



Research Report

**A Theory of Buddhism Integration for Sustainable
Development of Wisdom and Virtue in the 21st Century**

BY

Assoc. Prof. Dr. Sanu Mahatthanadull

Et al.

International Buddhist Studies College

Mahachulalongkornrajavidyalaya University

B.E.2566

Research Project Funded

By Thailand Science Research and Innovation Fund

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- Research Title:** A Theory of Buddhism Integration for Sustainable Development of Wisdom and Virtue in the 21st Century
- Researchers:** Assoc. Prof. Dr. Sanu Mahatthanadull
Ven. Phramaha Nantakorn Piyabhani, Asst.Prof.Dr.
Ven. Neminda, Dr.
Ven. Nguyen Anh Tuan, Dr.
Ven. Ugyen Tshering, Dr.
Assoc. Prof. Dr. Dusanee Thanaboripat
Dr. Sarita Mahatthanadull
- Department:** International Buddhist Studies College,
Mahachulalongkornrajavidyalaya University
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ABSTRACT

This is a qualitative research work with three objectives, namely: - (1) to investigate the development of wisdom and virtue in the 21st century according to Buddhism and the United Nations Sustainable Development Goals (SDGs), (2) to create a theory of Buddhism integration for sustainable development of wisdom and virtue in the 21st century, and (3) to validate a theory of Buddhism integration for sustainable development of wisdom and virtue in the 21st century. Data were collected from documentary and field studies with 25 experts and scholars from 11 countries, monks, and Buddhist scholars from the three Buddhist sects selected using the purposive and snowball sampling method. In-depth interviews with 15 key informants were carried out to create the theory. The theory validation was conducted through FGDs among 10 specialists. The interview forms were examined with the CVI by the 5 experts. Data were analyzed using content, thematic, discourse, narrative, and grounded theory analysis.

The findings showed that the wisdom-virtue framework from the three Buddhist schools reflects a holistic learning development that aligns well with the SDGs. The Theory of Buddhism Integration (BI) sustainably develops wisdom and virtue for mankind in the 21st Century.

The two rules are the Rule of Dual-Relational Integration (DRI), and the Rule of Holistic-Relational Integration (HRI). Each rule is made up of three and four principles from the first to the seventh principle respectively explaining seven different phenomena of dual and multidimensional integration for Buddhism-multidisciplinary-based integrators around the world. The FGD specialists had validated the BI Theory by agreeing it offered a new interpretation and held conceptual coherence resulting from precise definitions to be done in a pre-integration stage aiming truly for the sustainable development of wisdom and virtue through a holistic perspective.

ชื่อรายงานการวิจัย:	ทฤษฎีการบูรณาการพระพุทธศาสนาเพื่อการพัฒนาปัญญาและคุณธรรมที่ยั่งยืนในศตวรรษที่ 21
คณะผู้วิจัย:	รศ.ดร. สานุ มหัทธนาดุลย์ พระมหานันทภรณ์ ปิยภาณี, ผศ.ดร. พระเนมินตะ, ดร. พระเหียงน อัง ตวน, ดร. พระอุเย็น เชอริง, ดร. รศ.ดร. ดุขณี ธนะบริพัฒน์ ดร. สรिता มหัทธนาดุลย์
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บทคัดย่อ

งานวิจัยเชิงคุณภาพฉบับนี้ประกอบด้วยวัตถุประสงค์ 3 ประการคือ (1) เพื่อศึกษาการพัฒนาปัญญาและคุณธรรมในศตวรรษที่ 21 ตามแนวทางพระพุทธศาสนาและเป้าหมายการพัฒนาที่ยั่งยืนของสหประชาชาติ, (2) เพื่อสร้างทฤษฎีการบูรณาการพระพุทธศาสนาเพื่อการพัฒนาปัญญาและคุณธรรมที่ยั่งยืนในศตวรรษที่ 21, และ (3) เพื่อตรวจสอบความถูกต้องของทฤษฎีการบูรณาการพระพุทธศาสนาเพื่อการพัฒนาปัญญาและคุณธรรมที่ยั่งยืนในศตวรรษที่ 21 คณะผู้วิจัยดำเนินการเก็บรวบรวมข้อมูลจากเอกสารและภาคสนามจากผู้เชี่ยวชาญจำนวน 25 ท่าน จาก 11 ประเทศ ที่เป็นพระภิกษุและนักวิชาการพระพุทธศาสนาจาก 3 นิกาย ด้วยวิธีการคัดเลือกแบบเฉพาะเจาะจง และแบบสโนวบอล ดำเนินการสัมภาษณ์เชิงลึกกับผู้ให้ข้อมูลหลักจำนวน 15 ท่านเพื่อการสร้างทฤษฎีฯ ดำเนินการสนทนากลุ่มย่อย จำนวน 10 ท่าน ใน 3 กลุ่มผู้เชี่ยวชาญแยกตามแต่ละนิกายเพื่อตรวจสอบความถูกต้องของทฤษฎีฯ ที่สร้างขึ้น ดัชนีความเที่ยงตรงเชิงเนื้อหาของแบบฟอร์มคำถามเพื่อการสัมภาษณ์เชิงลึกได้รับการตรวจโดยผู้เชี่ยวชาญ 5 ท่าน มีค่า CVI = 1.0 ก่อนนำไปใช้งานจริง วิเคราะห์ข้อมูลด้วยการวิเคราะห์เนื้อหา (content analysis), การวิเคราะห์หัวข้อ (thematic analysis), การวิเคราะห์ภาษา (discourse analysis), การวิเคราะห์เรื่องเล่า (narrative analysis), และการวิเคราะห์ทฤษฎีฐานราก (grounded theory analysis)

ผลวิจัยชี้ให้เห็นว่า กรอบความคิดเรื่องปัญญาและคุณธรรมจากพระพุทธศาสนาทั้งสามนิกายสะท้อนให้เห็นการพัฒนาการเรียนรู้แบบองค์รวมที่สอดคล้องกับเป้าหมายการพัฒนาอย่างยั่งยืนของสหประชาชาติ ทฤษฎีการบูรณาการพุทธศาสนา (BI Theory) ที่ถูกสร้างขึ้นเพื่อประโยชน์ในการพัฒนาปัญญาและคุณธรรมของมนุษยชาติในศตวรรษที่ 21 ภายใต้กฎสองข้อ คือ (1) กฎแห่งการบูรณาการความสัมพันธ์แบบคู่ (DRI) ประกอบด้วย 3 หลักการ และ (2) กฎแห่งการบูรณาการความสัมพันธ์แบบองค์รวม (HRI) ประกอบด้วย 4 หลักการ หลักการทั้ง 7 เหล่านี้อธิบายปรากฏการณ์ของการบูรณาการความสัมพันธ์แบบคู่และแบบองค์รวมที่แตกต่างกันไปตามกฎของตน เพื่อประโยชน์แห่งการใช้งานของบูรณาการทั่วโลกที่ใช้พระพุทธศาสนา-พุทธศาสตร์ศึกษาเป็นฐานในการบูรณาการ การตรวจสอบทฤษฎีฯ ได้รับการยอมรับด้านการตีความในรูปแบบใหม่ และด้านความสอดคล้องในเชิงแนวคิดอันเป็นผลมาจากคำจำกัดความที่ชัดเจนในขั้นตอนก่อนการบูรณาการโดยมีเป้าหมายเพื่อการพัฒนาปัญญาและคุณธรรมอย่างยั่งยืนได้อย่างแท้จริงผ่านมุมมองแบบองค์รวม

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Assoc. Prof. Dr. Sanu Mahatthanadull,
Head of the Research Project

June 26, 2024

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List of Abbreviations

A) Abbreviations of Pāli Scriptures

In this research paper, the research team has referred to various primary and secondary data sources. The system of abbreviations will be systematized as follows:

The Pāli Canon, using the Pāli texts series edited in Roman by the Pali Text Society (PTS). Its forms are to be quoted first as an abbreviation of the scripture, followed by volume and page number (s), e.g., **S.III.47.** refers to Saṃyutta Nikāya (of the Suttanta Piṭaka), volume number 3 (Khandha-Vagga), page number 47. In the case of scriptures with only one book, the volume will be omitted. For instance, **Nd¹.45.** refers to Mahāniddeśa, Khuddaka Nikāya (Suttanta Piṭaka), page number 45; or **Vbh.1.** refers to Vibhaṅga, Abhidhamma Piṭaka, page number 1.

