Subhasita: Journal of Buddhist and Religious Studies
Vol. 2, No. 2, 2024: 107-120
https://www.smaratungga.ac.id/journal/index.php/jsb

Bridging Worlds: Exploring the Ethical Synergy Between Buddhism and Science

ABSTRACT

This research explores the fundamental differences between Buddhism and science, focusing on their unique approaches to knowledge and reality. The study aims to investigate the challenges of reconciling these two fields while identifying potential areas of complementarity. Using a qualitative approach, the research employs a literature review method to analyze key theoretical frameworks and previous studies to identify philosophical, methodological, and epistemological tensions. The findings reveal three primary challenges: philosophical tensions arising from differing objectives—Buddhism focuses on liberation from suffering, while science emphasizes materialistic and empirical goals; methodological constraints, particularly the subjectivity and irreproducibility of Buddhist meditation practices; and epistemological differences, including Buddhism's emphasis on transcendental truths that resist empirical validation. Despite these challenges, the study highlights the potential for a complementary relationship, where Buddhism contributes ethical and moral frameworks to guide scientific and technological advancements, particularly in addressing ecological and mental health issues. This research contributes to the discourse by clarifying the boundaries between Buddhism and science while promoting mutual enrichment instead of total integration. The study is unique in emphasizing the epistemological challenges of reconciling transcendental and empirical knowledge systems and proposing practical steps to foster interdisciplinary collaboration.

Keywords: Buddhism; science; epistemology; ethical integration; interdisciplinary collaboration.

ARTICLE INFO

Authors:
Hans-Günter Wagner[1]

Affiliations:
[1] University of Dual Education, Germany

Article History:
Received: 22-10- 2024
Revised: 20-12- 2024
Accepted: 25-12-2024
Published: 31-12-2024

Corresponding author:
Wagner-Consult@gmx.net

How to Cite (APA Style):
Wagner, Hans-Günter. (2024). Bridging Worlds: Exploring the Ethical Synergy Between Buddhism and Science. *Subhasita: Journal of Buddhist and Religious Studies, 2*(2), 107-120. DOI: 10.53417/jsb.142

INTRODUCTION

In recent decades, the relationship between Buddhism and science has attracted significant attention from academics, scientists, and religious practitioners. This growing interest accompanies the development of concepts such as *"Buddhist Science"* (a scientific interpretation of Buddhist teachings), which seeks to identify alignments between Buddhist teachings and modern scientific findings. This phenomenon is relevant academically, socially, and culturally, as it reflects efforts to bridge the gap between spiritual values and materialistic approaches to understanding reality. For instance, a Pew Research Center survey (2020) revealed that 35% of the global population expressed interest in discussions on the relationship between religion and science, with 18% specifically focusing on Buddhism's spiritual aspects within a scientific context. Collaboration between scientists and Buddhist practitioners is also evident, as shown in research on mindfulness meditation integrated into modern medical treatments for stress and depression (Van Gordon, Shonin, & Griffiths, 2015). This collaboration highlights the significant impact of this topic in fostering dialogue between religious and scientific communities while contributing to the development of health technologies based on mental well-being.

From a broader societal perspective, these integration efforts influence public perceptions of spiritual values in the modern era. In the scientific community, concepts such as *paṭiccasamuppāda* (interdependence) frequently align with modern ecological theories that address the interconnectedness of living beings and ecosystems (Singh, 2010). Additionally, the application of Buddhist ethical principles in environmental management offers concrete examples of how spiritual values can inform sustainability-oriented policies. However, categorizing religion, including Buddhism, as "science" raises concerns about the potential loss of spiritual depth, which is a fundamental aspect of religious teachings (Lopez Jr, 2009). Therefore, analyzing the extent to which science and religion, particularly Buddhism, can complement each other without altering their intrinsic essence is essential.

Previous studies on the relationship between science and religion fall into three main categories. *First,* reconciliatory studies, such as Wallace's (2013), propose frameworks that integrate the empirical principles of Buddhism with modern scientific methods. Wallace's findings suggest that Buddhism's empirical approach, particularly in meditation, can complement scientific observational methods in understanding consciousness. *Second,* studies emphasizing the materialistic focus of science, such as Sobisch (2021), highlight the challenges of accommodating Buddhism's spiritual dimensions due to scientific methodologies acknowledging only physical realities. *Third,* spiritual explorations, like those conducted by McMahan & Braun (2017), explore how Buddhist introspective practices prioritize internal transformation over empirical understanding of the external world. Although these studies offer valuable insights, they reveal gaps, particularly regarding the application of Buddhist ethical approaches in modern technology and the guidance Buddhist values can provide in fostering a more humane science.

