seeing or direct perceptual experience categorizes Buddhism as a form of empiricism, as perception and inductive inference are considered the means of knowledge, as revealed in the Pāli *Nikāyas*. From the viewpoint of the Western philosophy of religion, the Buddha developed an extended, comprehensive "empiricism" encompassing sensory as well as extra-sensory perception, while, from the Buddhist viewpoint, the British empiricist tradition utilizes only the sensory based portion of empiricism, as per the Cartesian worldview and Newtonian mechanics. In this regard, Fritjof Capra argues that the dynamic, holistic framework is sufficiently scientific and in agreement with the most advanced scientific theories of physical reality. He further emphasizes that the manifestation of an extreme specialization of the rational mind is now making contact with the essence of religion, which is the manifestation of an extreme specialization of the intuitive mind (Capra 1982, pp. 47–49). He states that scientific theories can never provide a complete and definitive description of reality, but only an approximation of its true nature. Capra and Luisi maintain that scientists do not deal with truth; rather, in the systemic paradigm, all scientific concepts and theories deal with limited and approximate descriptions of the true nature of reality (Capra and Luisi 2014, p. 82).

To understand the nature of knowledge and the role of experience in arriving at knowledge of the truth in Buddhism, it is useful to introduce one of the standard categories of Buddhist epistemology, which is elaborated by Donald S. Lopez, Jr. into three groups: the manifest, the hidden, and the very hidden (Lopez 2008, pp. 141–42). The category of "the manifest" includes those objects of knowledge that can be apprehended through direct perception, and "the hidden" not by direct perception but through inference, for example, seeing smoke rising from a distance and inferring the existence of a fire burning. Lopez states that the category of the hidden includes several of the most fundamental doctrines of Buddhism, including the concept of liberation from rebirth, the possibility of omniscience, the subtle impermanence of all conditioned things, and reincarnation. None of these, according to Buddhist theory, can be seen directly by an unenlightened person, but can be inferred by reasoning. The third category, "the very hidden," includes those things that remain inaccessible to the unenlightened through either direct perception or inference and are known only to a buddha

or enlightened being. These include the features of the various heavens and the subtle workings of the law of karma, such as the consequences of virtuous or non-virtuous deeds (Lopez 2008, p. 141). The Fourteenth Dalai Lama of Tibet, the most visible and influential Buddhist teacher to embrace the discourses of Buddhism and science, asserts that, from the Buddhist point of view, “the very hidden” may remain obscure to the unenlightened mind, and points to the most subtle workings of the law of karma. He addresses the question as to why there are so many species of beings in the world (His Holiness the Dalai Lama 2005, p. 28).

Regarding the term, “the enlightened versus unenlightened mind,” how may rational intellectuals apprehend it within the scope of their usual cognition? In Buddhism, especially the Chan/Seon/Zen tradition, the nature of the enlightened mind is said to be ineffable and thus cannot be demonstrated explicitly, but may only be experienced in an intuitive way. However, in an effort to appeal to scientifically-oriented intellectuals, the following view may offer a reasonable vindication which transcends ordinary human perception, approaching the unlimited, vast extra-sensory perceptions such as superknowledge, *abhiññā*. This can be categorized as a matter of the degree of penetration.

Although this new view does not necessarily prove that higher or supernormal knowledge is scientifically valid, we cannot conclude that it remains “unscientific” just because it endorses the transcendence of the visible sensory fields. Let us examine the nature of visible light, which is the visible portion of the electromagnetic spectrum, whose electromagnetic radiation includes cosmic rays (Gamma rays, X-rays) at one end and radio waves at the other. “Visible light” means that radiation stimulates the photoreceptors within the retina of the eye, creating a visual sensation. The range of radiation visible to the human eye is referred to as the visible spectrum, ranging from violet (380 nm) at one end of the spectrum to red (760 nm) at the other. Nanometers (nm) equal one billionth of a meter in length. The visible spectrum thus ranges from only 0.00038 to 0.00076 millimeters, which is known to represent a tiny fraction of the vast electromagnetic spectrum. While white light is composed of all the wavelengths in the visible spectrum, individual wavelengths within this spectrum create different color sensations by themselves. Beyond the blue end of the visible spectrum lies ultraviolet radiation (200 to 380 nm), while infrared radiation (760 to 1,000,000 nm)—which is often associated with heat—lies beyond the red end. These two forms of radiation are not visible to the human eye.