In some books from the Khuddaka Nikāya of the Suttanta Piṭaka, the abbreviation is used to indicate the text or verse numbers instead of the page number, such as **Kh.3.** refers to Khuddakapāṭha, Khuddaka Nikāya (Suttanta Piṭaka), text number 3; or **Dh.1.** refers to Dhammapada, Khuddaka Nikāya (Suttanta Piṭaka), verse number 1.

- | | |
|-------|--|
| A. | : Aṅguttaranikāya (5 vols.) |
| AN. | : Aṅguttaranikāya (5 vols.) |
| AA. | : Aṅguttaranikāya Aṭṭhakathā (Manorathapūraṇī) |
| Comp. | : Compendium of Philosophy (Abhidhammatthasaṅgaha) |
| D. | : Dīghanikāya (3 vols.) |
| DA. | : Dīghanikāya Aṭṭhakathā (Sumaṅgalavilāsinī) |
| Dh. | : Dhammapada (Khuddakanikāya) |
| DhpA. | : Dhammapada Aṭṭhakathā |
| DhsA. | : Dhammasaṅganī Aṭṭhakathā (Aṭṭhasālinī) |
| It. | : Itivuttaka (Khuddakanikāya) |

Kh.	: Khuddakapāṭha (Khuddakanikāya)
KhA	: Khuddakapāṭha Commentary
M.	: Majjhimanikāya (3 vols.)
Nd ¹	: Mahāniddeśa (Khuddakanikāya)
Nd. ²	: Cullaniddeśa (Khuddakanikāya)
S.	: Saṃyuttanikāya (5 vols.)
Vbh.	: Vibhaṅga (Abhidhamma)
Vism.	: Visuddhimagga

B) List of Common Scholarly Abbreviations used in the Research

Single	Plural	Full Word/Meaning
ABL		<i>Ariyasacca</i> -Based Learning
Adj.		adjective
AI		artificial intelligence
Assoc. Prof.		associate professor
Asst. Prof.		assistant professor
BA		Buddhist Studies
BI		Buddhism Integration Theory
B.A.		Bachelor of Arts
B.E.		Buddhist Era
BSDG	BSDGs	Buddhist Sustainable Development Goal (s)
BSDG-KPI		Buddhist Sustainable Development Goal's Key Performance Indicator
Co., Ltd.		company limited
CVI		content validity index
C.E.		Common Era or Current Era

DRI		Rule of Dual-Relational Integration, BI Theory
Dr.		Doctor of Philosophy (PhD) degree
DO		dependent origination
En/Env.		environment
ed.	eds.	edited by, editor (s)
et al.		et alii/ and others
etc.		et cetera/ and others
e.g.		example gratia, example
FGD	FGDs	focus group discussion (s)
GMO		genetically modified organism
HH		His Holiness
HRI		Rule of Holistic-Relational Integration, BI Theory
ibid.		ibidem/ in the same page, i.e., the same source that has been cited in the immediately preceding note
IBSC		International Buddhist Studies College
ICT		information and communication technology
IoT		internet of things
i.e.		id est, that is to say
KMITL		King Mongkut's Institute of Technology Ladkrabang
KPI	KPIs	key performance indicator (s)
LLL		lifelong learning
M		mind
MBCT		Mindfulness-Based Cognitive Therapy
MBIs		Mindfulness-Based Interventions

MBSR		Mindfulness-Based Stress Reduction
M.A.		Master of Arts
MCU		Mahachulalongkornrajavidyalaya University
MBU		Mahamakut Buddhist University
MDGs		millennium development goals
n.		noun
no.	nos.	number (s)
OECD		Organization for Economic Cooperation and Development
Op. cit.		opera citato/ as referred
PBL		problem-based learning
Ph.D.		Doctor of Philosophy
PM 2.5		particulate matter less than 2.5 microns in diameter
POD		points of difference
POP		points of parity
Prof.		professor
PTS		Pali Text Society
PTSD		post-traumatic stress disorder
p.	pp.	page (s)
QFT	QFTs	Quantum Field Theory (s)
RQF		Relativistic Quantum Field Theory
SDG	SDGs	sustainable development goal (s)
SEP		sufficiency economy philosophy
TMV		Theravāda, Mahāyāna, and Vajrayāna
tr.	trs.	translated by, translator (s)
TSRI		Thailand Science Research and Innovation

UN		United Nations
Ven.		venerable
vol.	vols.	volume (s)
VR		virtual reality
W		wisdom
3D		three dimensions

Chapter 1

Introduction

1.1 Background and Significance of the Problems

All things in the universe are mysteriously encrypted, subject to the rule of nature. Integrating knowledge is the only key to understanding them. In Buddhism, all objects contain microscopic elementary particles that cannot be seen with the naked eye. Buddhist metaphysical explanations describing the nature of the four great elements (*mahābhūta-rūpa*), the five aggregates (*pañca khandhā*)¹, etc. thus conveying the exposition of nature in terms of integrated natural entities. From this point, it comes to the saying that is often discussed “Religion and science should depend on each other”.² Albert Einstein affirmed, “Science without religion is lame, religion without science is blind”.³ As true as the saying about the eyes of the Buddha stated in the Buddhist text Mahānidesa:

*Passāmi loke pariphandamānanti passāmīti maṃsacakkhunāpi passāmi
dibbacakkhunāpi passāmi paññācakkhunāpi passāmi buddhacakkhunāpi*

¹ S.III.47; Vbh.1; Bhikkhu Bodhi (tr.), **The Connected Discourses of the Buddha A New Translation of the Saṃyutta Nikāya**, Vol. I. 2 vols. set. (Oxford: PTS, 2000), p. 886; Paṭhamakyaw Ashin Thittīla (Setthila) Aggamahāpaṇḍita (tr.), **The Book of Analysis (Vibhanga)**, (Oxford: PTS, 1995), p. 1.

² Phra Brahmapundit (Prayun Dhammacitto), **Integrative Method: Buddhism & Modern Sciences**, (Bangkok: Mahachulalongkornrajavidyalaya, 2557), pp. 20-21.

³ Albert Einstein, “Religion and Science”, **New York Times Magazine**, (9 November, 1930): 1-4; Albert Einstein, **The World as I See It**, (New York: Philosophical Library, 1949), pp. 24-28; Albert Einstein, **Ideas and Opinions**, (The University of Virginia: Modern Libr., 1954), pp. 36-40; Albert Einstein, **On Scientific Truth: Ideas and Opinions**, ed. by Carl Seelig, (New York: Modern Library, 1994), p. 286.

*passāmi samantacakkhunāpi passāmi dakkhāmi olokemi nijjhāyāmi upaparikkhāmi.*⁴

The Blessed One sees with the Five Eyes are (1) the physical eye (*maṃsacakkhu*); (2) the divine eye (*dibbacakkhu*); (3) wisdom-eye (*paññācakkhu*); (4) Buddha-eye (*buddhacakkhu*); and (5) All-seeing eye (*samantacakkhu*).

The Buddha, the supremely wise one, sees all things with such eyes. Likewise, a wise one should not solely look at the world and all things with just the physical eyes but the wisdom eye, etc. A person with a wisdom vision can see nature as it really is. A holistic view is a key feature in deeply and wisely considering (*yoniso-manasikāra*) the integration phenomena of different fields of disciplines.