This research aims to address these gaps by exploring the fundamental differences between Buddhism and science, particularly regarding their unique

approaches to knowledge and reality. This study analyzes the primary challenges in reconciling these two fields, including philosophical tensions, methodological constraints, and epistemological differences. Moreover, it seeks to identify potential areas of complementarity, where Buddhism offers ethical and moral frameworks to guide the development of science and technology. By highlighting Buddhist moral values, this research also examines ethical implications in supporting sustainability policies, character education, and the development of technologies focused on human well-being without compromising the richness and depth of either field.

The main argument of this study asserts that, while Buddhism and science share similarities in their empirical approaches, they fundamentally operate in different realms. Science prioritizes objective and empirical facts that can be tested experimentally, whereas Buddhism emphasizes spiritual attainment and mental liberation (Payne, 2020). This difference suggests that, although Buddhism and science can complement each other in certain aspects, integrating them into a single scientific framework risk diminishing their richness and depth. This research also underscores the importance of maintaining the separation between science and religion to preserve their authenticity in the pursuit of truth. In the social context, this argument is relevant because efforts toward integration may influence societal perceptions of spiritual values and scientific progress, potentially creating tensions between religious and scientific communities.

METHOD

This research aims to explore the relationship between Buddhism and science, focusing on efforts to reconcile the two. The study uses a qualitative approach with a descriptive-analytical method, chosen for its suitability in exploring complex philosophical arguments and theoretical concepts that cannot be quantified. The descriptive-analytical approach enables a detailed understanding of key themes and critical evaluation of arguments presented in the literature (Kim, Sefcik, & Bradway, 2017; Seixas, Smith, & Mitton, 2017). This method facilitates an in-depth exploration of the complex relationship between science and Buddhism, particularly in their philosophical and ethical dimensions.

The unit of analysis in this research includes Buddhist texts discussing the relationship between spirituality and scientific inquiry, along with scholarly works by figures such as Wallace and other key thinkers offering perspectives on the integration of science and religion. These sources were selected to provide a comprehensive understanding of the interaction between Buddhist concepts and scientific methods. For instance, texts such as the *Tipiṭaka* (the central canon in *Theravāda* Buddhism, comprising teachings attributed to the Buddha) were analyzed for references related to ethical and philosophical principles, alongside Wallace's *Buddhism and Science: Breaking New Ground*, which discusses foundational arguments on reconciliation.

This research utilized both primary and secondary data (Ajayi, 2017). Primary data included key texts such as Wallace's *Buddhism and Science*, which provides detailed discussions on the compatibility of Buddhist meditation practices with modern neuroscience. Additional primary sources comprised Buddhist scriptures such as the *Kālāma Sutta* (a discourse emphasizing rational inquiry and empirical testing) and the *Abhidhamma Pitaka* (a collection of teachings analyzing

the mind and mental processes), which address themes of empirical inquiry and introspection. Secondary data included broader literature on scientific theories, Buddhist concepts, and critical works analyzing efforts to integrate these fields. For example, Sobisch's (2021) study on scientific methodology highlights the challenges of reconciling materialistic scientific approaches with the spiritual dimensions of Buddhism, while Singh (2010) discusses Buddhist ethics in the context of ecological sustainability.

The data collection process was conducted systematically through a literature study. Relevant literature was identified using academic databases such as JSTOR and Google Scholar, with keywords including "Buddhist Science," "reconciliation between science and religion," and "spirituality in scientific inquiry." Key scholarly works, journal articles, and books addressing the relationship between science and Buddhism were selected and reviewed. Researchers organized the data using manual coding to identify recurring themes and patterns in the literature. Tools such as Excel spreadsheets helped categorize and track references, while a thematic framework was applied to classify data under headings such as "interdependence" and "empiricism in spirituality."