The nature of sound can be explained in a similar fashion. The human auditory system is capable of hearing only a limited range of the sounds produced in nature, certainly not entirely. Sound frequencies are measured in Hertz (Hz), or cycles per second. The minimum level of sound that humans can detect is strongly dependent on frequency. Normally, humans hear sounds as low as 20 Hz (infrasounds < 20 Hz) and as high as 20,000 Hz (ultrasounds > 20K Hz), best at about 3–4 kHz.<sup>19</sup> In terms of the overall electromagnetic spectrum, human eyes are said to be extremely limited, almost *blind*, and ears can be said to be nearly *deaf* without exaggeration.<sup>20</sup> Thus, human perception is known to be very limited, considering the vast electromagnetic spectrum that exists in the natural world. Such a limited spectrum of human perception may well vary depending on the degree of penetration consequent to both concentration and insight training, as espoused by the Buddha. Labeling an extra-sensory perception, such as superknowledge, as “non-scientific” can itself be scientifically invalid, as this knowledge may well be considered a justifiable extension of our “ordinary” understanding, potentially as a sixth sense. Such an understanding may lead modern readers to broaden their scope of insight, and to further encompass the issue of morality within the context of a reasonably scientific perspective.

<sup>19</sup> For an overview on “the Auditory System,” see (Gray 1997), <https://nba.uth.tmc.edu/neuroscience/s2/chapter12.html> (accessed on 20 April 2019).

<sup>20</sup> (NASA Langley Research Center Science Directorate EPO Programs). [http://science-edu.larc.nasa.gov/EDDOCS/Wavelengths\\_for\\_Colors.html](http://science-edu.larc.nasa.gov/EDDOCS/Wavelengths_for_Colors.html) (accessed on 20 April 2019).

## 8. The Divergence of the Ten Criteria in the *Madhyama Āgama*, and the Four Reliances in the Mahāyāna Traditions

An interesting divergence from the Pāli version of the *Kālāma Sutta*, preserved in the *Sarvāstivāda* Chinese parallel, *Madhyama Āgama* 16 (T138b13–439c22), is worthy of note. Here, as in the Pāli version, the Buddha states that the three roots of evil are desire, hatred and ignorance, that one can free oneself from these by developing the Four Immeasurables, and that this will result in the Four Assurances. However, in the Buddha's response to the Kālāmas' doubts, strikingly, he does advise the Kālāmas not to harbor doubt or skepticism and tells them outright: "You yourselves do not have pure wisdom with which to know whether there is an afterlife or not. You yourselves do not have pure wisdom to know which deeds are transgressions and which are not transgressions" (Bodhi 2012, pp. 73–74). He then explains the three unwholesome roots of *kamma* leading to moral transgressions, and categorically tells them what he himself has known by direct experience. Bodhi points out that it is possible that *Madhyama Āgama* 16 is a normalization of an original Indic text corresponding to the Pāli version, made at a time when the Buddha was widely regarded as an unquestionable authority (Bodhi 2012, pp. 1652–53).

In the Mahāyāna traditions, the issue of whom to trust in terms of the authenticity of various truth claims has preserved the Buddha's message, which was originally proclaimed in the *Kālāma Sutta* and later evolved into the "Four Reliances" (*pratisāraṇa*). In his teachings on the Four Reliances, specifically in various *Mahāyāna sūtras*, the Buddha proposes distinct guidelines for arriving at an unmistakable understanding of his system. The *Four Reliances Sūtra* states:

Four Reliances: that is, reliance on the Dhamma (teaching), not (merely) reliance on the person (teacher); reliance on the meaning, not (merely) reliance on the phrasing (letter); reliance on the *suttas* whose meaning is already drawn out (*nītārtha*, definite meaning), not (merely) reliance on those *suttas* whose meaning is to be drawn out (*neyāstha*, interpretable); reliance on extraordinary knowledge (*jñāna*, wisdom), not (merely) reliance on (intellectual) discrimination (*vijñāna*, ordinary consciousness). (Thompson 2008, p. 32)

These lines may be interpreted as follows:

(1). We must not rely on the reputation of a particular teacher, but should examine the nature of the teaching itself. It must be stressed that it is the truth of the teaching that is all-important, and never the personality of the teacher.