From the modern science perspective, Relativistic Quantum Field Theory (RQF) explains the basic degrees of freedom in quantum field theory (QFT) are operator-valued functions of space and time and, since space and time are continuous, we are dealing with an infinite number of degrees of freedom, so we will need to (re-) learn how to deal with systems with a large number of degrees of freedom (many-body theory). Once we are done, we will be able to properly define QFTs that can be used in a variety of different contexts, for example, high energy theory, condensed matter, cosmology, quantum gravity, etc.⁵ This may lead to a preliminary conclusion that supports Einstein’s quotation “Science without religion is lame”.

In this regard, Ken Wilber argued that to integrate religion and science is to integrate a premodern worldview with a modern worldview. But we saw that the essence of premodernity is the Great Chain of Being, and the essence of modernity is the differentiation of the value spheres of art, morals, and science. Thus, in order to integrate religion and science, we need to

⁴ Nd¹.45.

⁵ Michael Strickland, **Relativistic Quantum Field Theory, Vol. 2: Path integral formalism**, (San Rafael: Morgan & Claypool Publishers, 2019), p. xi.

integrate the Great Chain with the differentiations of modernity.⁶ That is to give the broadest sense of the Buddhist-science integral view to a learner.

The word “integration” holds both a core component which is the “main axis” and sub-components which are the “common axis”.⁷ Integration reflects a study method that integrates Buddhism and modern science is the adaptation of science to Buddhism, that is, to use Buddhism as a starting point and bring modern science to explain and enhance Buddhism. This method uses the knowledge of modern science to explain and support Buddhism in a more modern and rational way. . . It will surely help to achieve a complete holistic.⁸ Existence in the Twenty-first century is however not easy even humanity invents various innovations with high technology it seems that virtue has dropped excruciatingly. The phrase, “The more developed, the more problem” seems real as Ven. Phra Brahmamagunapon (P.A. Payutto) expressed, “With the development of technology, and in particular, so-called ‘high technology’, which deals with information and communications, greed and hatred have acquired much more effective tools.”⁹ Thus the twenty-first-century people urgently need Buddhism-integration-based knowledge and practices to bring back sustainably wisdom and virtue.

From the abovementioned background and significance of the problems, the research team thus suggests that the research title “A Theory of Buddhism Integration for Sustainable Development of Wisdom and Virtue in the 21st Century” is an urgent need to explore the said matter to deepen our understanding of Buddhism-modern science integration. Since no one has done any research relating to the theorizing of integration between Buddhism

⁶ Ken Wilber, **The Marriage of Sense and Soul: Integrating Science and Religion**, (New York: Random House, 1998), p. 13.

⁷ Sanu Mahatthanadull, *The Buddhist Integrated Approach to the Equilibrium of the Human Body Systems*, (Thai Version), **Ph.D. Dissertation in Buddhist Studies**, (Graduate School: Mahachulalongkornrajavidyalaya University, 2556 B.E.), p. 261.

⁸ Phra Dhammakosajarn (Prayoon Dhammacitto), Professor Dr. Rajabundit Honorary, **Integrative method: Buddhism & Modern Sciences**, (Thai Version), (Bangkok: Mahachulalongkornrajavidyalaya University, 2553 B.E.), p. 50.

⁹ Bhikkhu P.A. Payutto, **A Buddhist Solution for the Twenty-first Century**, (Bangkok: Sahadhammika Co., Ltd., 1994), p. 64.

and modern science in the form of a multidisciplinary study. This truly contributes to Buddhism and scientific breakthroughs for the modern world full of integrated sciences.

1.2 Statement of the Problems Desired to Know

The research starts with delineating the three researchable problems to be discussed. They are:

1.2.1 What is the development of wisdom and virtue in the 21st century according to Buddhism and the United Nations Sustainable Development Goals (SDGs)?

1.2.2 In what ways should the theory of Buddhism integration for sustainable development of wisdom and virtue in the 21st century be created?

1.2.3 What direction will the validation outcome of the theory of Buddhism integration for sustainable development of wisdom and virtue in the 21st century be?

1.3 Objectives of the Research

1.3.1 To investigate the development of wisdom and virtue in the 21st century according to Buddhism and the United Nations Sustainable Development Goals (SDGs).

1.3.2 To create a theory of Buddhism integration for sustainable development of wisdom and virtue in the 21st century.

1.3.3 To validate a theory of Buddhism integration for sustainable development of wisdom and virtue in the 21st century.

1.4 Scope of the Research

The scope of the research can be stipulated into the following three dimensions, namely: -1) Scope of Sources of Data; 2) Scope of Content; and 3) Scope of Key Informants and Focus Group Discussion Specialists. The details are as follows:

1.4.1 Scope of Sources of Data

The researcher team focuses on studying A Theory of Buddhism integration for Sustainable Development of Wisdom and Virtue in the 21st Century by first exploring deeply the primary resource of the Pāli Canon (Tipitaka), Commentaries (Atthakathā), etc. respectively by using the Pāli Text Society's Pāli version and English translation series. Besides, the primary source of various science theories was also focused. Second, in terms of the secondary sources, they were explored by usage of later Buddhist works of literature such as Sub-commentaries (Tīkā), Sub-Subcommentaries (Anutīkā), and Special Texts (Pakaraṇa-visesa), textbooks, research works, Doctor of Philosophy dissertations and Ph.D. thematic papers, journals, books, encyclopedias, dictionaries, newspapers, including online sources, etc. All these sources come from five languages, namely: - Pāli, Sanskrit, English, Thai, and Tibetan languages. In addition to those mentioned Buddhist side, from the Buddhism-Sciences integration perspective, the primary and secondary sources from modern sciences such as physics, chemistry, biology, psychology, etc. textbooks were explored in the same manner as Buddhism.

Apart from this, sources of data also came from the in-depth interviews with 15 key informants and Focus Group Discussions with 10 specialists from a total of 11 countries¹⁰ from around the world, covering all three Buddhist schools, namely: - Theravāda, Mahāyāna, and Vajrayāna.

1.4.2 Scope of Content

In this research, the research team has established a framework based on the three objectives for the exploration of: - 1) The Development of Wisdom and Virtue in the 21st Century According to Buddhism and The United Nations Sustainable Development Goals (SDGs), 2) Creating a Theory of Buddhism Integration for Sustainable Development of Wisdom and Virtue in the 21st Century, and 3) Validating a Theory of Buddhism Integration for

¹⁰ See 1.4.3 Scope of Key Informants and Focus Group Discussion Specialists in this Chapter, and Topic 3.2 Key Informants and Focus Group Discussion Specialists in Chapter 3 for comparison.

Sustainable Development of Wisdom and Virtue in the 21st Century. Therefore, the research work focuses on the three areas as follows:

1. The Development of Wisdom and Virtue in the 21st Century According to Buddhism and The United Nations Sustainable Development Goals (SDGs)

The development of wisdom and virtue according to the principles of Buddhism varies from sect to sect, namely Theravāda, Mahāyāna, and Vajrayāna respectively. Yet there is a non-Buddhist dimension, namely the SDGs according to the United Nations.

The scope of the content under the first research objective is defined to study in five frameworks as follows: 1) Theravāda View on Roles and Functions of Wisdom and Virtue in the 21st Century, 2) Theravāda View on The Process of Wisdom and Virtue Development, 3) Theravāda Ways to Develop Wisdom and Virtue in the 21st Century According to Buddhism and SDGs, 4) Mahāyāna Ways to Develop Wisdom and Virtue in the 21st Century According to Buddhism and SDGs, and 5) Vajrayāna Four-Step Practice to Develop Wisdom and Virtue in the 21st Century According to Buddhism and SDGs.

2. Creating a Theory of Buddhism Integration for Sustainable Development of Wisdom and Virtue in the 21st Century.

Theorizing a draft of Buddhism Integration is the heart of this research because it requires extensive basic knowledge of the data collection process from scriptures and in-depth interviews. The research team drafts a theory that encodes Buddhist science integration into the entire system.

Based on the BI Theory, Two Rules govern the Seven Principles according to their nature. The First Principle is Integrating Science into Buddhism; the Second Principle is integrating Buddhism into Science; the Third Principle is integrating Buddhism and Science Reciprocally; the Fourth Principle is Three-Buddhist-School-based Holistic Integration; the Fifth Principle is Environment-Mind-Wisdom-based Holistic Integration; the Sixth Principle is Physical-Environment-Mind-Wisdom-based Holistic

Integration; and the Seventh Principle is Problem-Solution-based Holistic Integration.