Researchers analyzed the data using thematic analysis and content analysis techniques (Neuendorf, 2018; Vaismoradi, Jones, Turunen, & Snelgrove, 2016). Thematic analysis identified major themes in the debate, such as the concept of *paṭiccasamuppāda* (interdependence, the Buddhist doctrine of dependent origination) and its resonance with ecological theories, as well as the empirical approaches within Buddhist meditation practices. For example, researchers derived themes like "interdependence" from texts highlighting the connection between Buddhist ethics and modern ecological theories (Singh, 2010). Content analysis evaluated arguments presented by Wallace (2013), particularly his discussions on consciousness and the limitations of scientific materialism. For instance, researchers critically assessed Wallace's proposition that Buddhist meditation practices could complement modern neuroscience by comparing these claims with the methodological frameworks of empirical science.

The findings from thematic and content analysis were integrated to draw broader conclusions. Thematic analysis provided a macro-level understanding of recurring philosophical and ethical themes, while content analysis offered detailed evaluations of specific arguments. Researchers synthesized these approaches by comparing thematic trends with critical evaluations to identify points of convergence and divergence between Buddhism and science. This integration enabled a balanced interpretation of how Buddhist ethical principles could inform scientific practices, particularly in addressing ethical dilemmas in technology and sustainability.

RESULTS AND DISCUSSION

1. Buddhism and Science: Points of Convergence

The first finding of this research explores the convergence between Buddhism and modern science, focusing on their shared approaches to understanding human cognition and behavior. Buddhist concepts such as *paṭiccasamuppāda* (interconnectedness) resonate with ecological and psychological

principles. Furthermore, mindfulness practices have been successfully integrated into healthcare, education, and organizational settings, highlighting their relevance in addressing contemporary challenges. For example, the *Mindfulness-Based Stress Reduction* (MBSR) program developed by Kabat-Zinn demonstrates how Buddhist practices are applied in neuroscience to manage stress and enhance mental well-being.

Table 1. Mindfulness-Based Stress Reduction Program

Buddhist Principle	Scientific Context	Application
Paṭiccasamuppāda	Ecological interconnectedness	Sustainable development practices
Mindfulness	Cognitive enhancement and stress reduction	Therapeutic interventions, workplace training, and educational frameworks

Buddhist teachings, particularly mindfulness and interconnectedness, have proven adaptable to scientific domains. Their integration into neuroscience, ecology, and organizational leadership demonstrates their potential to contribute meaningfully to modern knowledge systems. For instance, mindfulness-based programs are now widely adopted in corporate environments to improve emotional resilience, reduce burnout, and enhance ethical decision-making (Lippincott, 2018). Additionally, schools in the United Kingdom and the United States have incorporated mindfulness practices into their curricula to enhance emotional intelligence, concentration, and overall student well-being (Ager, Albrecht, & Cohen, 2015).

The research findings reveal three significant patterns in the convergence between Buddhism and science. *First,* both Buddhism and science share an exploratory approach aimed at understanding human cognition and behavior. Neuroscience research on brain plasticity, for example, closely aligns with Buddhist meditative practices, which are designed to enhance cognitive flexibility and awareness. This alignment, as noted by Ekman et al. (2005), demonstrates how both disciplines, despite their differing methodologies, seek to unravel the complexities of the human mind. *Second,* Buddhist principles such as mindfulness have found extensive practical applications in clinical settings, particularly in managing chronic pain and anxiety. Beyond healthcare, these practices address ecological challenges, such as promoting sustainability (Kabat-Zinn, 2003). In professional sectors, mindfulness programs are increasingly utilized to mitigate stress among healthcare workers and improve focus and productivity in high-stress industries such as technology. *Third,* mindfulness practices have achieved global acceptance and integration into therapeutic, professional, and educational settings. Globally, schools now adopt mindfulness programs in their curricula, building emotional resilience and enhancing students' academic performance. As highlighted by Greenberg and Harris (2012), these programs equip students with practical tools to handle stress and improve concentration, showcasing the universal relevance and adaptability of Buddhist teachings. Together, these patterns underscore the

profound impact and flexibility of Buddhist principles in addressing contemporary challenges across various domains.

Historical and philosophical developments in the dialogue between Buddhism and science further illuminate these points of convergence. The historical distinction between sacred and secular realms in Protestantism, parallels Buddhism's ability to integrate scientific discoveries into its worldview. This adaptability is particularly evident in ecological research, where the Buddhist concept of *paṭiccasamuppāda* (interconnectedness) aligns with modern understandings of ecological symbiosis and sustainability.