(2). Concerning the teaching: We should not be influenced merely by the rhetoric, or the poetic style of a particular teaching, but should accept it only if the actual meaning of the words is significant.

(3). Regarding the meaning of a teaching: We should not be satisfied merely with an interpretable, provisional meaning of conventional truth, but should rely upon the definitive meaning of the ultimate truth of emptiness.

(4). Regarding the definitive meaning: We must not rely on dualistic, discursive knowledge, which is deceptive and impure, but on exalted wisdom through direct experience. Although not discussed as thoroughly as the Buddha's Ten Criteria, the Four Reliances constitute a simplified version of the Buddha's earlier message.

The Four Reliances appear in several Mahāyāna sūtras, such as the *Vimalakīrtinirdeśa sūtra*,<sup>21</sup> *Mahāparinirvāna sūtra*,<sup>22</sup> *Mahāprajñāpāramitā śāstra*,<sup>23</sup> and *Catuḥpratisāraṇa sūtra*.<sup>24</sup> The usual order of

<sup>21</sup> (Thurman 1976), *The Holy Teaching of Vimalakīrti; A Mahāyāna Scripture*. pp. 99 and 150. *Vimalakīrtinirdeśa sūtra* (T0474.14.0519a04–14.0536c24), composed ca. 2nd century C.E., Chinese translation by Kumārajīva.

<sup>22</sup> *Mahāparinirvāna sūtra* (T0007.01.0191b03–01.0207c12), *the Great Complete Nibbāna Sūtra*, translated by Dharmarakṣaṇa (385–433).

<sup>23</sup> *Mahāprajñāpāramitā śāstra* (T1509.25.0066a18–25.0756c19, Daijīdolun), composed by Nāgārjuna (150–250 AD), translated by Gumarajep (344–413).

<sup>24</sup> *Catuḥpratisāraṇa sūtra* (*Sūtra of the Four Refuges*), devoted to the assessment of interpretation, is unknown in the canonical literature and seems to have been compiled at a later date (Lamotte 1988, p. 11).

“teaching-reliance,” “meaning-reliance,” “definitive meaning-reliance,” and “wisdom-reliance” seems to conform to various stages of practice. According to Étienne Lamotte, even if the *Catuhpratiśaraṇa sūtra* was not given its definitive form until after the establishment of the Buddhist schools, its ideas had already been evolving since the earliest Buddhist texts. The aim of this *sūtra* is to ensure the subordination of human authority to the spirit of the dharma, the letter to the spirit, the *sūtra* of provisional meaning to the *sūtra* of precise meaning, and discursive consciousness to direct knowledge (Lamotte 1988, p. 12). By taking the steps advised in the Four Reliances and using them to assess the truth of the teachings, this paradigm appears to supply a clear option, enabling the practitioner to discriminate correctly between what is to be accepted and what is to be passed by. Thereby, the practitioner is able to advance directly on the right path of practice.

### 9. A Possible Application of the “Ten Criteria” for Debunking the Various Post-Truths

In the twenty-first century, we continue to struggle with these challenging issues, including a plethora of views and post-truths, which are often based on passion and emotion rather than reason and evidence. Over the last several years, dictionary.com has been defining words and updating terms related to the evolving understanding of various types of misinformation: (1) misinformation—false information that is spread, regardless of whether there is intent to mislead, (2) disinformation—deliberately misleading or biased information, manipulated narrative or facts, (3) post-truth—relating to or existing in an environment in which facts are viewed as irrelevant, and emotional appeals are used to influence public opinion, (4) fake news—false news stories, often of a sensational nature, created to be widely shared or distributed for the purpose of generating revenue, or promoting or discrediting a public figure, political movement, and so forth, (5) confirmation bias—a bias that results from the tendency to process and analyze information in such a way that it supports one’s preexisting ideas and convictions, (6) implicit bias—a bias that results from the tendency to process information based on unconscious associations, (7) homophily—the tendency to form strong social connections with people who share one’s defining characteristics, such as age, gender, ethnicity, personal beliefs, and so forth.<sup>25</sup> How do we rationally deal with this proliferation of mis/disinformation? It is striking that the Buddha’s specific advice concerning the quest of the ancient Kālāmas, which is still cogent and valid, appears to be reasonably applicable to modern readers who are faced with this issue.