The scope of the content under the second research objective is defined to study in two frameworks as follows: 1) The Rule of Dual-Relational Integration (DRI), and 2) The Rule of Holistic-Relational Integration (HRI).

3. Validating a Theory of Buddhism Integration for Sustainable Development of Wisdom and Virtue in the 21st Century.¹¹

Theory validation plays a pinnacle role in making the Theory valid to the optimal result. The validity of the theory has been validated by FGDs from each Buddhist school. The scope of the content under the third research objective is defined to study in two frameworks as follows: - 1) Validation of Buddhism Integration Theory (BI Theory), and 2) Validation of the Goal of Sustainable Development of Wisdom and Virtue.

1.4.3 Scope of Key Informants and Focus Group Discussion Specialists

This is qualitative research by analyzing data from documents and field studies relating to A Theory of Buddhism Integration for Sustainable Development of Wisdom and Virtue in the 21st Century. According to the first and second objectives, some data and information gathering from textual collection and in-depth interviews were carried out. In particular, the third objective requires a special type of validation against the proposed theory, thus the Focus Group Discussions (FGDs)¹² were designed to meet such requirements. The specialists were invited to share their views, experiences,

¹¹ Referring to the research's 3rd objective, the theory is validated by Focus Group Discussions (FGDs).

¹² Brenda L. Berkelaar, “**Interviews and Focus Groups in Qualitative Organizational Communication Research**”, in *The Sage Handbook of Qualitative Research in Organizational Communication*, Eds. by Boris H. J. M. Brummans; Bryan C. Taylor; and Anu Sivunen, (London: Sage, 2024): 298-318; Pranee Liamputtong, “**Focus Group Interviewing Method**”, eds. by Alissa Ruth; Amber Wutich; and H. Russell Bernard, *The Handbook of Teaching Qualitative and Mixed Research Methods: A Step-by-Step Guide for Instructors*, (Oxon: Routledge, 2024): 68-71.

stories, and the insightful with rich data produced.¹³ Therefore, the key informants for in-depth interviews and FGDs were the experts and scholars from both local and international salient organizations. For this reason, the purposive sampling technique was used based on the significance of the studies. Regarding the abovementioned field studies, there are a total of 25 experts and scholars who are monks and Buddhist scholars from the three Buddhist sects of Theravāda, Mahāyāna, and Vajrayāna with deep knowledge of Buddhism and science, and with expertise in interdisciplinary integration between the two disciplines.

First, the scope of key informants for the in-depth interviews that appeared in this research concerns a group of 15 key informants. Second, the scope of specialists for Focus Group Discussions deals with 10 specialists. There is a total of 11 countries¹⁴ among the domestic and international organizations around the world, namely: - (1) USA, (2) Australia, (3) UK, (4) Thailand, (5) Japan, (6) Indonesia, (7) Vietnam, (8) China, (9) India, (10) Hongkong, and (11) Tibet. The following name list exhibits all expert and scholar names who participated in this research:

AAA: In-depth Interviews

1. Ven. Bhikkhu Bodhi, President of the Buddhist Association of the United States (BAUS), NY, USA;
2. Bhikkhu Brahmali, Bodhinyana Monastery, Australia;
3. Emeritus Prof. Dr. Peter Harvey, Lecturer and Buddhist Researcher, University of Sunderland, United Kingdom;

¹³ Roger O’Sullivan, “**Focus Groups**”, in *The A-Z of Social Research: A Dictionary of Key Social Science Research Concepts*, Eds. by Robert L. Miller and John D. Brewer, (London: SAGE Publications Ltd., 2003), p. 120; And in David L. Morgan, “**Focus Groups**”, in *The Sage Dictionary of Social Research Methods*, Compiled and ed. by Victor Jupp, (London: SAGE Publications Ltd., 2006), p. 121; And in Amanda M. Rosen, **Effective Research Methods for Any Project**, (Chantilly: The Great Courses, 2019), p. 103; And in Herman Aguinis, **Research Methodology: Best Practices for Rigorous, Credible, and Impactful Research**, (California: Sage, 2024), p. 478.

¹⁴ See Topic 1.4.1 Scope of Sources of Data in this Chapter, and Topic 3.2 Key Informants and Focus Group Discussion Specialists in Chapter 3 for comparison.

4. Prof. Dr. Frank Johnny Hoffman, Lecturer, IBSC, MCU, Thailand;
5. Assoc. Prof. Dr. G Clinton Godart, Graduate School of International Cultural Studies, Tohoku University, Japan;
6. Dr. Mark Blum, Distinguished Chair in Japanese Studies, University of California, USA;
7. Dr. Asoka Bandarage, Distinguished (Adjunct) Professor, California Institute for Integral Studies, USA;
8. Assoc. Prof. Dr. Peerasak Vorasuntharosoth, Former Dean of Engineering Faculty, KMITL, and Former Director of Thailand Institute of Scientific and Technological Research, Thailand;
9. Assoc. Prof. Dr. Cherdasak Maneeruttanarungroj, Biochemist and Molecular Biologist, Department of Biology, School of Science, KMITL, Thailand;
10. Ven. Junaidi Anuwar, Dr., Mahāyāna Teacher, Thai Plum Village International Mindfulness Practice Center, Indonesia;
11. Ven. Nam Nguyen Van, Dr., Mahāyāna Lecturer, Khanh Hoa Buddhist College, Vietnam;
12. Ven. Shi Chingyun, Dr., Chan Master, Buddhism Academic of China HeBei, China;
13. Ven. Geshe Sonam Wangden (Ph.D.), Vajrayāna Master, Lharam Geshe, Sera Jey Monastic University, South India;
14. Ven. Gen Ngawang Norbu, Head of Thukdam Research Center, Sera Jey Monastic University, South India;
15. Ven. Geshe Thabkhe (Ph.D.), Vajrayāna Master, Sera Jey Monastery, South India.

BBB: Focus Group Discussions

Theravāda FGD¹⁵

1. Most Ven. Phra Methavinairos, Assoc. Prof. Dr. Mahamakut Buddhist University, Buddhamonthon, Nakhon Pathom, Thailand;
2. Ven. Phramaha Somphong Khunakaro, Asst. Prof. Dr. Vice-Director of IBSC, MCU, Thailand;
3. Ven. Piyaratana Walmoruve, Asst. Prof. Dr. Director of BA (Buddhist Studies) English Programme, Faculty of Buddhism, MCU, Thailand;
4. Assoc. Prof. Dr. Praves Intongpan, Department of Philosophy and Religion, Faculty of Humanities, Kasetsart University, Thailand;

Mahāyāna FGD¹⁶

5. Ven. Phamaha Anon Anando, Asst. Prof. Dr. IBSC Lecturer, MCU, Thailand;
6. Ven. Laidong, Dr. Executive Director of Guangdong Buddhist Association, Executive Dean of Guangzhou Kelin Academy, China;
7. Ven. Thich Phap Kham, Dr. Director of Hongkong Plum Village International Buddhist Meditation Center, Hong Kong;

Vajrayāna FGD¹⁷

8. Ven. Tulku Tenzin Gyurme Rinpoche, The president of TSF, TTS & DCH., Junior English Translator of HH Dalai Lama, Tibet;

¹⁵ Focus Group Discussion (FGD): Theravāda View, August 30th, 2023 from 1.00-3.00 p.m. on the 2nd Floor, Buddhapañña Meeting Room, Phra Buddhaghosacara Building, International Buddhist Studies College (IBSC) Mahachulalongkornrajavidyalaya University, Wang Noi, Ayutthaya.

¹⁶ Focus Group Discussion (FGD): Mahāyāna View, September 14th, 2023, 1.00 - 3.00 p.m. via Zoom Application 7767776667 Password 2020.