Additionally, the complementarity hypothesis proposed by Harrison (2006) offers a valuable lens for understanding this relationship. This hypothesis suggests that Buddhism and science address distinct dimensions of reality, with Buddhism exploring ethical and spiritual aspects while science investigates empirical and material phenomena. These complementary perspectives contribute to a more holistic understanding of human experience and the natural world, demonstrating how both domains can enrich one another while maintaining their unique methodologies and objectives.

These findings reveal the mutual enrichment of Buddhism and science. While Buddhism provides ethical and philosophical frameworks for scientific inquiry, science offers empirical validation and practical applications for Buddhist teachings. For example, mindfulness-based interventions have been widely adopted in organizations to enhance focus, reduce burnout, and strengthen team cohesion.

This interaction highlights the adaptability of Buddhist principles in addressing global challenges, such as environmental sustainability and mental health. However, it also underscores the importance of respecting the distinct domains and methodologies of each field. Future collaborations should emphasize complementary strengths rather than attempting to unify these disciplines.

While mutual enrichment is evident, challenges remain in fully integrating Buddhist and scientific paradigms, particularly in addressing global crises such as climate change and mental health epidemics. A balanced approach is necessary, where Buddhism's ethical guidance informs the application of scientific advancements, ensuring that both domains contribute constructively without losing their intrinsic values and strengths.

2. The Historical Reconciliation of Buddhism and Science

Efforts to reconcile Buddhism with modern scientific paradigms have been observed throughout history, with significant contributions from figures such as Henry Steel Olcott and Paul Dahlke. These individuals sought to position Buddhism as a rational and empirical tradition by portraying it as "the science of the mind" and aligning its cosmological and philosophical concepts with emerging scientific discoveries. For instance, Olcott's Buddhist Catechism emphasized the parallels between Buddhist meditation practices and scientific observation, presenting Buddhism as a system of inquiry comparable to modern scientific methodologies (Gül, 2019). Similarly, Dahlke's writings in Germany highlighted Buddhism's philosophical depth by integrating its doctrines into contemporary debates on psychology and metaphysics, although his efforts faced challenges due to the limited empirical validation of Buddhist metaphysical claims.

Table 2. Contributions and Challenges

Name	Contribution	Challenge
Henry Steel Olcott	*Buddhist Catechism*: "Science of the Mind"	Incompatibility with empirical methodologies
Paul Dahlke	Integration of Buddhist doctrines in Germany	Limited scientific validation of metaphysical claims

These efforts often required a reinterpretation of traditional teachings to emphasize their rational and empirical aspects. For example, Olcott's focus on mindfulness practices as tools for cognitive enhancement illustrates a reframing that positions Buddhism as a tradition grounded in evidence-based inquiry.

Three significant patterns emerge from these historical efforts. *First,* the reinterpretation of Buddhist teachings served as a primary strategy to align them with scientific principles. Figures such as Olcott sought to rationalize Buddhism, focusing on its meditative practices while downplaying its supernatural elements. *Second,* individuals like Dahlke engaged in philosophical debates, employing scientific analogies to address complex metaphysical questions. These dialogues demonstrated creativity in bridging epistemological divides, although they occasionally led to oversimplifications. *Third,* regional reform movements in Theravāda Buddhist countries, such as Sri Lanka, linked Buddhism with social and political responsibilities. For example, the Panadura Debate showcased how Buddhist leaders used rational arguments to counter Christian missionary critiques, reinforcing Buddhism's relevance in addressing colonial challenges.

While these historical efforts bridged cultural and intellectual gaps, they often risked oversimplifying or distorting Buddhist teachings. By prioritizing compatibility with scientific paradigms, certain metaphysical and spiritual dimensions of Buddhism were sidelined. For instance, Olcott's portrayal of Buddhism as purely rational overlooked its foundational focus on liberation from suffering, a goal distinct from the empirical pursuits of science.

The integration of scientific discoveries into Buddhist worldviews mirrors broader historical trends, such as the distinction between sacred and secular realms in Protestantism (Casanova, 2019). This parallel illustrates how religious traditions can adapt to modern intellectual contexts without entirely compromising their foundational beliefs. Additionally, the complementarity hypothesis proposed by Harrison (2006) provides a valuable framework for understanding this relationship. For example, Buddhism's ethical and spiritual inquiries, such as its emphasis on compassion and interconnectedness (*paṭiccasamuppāda*), complement science's empirical investigations into ecological systems and human behavior. A contemporary example of this complementarity can be seen in mindfulness programs addressing workplace stress, where Buddhist practices enrich organizational psychology with ethical and emotional frameworks (Lippincott, 2018).