### 10. Conclusions: “Ehipassiko”—“That Which Invites Everyone to Come and See”

The recent burst of media misinformation and the spread of unverifiable claim have presented a potential challenge to concerned intellectual communities. In order to validate one’s genuine truthfulness, it is compelling that modern readers investigate the alleged claims according to familiar scientific methods, which demonstrate an integral unity of reasoning. Herewith, one may question if any spiritual group or leader who has explored religious theories and practices has ever run into this issue and provided a rational resolution that could serve as a referential truth that points to the meaningful significance in diverse social, political, economic and environmental issues.

Among many religious leaders in history, the Buddha is uniquely known to have taken on the challenging subject of how to authenticate a truth claim. The Buddha is said to have awakened to the true nature of existence and attained final liberation from suffering through the practice of *Satipaṭṭhāna*. As is shown in the *Nikāya*, the Buddha searched for an answer using direct insight and discovered the nature of suffering, the causes of its arising and passing away, and a dispensation with which the flames of delusion could be blown out to an extinction. He presented and taught the principles on which he had pursued his quest, so that all sentient beings could follow his system and know the final truth for themselves. Richard Gombrich claims that the Buddha was one of the greatest thinkers—and

<sup>25</sup> Dictionary.com, <https://www.dictionary.com/e/word-of-the-year/> (accessed on 28 May 2019).

greatest personalities—whom we have on record in human history, and that his ideas would help to make the world a more civilized place, both gentler and more intelligent (Gombrich 2009, p. 1).

However, while the enlightenment experience is perhaps presumed to be the ultimate personal experience for any religious practitioner, one may wonder how to determine if any alleged claim of that experience commensurates with “right enlightenment.” In a similar vein, we need to question how rational readers may differentiate the right truth from the digital information flood and the various post-truths. This article has endeavored to search for clues from early Buddhism by examining the Buddha’s strategy, and attempting to determine if such a strategy can be utilized against the rising tide of misinformation that inundates our modern times.

The Buddha, specifically in the *Kālāma Sutta*, presents empirically testable guidelines—the “Ten Criteria”—grounded on an integrated unity of sound logical reasoning and moral agenda, in order to investigate the nature of reality, and avers that his proposed method is verifiable and convincible as a moral discipline. In the *sutta*, the Buddha, who strongly advocates the practice of free inquiry with clear reference points, is seen as entirely distinct from other religious leaders of his time, who were prone to saying, “You must have absolute faith in me and what I tell you.” Instead, the Buddha urged his followers to summon up doubt, scrutinize all the evidence regarding the basic facts of the teaching, and then experiment to discern if they indeed represent the truth. To attain this goal, he cautioned them to guard against the three karmically unwholesome roots or poisons: greed, hatred and delusion. Specifically, he recommended that if any teaching violates oneself or others, causing harm or suffering, one should not adhere to it. Conversely, if any teaching is for the common good, leading to one’s general welfare and happiness, then one should adopt and develop it. The *sutta* advocates the use of both sound logical inference and dialectic principles in the proposition of seeking the ultimate truth and wisdom. Thus, the “Ten Criteria” illuminate a clear path by serving as a reference point while allowing one to fully expand his/her autonomous reasoning power. It is noteworthy that the “Ten Criteria” are based on a mode that demonstrates an integral unity of reasoning, including such fundamental principles of science as universal applicability, methodological propriety and verifiability. It offers an empirical and effective personal investigation of the teacher–student dynamic, and provides a virtual road map in a cogent and valid manner.

In conclusion, one of the unique qualities of the Buddha’s teaching is *Ehipassiko*<sup>26</sup>—“that which invites everyone to come and see”—that is, to witness the fruits of the practice through direct experience. Discouraging blind faith, it represents a convincing application of the empirical verification of the Dhamma in order to investigate the nature of reality. The authors maintain that although the Buddha’s “Ten Criteria” were proclaimed more than two and a half millennia ago, they nonetheless keep their original vigor today. It is a declaration which aptly encompasses the modern scientific principles of reasoning and rationality in the search for truth. Serving as a reference point, the Buddha’s “Ten Criteria” can be employed in examining diverse alleged “truth claims” in general.

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<sup>26</sup> *Ehipassiko*, a Pāli word from the Sanskrit phrase *ehi, paśya* “come see.” It means to see for yourself, not to believe the Buddha’s teachings at face value (just as it is) without trying them out for yourself.

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