¹⁷ Focus Group Discussion (FGD): Vajrayāna View, September 20th, 2023 from 6.00 - 8.00 p.m. via Zoom Application 7767776667 Password 2020.

9. Ven. Geshe Lharampa Thabkhe Lodoe, Dr. Director of Sera Jey Modern Education, Ex-Director of Sera Jey Science Center, South India;

10. Ven. Geshe Ngawang Norbu, Ex-Director of Sera Jey Science Center, Ex-Director of Sera Jey Modern Education, South India.

CCC: CVI Examiners

The in-depth interview forms' content validity¹⁸ was examined with the Content Validity Index (CVI) by the 5 experts, namely: -

1. Most Venerable Associate Professor Dr. Phra Methavinairos, Mahamakut Buddhist University, Thailand;

2. Associate Professor Dr. Praves Intongpan, Department of Philosophy and Religion, Faculty of Humanities, Kasetsart University, Thailand; and

3. Associate Professor Dr. Amnaj Buasiri, Committee of Education Council, Ministry of Education, Thailand.

4. Assoc. Prof. Dr. Suvin Raksat, Assistance to the rector for Academic Administration, Mahamakut Buddhist University, Thailand.

5. Assoc. Prof. Dr. Konit Srithong, Vice-Director of IBSC, MCU, Thailand.

DDD: Locations for Field Studies

The location of this research is fixed in 24 Institutes and Organizations:

1. Buddhist Association of the United States (BAUS), NY, USA;

2. Japanese Studies, University of California, USA;

3. California Institute for Integral Studies, USA;

¹⁸ Animesh Hazari, **Research Methodology for Allied Health Professionals: A Comprehensive Guide to Thesis & Dissertation**, (Singapore: Springer, 2023), p. 77; Donna M. Mertens, **Research and Evaluation in Education and Psychology: Integrating Diversity with Quantitative, Qualitative, and Mixed Methods**, 6th ed., (Thousand Oaks: Sage, 2024), p. 312; See CVR for comparison in Herman Aguinis, **Research Methodology: Best Practices for Rigorous, Credible, and Impactful Research**, (California: Sage, 2024), p. 147.

4. Bodhinyana Monastery, Australia;
5. University of Sunderland, United Kingdom;
6. IBSC, MCU, Thailand;
7. Engineering Faculty, KMITL and Thailand Institute of Scientific and Technological Research, Thailand;
8. Department of Biology, School of Science, KMITL, Thailand;
9. Mahamakut Buddhist University, Buddhamonthon, Nakhon Pathom, Thailand;
10. Department of Philosophy and Religion, Faculty of Humanities, Kasetsart University, Thailand;
11. Ministry of Education, Thailand;
12. Faculty of Buddhism, MCU, Thailand;
13. Graduate School of International Cultural Studies, Tohoku University, Japan;
14. Thai Plum Village International Mindfulness Practice Center, Indonesia;
15. Khanh Hoa Buddhist College, Vietnam;
16. Buddhism Academic of China HeBei, China;
17. Guangdong Buddhist Association, Guangzhou Kelin Academy, China;
18. Sera Jey Monastic University, South India;
19. Sera Jey Monastery, South India;
20. Sera Jey Modern Education, South India;
21. Sera Jey Science Center, South India;
22. Thukdam Research Center, Sera Jey Monastic University, South India;
23. Hongkong Plum Village International Buddhist Meditation Center, Hong Kong;
24. TSF, TTS & DCH. Tibet.

1.5 Definition of the Terms Used in the Research

In this research, a large number of technical terminologies related to the study both from modern sciences and Buddhism were mentioned. To

avoid some misunderstanding among them and to make the most accurate benefit to the study, the key definitions are thus given as follows:

a. Definition of the General Terms:

1.5.1 Wisdom and Virtue (a) in Buddhism, refer to the threefold training (*sīla-samādhi-paññā*). Wisdom or *paññā* refers to higher training in wisdom (*adhipaññā-sikkhā*), virtue or *guṇa-dhamma* covers both higher training in morality (*adhisīla-sikkhā*) and higher training in concentration (*adhicitta-sikkhā*); (b) according to United Nation, they refer to intellect and goodness as in the Sustainable Development Goals (SDGs).

1.5.2 Development of Wisdom and Virtue refers to practical guidelines to develop wisdom (*paññā*) and virtue (*guṇa-dhamma*) from the Buddhist viewpoint, and the development of intelligence and goodness of the people according to the United Nations' SDGs. Such developments are focused on individuals and societies in the twenty-first century.

1.5.3 The 21st Century refers to the twenty-first century, the current century of the 4th Industrial Revolution. An era when scientific advancement has been flourishing to its utmost but the world's major population lives in a wisdom and virtue crisis. Such crises are grouped by the following five problem frameworks: - (1) Environmental Challenges, (2) Global Health Emergency, (3) Social unity & Peace in Crisis, (4) Biological Chemical and Nuclear Hazards, and (5) Adverse Outcomes of Technologies.

1.5.4 Buddhism refers to the principle and practice of wisdom (*paññā*) and virtue (*guṇa-dhamma*) from the Three Buddhist Sects of Theravāda, Mahāyāna, and Vajrayāna.

1.5.5 United Nations Sustainable Development Goals refer to the 17 Sustainable Development Goals (SDGs) related to human intellect and goodness that were adopted by the United Nations.

1.5.6 Create refers to the drafting of a theory of Buddhism integration carried out by the research team by analyzing, synthesizing,

interpreting, and integrating both primary and secondary data, including fieldwork to collect data from in-depth interviews for further validation.

1.5.7 A Theory of Buddhism Integration (BI Theory) refers to a new theory, which is created by the research team, of the two Rules DRI and HRI. Both rules govern the Seven Principles. The Theory leads to sustainable wisdom and virtue development in the 21st century.

1.5.8 Science refers to the two types of science or modern science, namely: - (1) Pure science, such as physics, chemistry, biology, and astronomy; and (2) Applied science, such as medical science, engineering, agriculture, technology, and renewable energy; including modern disciplines in the modern day.

1.5.9 Modern Disciplines refer to the multidisciplinary disciplines other than science, such as humanities, social sciences, education, philosophy, etc.

1.5.10 Sustainable Development of Wisdom and Virtue refers to stages of sustainably developed wisdom (*paññā*) and virtue (*guṇa-dhamma*) of human beings who live in the 21st century which is the result of the BI Theory. The Four KPIs under the BSDGs framework are: - (1) Physical BSDG, (2) Environmental BSDG, (3) Mental BSDG, and (4) Wisdom BSDG.

1.5.11 Validate refers to the verification, approval, and certification of the BI Theory for improvement before presenting it in the final stage. The validation was done by the process of Focus Group Discussions (FGDs) were participated by Theravāda, Mahāyāna, and Vajrayāna scholars respectively.

b. Definition of the Specific Terms in the BI Theory:

1.5.12 DRI refers to The Rule of Dual-Relational Integration that governs different phenomena of dual-dimensional integration according to the three principles, namely: - (1) First Principle, (2) Second Principle, and (3) Third Principle.

1.5.13 HRI refers to The Rule of Holistic-Relational Integration that governs different phenomena of multi-dimensional integration according to

the four principles, namely: - (1) Fourth Principle, (2) Fifth Principle, (3) Sixth Principle, and (4) Seventh Principle.

1.5.14 First Principle refers to a principle under the DRI Rule that addresses integrating science into Buddhism.

1.5.15 Second Principle refers to a principle under the DRI Rule that addresses integrating Buddhism into science.

1.5.16 Third Principle refers to a principle under the DRI Rule that addresses integrating Buddhism and science reciprocally.

1.5.17 Fourth Principle refers to a principle under the HRI Rule that addresses three-Buddhist-school-based holistic integration.

1.5.18 Fifth Principle refers to a principle under the HRI Rule that addresses environment-mind-wisdom-based holistic integration.

1.5.19 Sixth Principle refers to a principle under the HRI Rule that addresses physical-environment-mind-wisdom-based holistic integration.