Historical reconciliation efforts highlight both the potential and limitations of integrating Buddhism with scientific paradigms. These initiatives enriched cross-disciplinary dialogue by introducing Buddhist insights into scientific contexts while underscoring the challenges of preserving the integrity of both traditions. Moving forward, it is essential to adopt a nuanced approach that respects the unique

methodologies and objectives of Buddhism and science. Practical examples, such as integrating Buddhist ethics into sustainability initiatives or using mindfulness to enhance professional well-being, demonstrate how these two domains can effectively complement each other while maintaining their distinct identities. By embracing their differences, Buddhism and science can collaboratively address global challenges, such as mental health crises and environmental sustainability, contributing to a holistic understanding of human existence and the natural world.

3. Challenges in Reconciling Buddhism and Science

Efforts to reconcile Buddhism and science face significant challenges, primarily due to the incompatibility of their methodologies and epistemologies. While Buddhism emphasizes transcendental truths and subjective introspection, science relies on empirical validation and reproducibility. These differences have led to philosophical tensions, methodological constraints, and epistemological debates, complicating attempts at integration.

Wallace's proposal for a *science of consciousness* exemplifies these challenges. Drawing inspiration from Tibetan Buddhist philosophy and quantum theory, Wallace argued that meditative practices could complement scientific explorations of consciousness. However, his approach faced criticism for relying heavily on subjective introspection, which falls short of the reproducibility required by scientific methodologies. Nevertheless, his ideas have sparked valuable discussions on the potential integration of Buddhist insights into contemporary cognitive science.

Table 3. Key Challenges in Reconciling Buddhism and Science

Challenge	Buddhist Perspective	Scientific Perspective
Metaphysical principles	Focus on transcendence (*śūnyatā*)	Emphasis on empirical evidence
Subjective introspection	Meditation and personal experience	Reproducible and objective methods
Epistemological frameworks	Truths transcend empirical validation	Truths grounded in measurable data

Philosophically, Buddhism's primary goal is the liberation from suffering through self-realization, which contrasts sharply with science's aim to understand the material world through empirical investigation. For example, *śūnyatā* (emptiness) denotes the transcendence of inherent existence, a concept that resists alignment with science's focus on observable and measurable phenomena. This divergence highlights the difficulty of bridging fundamentally different worldviews.

Methodologically, Buddhist practices such as meditation present challenges due to their deeply introspective and subjective nature. Unlike scientific experiments, which rely on reproducibility and standardization, meditative experiences are inherently personal and cannot be universally validated. Wallace's *science of consciousness* sought to integrate these practices into scientific inquiry, but its reliance on non-standardized methodologies remains a significant limitation. Despite these challenges, his framework has encouraged interdisciplinary research into mindfulness and neuroplasticity, yielding promising results in mental health interventions (Wallace, 2003).

Epistemologically, Buddhism often transcends the empirical validation upon which science depends. The Buddhist distinction between conventional truth (everyday reality) and ultimate truth (*śūnyatā*) illustrates these differences. While conventional truth partially aligns with scientific understanding, ultimate truth resists empirical measurement, underscoring the complexity of integrating these epistemological frameworks.

Buddhist teachings, such as interconnectedness (*paṭiccasamuppāda*), have inspired ecological research by providing ethical frameworks for sustainability. For example, Kabat-Zinn's *Mindfulness-Based Stress Reduction* (MBSR) program has been empirically validated to improve mental health outcomes, including stress reduction and emotional regulation (Kabat-Zinn, 2003). Similarly, ecological studies have adopted the Buddhist principle of interdependence to advocate for sustainable development practices (Chetri, 2023).

In professional sectors, mindfulness training has demonstrated measurable benefits in improving focus, reducing burnout, and fostering ethical decision-making in high-pressure environments such as healthcare and technology (Gelles, 2015). These applications highlight the potential for Buddhist principles to complement scientific approaches without compromising their distinct methodologies.