1.5.20 Seventh Principle refers to a principle under the HRI Rule that addresses problem-solution-based holistic integration.

1.6 Advantages Expected to Obtain from the Research

This research paper contributes to the advantages as follows:

1.6.1 Acquisition of Body of knowledge about the development of wisdom and virtue in the 21st century according to Buddhism and the United Nations Sustainable Development Goals (SDGs).

1.6.2 Obtaining a created version of the Theory of Buddhism Integration (BI Theory) for sustainable development of wisdom and virtue in the 21st century.

1.6.3 Having validated and obtained a complete version of the Theory of Buddhism Integration (BI Theory) for sustainable development of wisdom and virtue in the 21st century.

1.6.4 Individuals such as scientists, scholars, religious people, professors, students, research institutions, governments, and related organizations understand Buddhism and science and can tangibly and properly integrate them into multi-disciplinary studies.

Chapter 2

Concepts, Theories, and Related Research Works

In this chapter, the research team elaborates on the general concepts and theories together with all concerned research works that relate to the focus points of the study. They are: - 1) The Concept of SDGs and the Development of Wisdom and Virtue, 2) The Concept of the 21st Century, 3) The Concept of Wisdom and Virtue in Theravāda Buddhism, 4) The Concept of Wisdom and Virtue in Mahayāna Buddhism, 5) The Concept of Wisdom and Virtue in Vajrayāna Buddhism, 6) Theories of Sciences and Integration, and 7) Related Research Works. The following are their details.

2.1 The Concept of SDGs and the Development of Wisdom and Virtue

The Sustainable Development Goals (SDGs), also known as Global Goals, define the world we desire. The goals apply to all nations and mean, quite simply, to ensure that no one is left behind.¹ SDGs aim to transform the world, to end poverty and inequality, to protect the planet, and to ensure that all people enjoy health, justice, and prosperity.² Due to the incomplete achievement of the proposed goals of the Millennium Development Goals (MDGs) adopted by the UN in 2000, thus, there is a need for a new set of goals called SDGs that need to be reached by 2030.³ Regarding the ending of poverty and other deprivations, strategies must be planned to improve health and education, reduce inequality, and urge economic growth,

¹ United Nations, “**What the SDGs Mean**”, <https://www.un.org/en/chronicle/article/what-sdgs-mean>, 2018.

² World Health Organization, “**Sustainable Development Goals**”, <https://www.who.int/europe/about-us/our-work/sustainable-development-goals>, 2023.

³ S. J. Taylor, “**A Review of Sustainable Development Principles**”, Centre for Environmental Studies. University of Pretoria, 2016.

including the tackling of climate change and the preservation of our oceans and forests. Only a nationally tailored strategy having the SDGs as guideline can foster economic growth and development of internal systems.⁴ To achieve SDGs, wisdom and virtue have to be cultivated along with sustainable development.

In Buddhism, wisdom (*paññā*) refers generally to understanding, and more specifically to clear understanding or comprehensive to a thorough and accurate understanding of the truth. Wisdom possesses an insight into reality and penetration into the heart of problems. Wisdom stands in opposition to delusion (*moha*).⁵ Wisdom is a principal form of knowledge contained within the volitional formation aggregate (*saṅkhāra-khandha*). Besides this form of knowledge, many other factors within the group of volitional formations are related to the principle of knowledge and understanding either by supporting it or by acting as intermediate factors in wisdom development. Examples of these factors are faith (*saddhā*) and view (*diṭṭhi*). Faith implies accepting the knowledge of others, trusting in the wisdom of others, and relying on others' knowledge while view is an important stage in the development of wisdom. Therefore, wisdom must be generated, cultivated, and gradually developed.⁶

Even though there is only one kind of wisdom, i.e., the natural phenomena of understanding reality, of penetrating the truth of things as they really are, wisdom is frequently divided into various kinds depending on the level of wisdom, its specific function, or specific source of understanding. For example, three kinds of wisdom, which are seldom mentioned in the Tipitaka, are classified according to the source of understanding:⁷

⁴ V. C. Turcea and R.A. Ion, “**How Important are the Sustainable Development Goals? A Bibliometric and Modern Data Analysis**”, Proceedings of the 3rd International Conference on Economics and Social Sciences, Bucharest University of Economic Studies, Romania, October 15-16, 2020: 624-635.

⁵ Bhikkhu P.A. Payutto, **Buddhadhamma: The Laws of Nature and Their Benefit to Life**, (Bangkok: Buddhadhamma Foundation, 2018), p. 29.

⁶ Ibid., pp. 56-58.

⁷ Ibid., p. 83.

1) *Sutamaya-paññā*: Wisdom stemming from listening, reading, and learning.

2) *Cintāmaya-paññā*: Wisdom stemming from reflection and contemplation.

3) *Bhāvanāmaya-paññā*: Wisdom stemming from further spiritual cultivation.

In order to develop wisdom, virtuous conduct has to be developed parallelly. Knowledge is the mainstay of virtuous conduct and virtuous conduct is equivalent to living with wisdom. Therefore, a virtuous person can be referred to as a wise person (*paṇḍita*).⁸

Cariya (virtuous conduct) can be divided into 3 stages as follows:⁹

1) To know the truth of nature, and to have insight into nature that all things exist according to causes and conditions.

2) To use this knowledge beneficially to conduct oneself in harmony with the laws of nature, and to act in a way that generates favorable results.

3) When one acts in accordance with causes and conditions, one allows them to generate results automatically and independently. Then, one observes these results with understanding, without grasping onto them and affixing a sense of self.

Sīla (morality or virtuous conduct) is a fundamental level of objective truth. It refers to intentional speech (right speech, *sammā-vācā*), action (right action, *sammā-kammanta*), and livelihood (right livelihood, *sammā-ājīva*), that is free from evil, immoral conduct, and from thoughts of harm and oppression. It also incorporates corresponding virtuous and upright behavior. Five precepts are considered the most basic form of acceptable moral conduct, encompasses only the stage of *sīla*, not of *samādhi* or *paññā*.¹⁰

⁸ Ibid., p. 1190.

⁹ Op. cit.

¹⁰ Bhikkhu P.A. Payutto, **Buddhadhamma: The Laws of Nature and Their Benefit to Life**, pp. 1222-1236.

The Sustainable Development Goals (SDGs) are designed to be a blueprint to achieve a better and more sustainable future for all. The teachings of Buddha are seen identical with several markers of the SDGs.¹¹

Today, problems in world development are sophisticated and the development framework needs rethinking. The development approach should be holistic, covering human, social, environmental, and economic development to fulfill the needs of people for happiness and peaceful societies. In addition, human development should also focus on the inner self, mind, and wisdom, which can drive human and national development in the right direction. In particular, the commitment in 2015 to SDGs should consider inner happiness from the mind and wisdom-based as well. However, current Western happiness usually refers to happiness in sensual pleasures which involve various forms of suffering and short-lived happiness. On the contrary, Buddhist happiness focuses more on inner happiness which is a far more sustainable pattern as it is usually accompanied by less suffering. In terms of Buddhist happiness, people can be happy from a calm mind, natural appreciation, positive thinking, generosity, helping others, having compassion and loving-kindness (*mettā*), working with good aspiration (*chanda*), and having good quality, and without attachment to oneself. Individuals and society as a whole can be happy from giving and less acquisition as well as mind development.¹²

Buddhism has the potential to link sustainable development at all levels, i.e., individual, national, and global.¹³ Thus, to achieve the SDGs, Buddhists must develop wisdom and virtue to live with happiness and harmony in the world we desire.

Regarding the concept of sustainable development goals and the development of wisdom and virtue mentioned, three issues are reviewed as follows: -1) SDG' Goals to Develop Wisdom and Virtue, 2) SDG' Targets

¹¹ Sabita Dhakhwa, "The Sustainable Developments Goals and Buddha's Teachings", **Historical Journal**, Vol. 12 No. 1, (2020): pp. 70-79.