The complementarity hypothesis offers a constructive alternative by suggesting that Buddhism and science address different aspects of reality (Harrison, 2006). Science investigates empirical phenomena, while Buddhism provides ethical and spiritual frameworks for interpreting these findings. For instance, Buddhist teachings on interconnectedness complement ecological research by emphasizing the moral implications of environmental interdependence. By recognizing their unique contributions, both domains can collaboratively address global challenges, such as climate change and mental health crises.

Historically, this approach mirrors Protestantism's distinction between sacred and secular realms (Casanova, 2019). This separation allowed religion and science to coexist while maintaining distinct spheres of influence. However, efforts like those of Wallace often blur these boundaries, leading to methodological and philosophical oversimplifications.

4. The Synergy of Buddhism and Science: An Exploration of Potential, Constraints, and Future Directions

This research identifies three main challenges in integrating Buddhism and science: philosophical tensions, methodological constraints, and epistemological differences. These challenges highlight the distinct domains of Buddhism and science, as well as potential areas of complementarity that can enrich interdisciplinary collaboration.

Buddhism's primary focus on introspection and transcendental truths contrasts sharply with the empirical validation central to scientific inquiry. For example, Buddhist meditation practices, which emphasize subjective insights into consciousness, remain difficult to align with the reproducibility standards required by science. However, principles such as *paṭiccasamuppāda* (interconnectedness) have been applied in ecological research and mental health practices, demonstrating potential pathways for collaboration. These findings align with Wallace's (2009)

concept of a *science of consciousness* while expanding the discussion to underscore deeper epistemological challenges.

Recent studies support the integration of mindfulness-based practices into psychological therapies. Kabat-Zinn's (2003) Mindfulness-Based Stress Reduction (MBSR) program significantly improves mental well-being. However, critics like Lopez Jr. (2008) argue that framing Buddhism as a *science of the mind* risks oversimplifying its philosophical depth, particularly regarding *anatta* (no-self) and *śūnyatā* (emptiness).

Conversely, Shani and Beiweis (2023) highlight how neuroscience has increasingly engaged with Buddhist meditation techniques to explore brain activity during mindfulness. While this supports the potential for complementarity, it also raises questions about the scientific reduction of meditation to neural correlates, potentially overlooking its transformative and spiritual dimensions. These findings emphasize both the opportunities and limitations of reconciling the two paradigms.

Buddhist meditation, particularly *mindfulness* and *samatha* (calm abiding), offers a unique introspective methodology that complements scientific inquiry into consciousness. Although subjective and non-reproducible, these practices provide rich qualitative insights into mental states and behavioral transformations. For example, studies by Gokhale (2021) and Westerhoff (2016) emphasize the phenomenological approach of meditation, capturing experiential data often overlooked by empirical methodologies. Integrating tools such as neurophenomenology, as proposed by Varela (1996), could bridge the gap between subjective meditation experiences and empirical validation, enriching both domains.

First, establishing interdisciplinary forums and research consortia is crucial for fostering collaboration. Bringing together Buddhist practitioners, neuroscientists, and psychologists can provide platforms for dialogue and joint exploration. Initiatives such as the Mind and Life Institute, which has successfully facilitated discussions between the Dalai Lama and Western scientists, exemplify how such collaborations can address global challenges, particularly in mental health and environmental sustainability, by leveraging the unique insights of Buddhism and scientific disciplines.

Second, developing educational curricula that incorporate ethical reflections based on Buddhist principles offers a practical way to enrich science education. Incorporating case studies on interconnectedness and ecological ethics rooted in *paṭiccasamuppāda* can cultivate moral frameworks essential for addressing environmental issues. For instance, embedding mindfulness modules in medical and environmental science programs can enhance students' ethical and reflective capacities while providing practical tools for mental well-being and ecological awareness.

Third, advancing innovative methodologies is essential to bridge the introspective dimensions of Buddhist practices with empirical scientific standards. Techniques such as first-person experiential reports combined with neural imaging present a promising approach to comprehensively understanding meditative states. Drawing on suggestions by Vörös (2016), these methodologies can capture the qualitative depth of meditation while maintaining scientific rigor. Collaborations between Buddhist monastics with extensive meditative expertise and cognitive

scientists can further refine these tools, making them more robust and applicable across diverse research contexts.

Through these strategic initiatives, the integration of Buddhism and science can be optimized, enabling each domain to contribute its unique strengths toward addressing contemporary challenges in a complementary and impactful manner. While the findings demonstrate areas of complementarity, they also caution against forcing Buddhism into a scientific framework. Such attempts risk diluting Buddhism's transformative potential and limiting scientific innovation. By maintaining the distinctiveness of each domain, collaboration can foster a richer understanding of human consciousness and global challenges.