¹² S. Kittiprapas, "Buddhist Approach and Happiness for Sustainable Development", **The Journal of The International Buddhist Studies College**, Vol. 1 No. 1, (2015): 90-123.

¹³ M. K. Verma, "**Buddhist Way of Sustainable Development: Theory and Practice**", <https://www.undv2019vietnam.com/Subtheme-05/en/23.pdf>, 2023.

to Develop Wisdom and Virtue, and 3) Sustainable Development According to Philosophy.

2.1.1 SDG' Goals to Develop Wisdom and Virtue

The 17 goals of SDGs are the heart of the 2030 Agenda for Sustainable Development adopted by all United Nations members in 2015.^{14,15} These are:

Goal 1: No poverty, to end poverty in all its forms everywhere.

Goal 2: Zero hunger, to end hunger, achieve food security and improved nutrition, and promote sustainable agriculture.

Goal 3: Good health and well-being, to ensure healthy lives and promote well-being for all at all ages.

Goal 4: Quality education, to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.

Goal 5: Gender equality, to achieve gender equality and empower all women and girls.

Goal 6: Clean water and sanitation, to ensure availability and sustainable management of water and sanitation for all.

Goal 7: Affordable and clean energy, to ensure access to affordable, reliable, sustainable, and modern energy for all.

Goal 8: Decent work and economic growth, to promote sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all.

Goal 9: Industry, innovation, and infrastructure, to build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.

Goal 10: Reduced inequalities, to reduce inequality within and among countries.

¹⁴ United Nations, “**The 2030 Agenda and the Sustainable Development Goals**”, https://repositorio.cepal.org/bitstream/handle/11362/40156/S1801140_en.pdf, 2018.

¹⁵ United Nations, “**The 17 Goals**”, <https://sdgs.un.org/goals>, 2023.

Goal 11: Sustainable cities and communities, to make cities and human settlements inclusive, safe, resilient, and sustainable.

Goal 12: Responsible consumption and production, to ensure sustainable consumption and production patterns.

Goal 13: Climate action, to take urgent action to combat climate change and its impacts.

Goal 14: Life below water, to conserve and sustainably use the oceans, seas, and marine resources for sustainable development.

Goal 15: Life on land, to protect, restore, and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.

Goal 16: Peace, justice, and strong institutions, to promote peaceful and inclusive societies for sustainable development, provide access to justice for all, and build effective, accountable, and inclusive institutions at all levels.

Goal 17: Partnerships, to strengthen the means of implementation and revitalize the global partnership for sustainable development.

For the SDGs to draw out public trust and confidence, ethics must be central to their realization.¹⁶ The SDGs will function as a form of “soft law”.¹⁷ In the absence of legally binding compliance and accountability mechanisms, realizing the SDGs will require a mindset shift on the part of authorities, i.e., from the empty political rhetoric that has generally characterized the realization of other soft-law international instruments, to a problem-solving mindset based on adherence to unambiguous ethical benchmarks. Such an approach may help generate public trust and confidence in national authorities, transnational organizations, and soft-

¹⁶ J. A. Singh, “The Sustainable Development Goals: The Role of Ethics”, **Sight and Life**, Vol. 29 No. 2, (2015): 58-63.

¹⁷ M. Miller-Dawkins, “**Global goals and international agreements. Lessons for the design of the Sustainable Development Goals**”, www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/9295.pdf. Accessed October 1, 2015.

law instruments, and could also facilitate the realization of the SDGs.¹⁸ Considerable progress has been made in the availability of internationally comparable data for SDG monitoring by the United Nations.¹⁹ For 8 of the 17 SDGs, fewer than half of the 193 countries or areas have internationally comparable data from 2015 or later. While Goal 3 (health) and Goal 7 (energy) have the highest data availability (more than 80% of countries have at least one data point since 2015), and only around 20% of countries have data for Goal 13 (climate action).

In Thailand, an overwhelming number of works were within the ranges of Goal 3 (good health and well-being), Goal 8 (decent work and economic Growth, Goal 2 (zero hunger), Goal 9 (industry, innovation, and infrastructure), and Goal 11 (sustainable cities and communities). However, goals belonging to the planet (the environmental aspect of sustainable development) received less attention. Furthermore, the two Goals, i.e., Goal 1 (no poverty) and Goal 5 (gender equality) were the least amount of research in the People (or social aspect of sustainable development).²⁰

One example of SDGs relating to Buddhism is goal 5, which is about gender equality. Buddha's teachings can contribute to achieving sustainable development goals and eventually gender equality. When the Buddha's teachings were analyzed, it was found that the root cause behind the violence was a polluted mind filled with greed, hatred, and delusion. In general, violence starts from the mind and a lot of the Buddha's teachings related to elimination of violence and promotion of gender equality can be found in *Tipitakā*. The polluted or corrupted mind can generate destructive emotions and perform violent actions that cause much misery affecting the world as well as our own lives. The Buddha's teachings can help support

¹⁸ J. A. Singh, "The Sustainable Development Goals: The Role of Ethics", **Sight and Life**, Vol. 29 No. 2, (2015): 58-63.

¹⁹ United Nations, "**The Sustainable Development Goals Report 2022**", <https://unstats.un.org/sdgs/report/2022/The-Sustainable-Development-Goals-Report-2022.pdf>.

²⁰ N. Phanthuwongpakdee, P. Intaprasert, C. Gongkaew, C. Bunnag, S. Wichachai and T. Soontornthum, "**Localizing SDGs in Thailand: Towards a More Inclusive National Science, Research, and Innovation (SRI) Plan**", *Environmental Sciences Proceedings* 15, 2022: 1-11.

the change of a person's attitude and develop a positive mind. The teachings of the Buddha are linked with the spirit of the gender equality goal of SDGs. The teachings such as moral conduct (*sīla*), right speech, right livelihood, right understanding, *Sāraṇīya Dhammas*, practicing of loving kindness (*mettā*), and so on, are some of the Buddha's teachings that can contribute to non-violence, equality, and peace. Such spiritual parts need to be incorporated in order to achieve the gender equality goal of SDGs.²¹

2.1.2 SDG' Targets to Develop Wisdom and Virtue

According to 17 goals of SDGs, included are 169 constituent targets, and 230 indicators, an evidence-based indicator.²² For targets, there are outcome targets and implementation targets. The SDGs and targets provided by the UN are an important achievement. These goals and targets largely reflect the worldview of modernity, with an emphasis on scientific and planning rationality and emancipatory ideals. Explicit use of worldviews, such as sets of values and beliefs, and ethics can help enrich the interpretation and implementation of the SDGs. The engagement of citizens in their real-world diversity and the development of respect for empathy and cooperation with people holding other values, beliefs, and morals can also be facilitated. In all religions, the everyday reality can often differ significantly from the avowed ideals. Therefore, people who still live in a premodern world in which traditional morality and ethics prevail must not be overlooked in the implementation of the SDGs.²³

²¹ J. A. Singh, "The Sustainable Development Goals: The Role of Ethics", **Sight and Life**, Vol. 29 No. 2, (2015): 58-63.

²² S. Pakkan, C. Sudhakar, S. Tripathi and M. Rao, "A Correlation Study of Sustainable Development Goal (SDG) Interactions", **Quality and Quantity**, Vol. 57, (2023): 1937-1956.

²³ B. J. M. de Vries, "Engaging with the Sustainable Development Goals by going beyond Modernity: An ethical evaluation within a worldview framework", **Global Sustainability**, Vol. 2, (2019): <https://doi.org/10.1017/sus.2019.15>.