The complementarity hypothesis offers a valuable framework, suggesting that Buddhism and science address different dimensions of reality. While science explores empirical phenomena, Buddhism provides ethical and spiritual lenses for interpreting these findings (Harrison, 2006). This synergy can enrich interdisciplinary dialogue, offering holistic solutions to contemporary challenges.

The integration of Buddhism and science is best framed as a complementary relationship rather than a methodological unification. Future research should explore broader acceptance across Buddhist traditions and scientific communities, focusing on empirical studies that investigate the transformative potential of integrating these perspectives. By embracing their differences, Buddhism and science can collaboratively contribute to a nuanced understanding of consciousness, ethics, and sustainability.

CONCLUSION

This research identifies the fundamental differences between science and religion, particularly Buddhism, in their approaches to knowledge and reality. Science is rooted in empirical facts, materialism, and objectivity, employing methods that prioritize reproducibility. In contrast, Buddhism focuses on transcendental and ethical dimensions, such as liberation from suffering and the attainment of Nirvana, relying on introspection and meditative practices. These fundamental differences create challenges in reconciling science and religion, as seen in the concept of *"Buddhist science,"* which attempts to merge the two approaches but often encounters methodological and epistemological constraints.

Despite these challenges, this research highlights Buddhism's valuable contributions to ethical reflection, particularly in guiding scientific and technological advancements. The complementary nature of these traditions demonstrates that, while their methodologies cannot be unified, they can enrich one another. Buddhism provides a moral lens that can guide the responsible application of scientific discoveries without altering the foundational principles of science. Through this complementary relationship, both domains can collaboratively address complex issues such as ecological crises and mental health challenges.

This research contributes to understanding the distinct yet complementary roles of Buddhism and science in shaping human life and addressing global challenges. By clarifying the boundaries and interactions between these domains, the study fosters interdisciplinary dialogue on ethics and knowledge systems. However, this research is limited to theoretical analysis and does not explore broader Buddhist practices that could offer deeper insights. Future studies could

include empirical investigations into communities that integrate Buddhist teachings with scientific practices or assess the acceptance of such integration across diverse Buddhist traditions. Additionally, exploring practical applications in fields such as ecological sustainability or technological ethics could expand the relevance of these findings.

REFERENCES

Ager, K., Albrecht, N. J., & Cohen, P. M. (2015). Mindfulness in Schools Research Project: Exploring Students' Perspectives of Mindfulness—What are students' perspectives of learning mindfulness practices at school? *Psychology*, *6*(7). https://doi.org/10.1111/j.1750-8606.2011.00215.x

Ajayi, V. O. (2017). Primary sources of data and secondary sources of data. *Benue State University*, *1*(1), 1–6.

Casanova, J. (2019). Global religious and secular dynamics: The modern system of classification. *Brill Research Perspectives in Religion and Politics*, *1*(1), 1–74.

Chetri, S. (2023). Gross National Happiness: The Interdependent Domains of Happiness. In *Handbook of Happiness* (pp. 129–171). Singapore: Springer Nature Singapore. https://doi.org/10.1007/978-981-99-2637-4_7

Donald S., L. J. (2008). *Buddhism and Science: A Guide for the Perplexed (Buddhism and Modernity)*. Amerika: Amazon.

Ekman, P., Davidson, R. J., Ricard, M., & Alan Wallace, B. (2005). Buddhist and psychological perspectives on emotions and well-being. *Current Directions in Psychological Science*, *14*(2), 59–63.

Gelles, D. (2015). Mindful work: How meditation is changing business from the inside out. In *Mindful work: How meditation is changing business from the inside out.* (p. 296). Boston: Houghton Mifflin Harcourt.

Gokhale, P. P. (2021). Buddhist Approaches to Impermanence: Phenomenal and Naumenal. *Religions*, *12*(12), 1081. https://doi.org/10.3390/rel12121081

Greenberg, M. T., & Harris, A. R. (2012). Nurturing Mindfulness in Children and Youth: Current State of Research. *Child Development Perspectives*, *6*(2), 161–166. https://doi.org/10.1111/j.1750-8606.2011.00215.x

Gül, A. (2019). Henry Steel Olcott'un Budizm Üzerine Çalışmaları ve Budist Kateşizm'i. *Amasya İlahiyat Dergisi*, (13), 495–534. https://doi.org/10.18498/amailad.551093

Harrison, P. (2006). "Science" and "religion": constructing the boundaries. *The Journal of Religion*, *86*(1), 81–106.

Kabat-Zinn, J. (2003). Mindfulness-based interventions in context: Past, present, and future. *Clinical Psychology: Science and Practice*, *10*(2), 144–156. https://doi.org/10.1093/clipsy.bpg016

Kim, H., Sefcik, J. S., & Bradway, C. (2017). Characteristics of Qualitative Descriptive Studies: A Systematic Review. *Research in Nursing & Health*, *40*(1), 23–42. https://doi.org/10.1002/nur.21768

Lippincott, M. (2018). Deconstructing the relationship between mindfulness and leader effectiveness. *Leadership & Organization Development Journal*, *39*(1). https://doi.org/10.1108/LODJ-11-2017-0340

Lopez Jr, D. S. (2009). *Buddhism and science: A guide for the perplexed*. Chicago: University of Chicago Press.

McMahan, D., & Braun, E. (2017). *Meditation, Buddhism, and science*. Oxford: Oxford University Press.

Neuendorf, K. A. (2018). Content analysis and thematic analysis. In *Advanced research methods for applied psychology* (pp. 211–223). Milton Park: Routledge.

Payne, R. K. (2020). Buddhism and the Sciences: Historical Background, Contemporary Developments. *Journal of Dharma Studies*, *3*(2), 219–243. https://doi.org/10.1007/s42240-020-00086-8

PRC. (2020). The relationship between religion and science. Retrieved from Pew Research Center website: https://www.pewresearch.org/

Seixas, B. V., Smith, N., & Mitton, C. (2017). The Qualitative Descriptive Approach in International Comparative Studies: Using Online Qualitative Surveys. *International Journal of Health Policy and Management*, *7*(9), 778–781. https://doi.org/10.15171/ijhpm.2017.142

Shani, I., & Beiweis, S. K. (2023). *Cross-cultural approaches to consciousness: mind, nature and ultimate reality*. New York: Bloomsbury Academic.

Singh, A. (2010). Ecological Consciousness in Buddhist Theism and Their Role in Recovery of Global Ecological Crisis. In *Global Recovery: through Buddhist Ecology* (p. 3). Ayutthaya: Mahachulalongkornrajavidyalaya University.

Sobisch, J.-U. (2021). Buddhism and Science–Doing the Splits? *Religionen Im Dialog*, *20*(2), 278–295.

Vaismoradi, M., Jones, J., Turunen, H., & Snelgrove, S. (2016). Theme development in qualitative content analysis and thematic analysis. *Journal of Nursing Education and Practice*, *6*(5), 100–110. https://doi.org/10.5430/jnep.v6n5p100

Van Gordon, W., Shonin, E., & Griffiths, M. (2015). Towards a second-generation of mindfulness-based interventions. *Australia and New Zealand Journal of Psychiatry*, *49*(7), 591–591. https://doi.org/10.1177/0004867415577437

Varela, F. J. (1996). Neurophenomenology: A methodological remedy for the hard problem. *Journal of Consciousness Studies*, *3*(4), 330–349.

VÖRÖS, S. (2016). Sitting with the Demons – Mindfulness, Suffering, and Existential Transformation. *Asian Studies*, *4*(2), 59–83. https://doi.org/10.4312/as.2016.4.2.59-83

Wallace, B. A. (2003). Introduction: Buddhism and science Breaking down the barriers. In *Buddhism and science: Breaking new ground* (pp. 1–30). Delhi: Colombia University Press.

Wallace, B. A. (2009). Buddhism and Science: Confrontation and collaboration. *International Conference on "Buddhism and Science,"* 15–17. Sarnath: Central Institute of Higher Tibetan Studies.

Wallace, B. A. (2013). *Meditations of a Buddhist skeptic: A manifesto for the mind sciences and contemplative practice*. New York: Columbia University Press.

Westerhoff, J. (2016). On the Nihilist Interpretation of Madhyamaka. *Journal of Indian Philosophy*, *44*(2), 337–376. https://doi.org/10.1007/s10781-014-9266-z

This page intentionally left blank