2.1.3 Sustainable Development According to Philosophy

According to Basiago,²⁴ sustainability is defined as the ability to maintain the integrity of an entity over time. The term sustainability is also defined as an efficient and equitable sharing of resources along generations to operate the socio-economic activities of a finite ecosystem.²⁵ While in the academic vocabulary and in practice the concept is applied to promote a healthy socio-economic and ecologic environment for the human society.²⁶ Sustainable development can be described as the principle of achieving human development, while at the same phase sustaining the natural systems, to provide the input that the society depends on.²⁷ Research on sustainability is more than a knowledge search, rather, it is meant to offer a secure future, and sustainable thinking in any topic requires more than just plans and overthinking but organized action.²⁸

Thailand has its development framework, the Sufficiency Economy Philosophy (SEP), that is used to achieve the SDGs. The SEP relies on wisdom and integrity, as well as the principles of moderation, reasonableness, and prudence, conceived by His Majesty the Late King Bhumibol Adulyadej. The focus of the SEP is sustainability, and it has been adopted as the core principle of Thailand's National Economic and Social Development Plan since 2002.²⁹ The SEP stresses balance in the use of

²⁴ A.D. Basiago, "Economic, Social, and Environmental Sustainability in Development Theory and Urban Planning Practice", **The Environmentalist** 19, Kluwer Academic Publishers, Boston, 1999: 145-161.

²⁵ H. Stoddart, K. Schneeberger, F. Dodds, A. Shaw, M. Bottero, J. Cornforth and R. White, **A Pocket Guide to Sustainable Development Governance**, (London: Stakeholder Forum, 2011).

²⁶ M. J. Milne and R. Gray, "W(h)ither Ecology? The Triple Bottom Line, the Global Reporting Initiative, and Corporate Sustainability Reporting", **Journal of Business Ethics**, Vol. 118 No.1, (2013): 13-29.

²⁷ P. Cerin, "Bringing Economic Opportunity into Line with Environmental Influence: A discussion on the Coase Theorem and the Porter and Van der Linde Hypothesis", **Ecological Economics**, Vol. 56 No. 2, (2006): 209-225.

²⁸ P. McManners, "Increasing the Impact of Sustainability Research – A New Methodology", **Journal of Sustainable Research**, 2019: <https://doi.org/10.20900/jsr20190008>.

²⁹ Ministry of Foreign Affairs of Thailand, **Sufficiency Economy Philosophy: Thailand's Path towards Sustainable Development Goals**, second edition. (Bangkok: Ministry of Foreign Affairs, 2017).

economic, social, environmental, and cultural capital and is based on three principles that stress a middle path for Thai people at all levels, from family to community to country. These principles are as follows:³⁰

1) Moderation is an important principle for achieving the SDG targets such as less wasteful consumption and production patterns (SDG 12), the curbing of fossil fuel usage (SDG 7), sustainable management of marine (SDG 14) and terrestrial (SDG 15) ecosystems.

2) Reasonableness is defined as thoughtful consideration of the impact that our actions and decisions may have on others and the world around us. Reasonableness has numerous practical applications in global issues of climate change (SDG 13), equality (SDG 10), justice (SDG 16), developing clean energy sources (SDG 7), and reducing pollution (SDG 12).

3) Prudence is concerned with assessing potential risks, working methodically, and achieving a level of competence and self-reliance before proceeding further. It is also about people taking care not to overreach their capabilities. This principle may apply to almost all of the SDGs including health (SDG 3), food (SDG 2), water (SDG 6), and energy security (SDG 7).

Sustainable development can also be described as a process that requires the use of existing resources without compromising them for future generations. In addition, it requires visualizing the world as a system that connects space and time. Dependent origination (*paticcasamuppāda*)³¹, the key principle of the Buddha's teachings, which sees all things and phenomena as interdependent and arising from multiple causes and conditions, is clearly consistent with Sustainable development. The Buddha explained the ways to earn and share wealth virtuously and

³⁰ OpenDevelopment, “**Sustainable Development Goals**”, <https://thailandopendevlopmentmekong.net/topics/sustainable-development-goals/>, 2018; National Voluntary Presentation, “**Annual Ministerial Review (AMR) at ECOSOC 2014**”, 9 July 2014, New York: United Nations.

³¹ S. Kittiprapas, “Buddhist Approach and Happiness for Sustainable Development”, **The Journal of The International Buddhist Studies College**, Vol. 1 No. 1, (2015): 90-123.

trail the path of spirituality to establish sustainable development, peace, and harmony in society. Thus, Buddhist theories and practices, focusing on inner cheerfulness, can well support holistic sustainable development. The inner happiness-focused sustainable development may be called “Buddhist Sustainable Development”, driven by the “Buddhist sustainable happiness” path or happiness at high (mind and wisdom) levels. Buddhist philosophy explains the levels of happiness as a process of human development and provides a way out from problems by acknowledging the fact that our mind has been controlled by *taṇhā* or *kilesa* and trying to free our mind from such control. Only sustainable happiness comes from emancipation. Buddhism can help liberate a person from all unnecessary desires. For example, human behaviors can be driven by wisdom, rather than by self-interests and unlimited wants as assumed in Western economic theory. In Western theory, the mainstream sustainable development concept which lacks spiritual focus cannot solve current global problems.

Therefore, the right views towards life goals (with inner freedom/happiness) are a firm foundation for the right behavior toward others and nature, leading to a sustainable path of development. Based on Buddhist philosophy, wisdom, and mindfulness should be the key to driving the new direction of development. If human beings have higher quality spiritually, we could have a deep understanding of the relationship of all beings under the law of nature which could move towards a caring and sustainable society. Societies would have more equality, justice, and respect, free from poverty with good human behavior and relationships. Human beings can live happily with moderate consumption, cooperation, and harmony, as well as equitable resource distribution. Being less want and less dependent on materials. Higher or inner happiness can lead to the whole societal happiness with peace and sustainable development. This is the human spiritual focus that is not considered in the Western sustainable development concept. Western economic society only focuses on sustainable development from meeting the needs of present and future generations.³² It is mentioned as “Development that meets the needs of the

³² S. Kittiprapas, “Buddhist Approach and Happiness for Sustainable Development”, **The Journal of The International Buddhist Studies College**, Vol. 1 No. 1, (2015): 90-123.

present without compromising the ability of future generations to meet their own needs.”³³ However, Western philosophy since Aristotelianism has focused on virtue ethics as one strategy to raise happiness in society and share some fundamental precepts as Buddha’s teachings. Furthermore, both concepts emphasized that more material possessions do not lead to happier lives.³⁴

2.2 The Concept of the 21st Century

The concept of twenty-first-century skills first appeared in 2006 in an OECD (the Organization for Economic Cooperation and Development) project. The concept aimed to define the skills people were expected to have in the new century. The characteristics of this century and the ways through which those skills would be acquired by individuals were determined in the project.³⁵

Three industrial revolutions have been witnessed by humans for 250 years and the 1st industrial revolution began in Great Britain in the mid-18th century. Lots of technological innovations were of British origin such as the iron and textile industries, machine tools, along with the development of the steam engine and railroads. The 2nd Industrial Revolution began between 1870 and 1914 and methods of communication were revolutionized with the invention of the telegraph and the telephone as well as transportation methods. The emergence of the automobile and the plane at the beginning of the 20th century. The 3rd industrial revolution occurred in the 2nd half of the 20th century with the emergence of a new type of energy whose potential surpassed its predecessors, i.e., nuclear energy. The 4th industrial revolution, based on the digital revolution, represented new ways in which technology becomes embedded within

³³ The World Commission on Environment and Development’s (the Brundtland Commission), **Our Common Future**, (Oxford: Oxford University Press, 1987).

³⁴ Sustainable Society Foundation, “**A Sustainable Human Development Index in the Post 2015 Era**”, <http://www.ssfindex.com/a-sustainable-human-development-index-in-the-post-2015-era/>, March 26, 2013.

³⁵ Atilla Dilekçi and Halit Karatay, “The effects of the 21st century skills curriculum on the development of students’ creative thinking skills”, **Thinking Skills and Creativity**, Vol. 47, (2023): <https://doi.org/10.1016/j.tsc.2022.101229>.

societies and even the human body. It is marked by emerging technological breakthroughs in many fields. Included are robotics, artificial intelligence, neurotechnology, nanotechnology, quantum computing, biotechnology, internet of things (IoT), virtual reality (VR), decentralized consensus, fifth-generation wireless technologies (5G), additive manufacturing/3D printing and fully autonomous vehicles³⁶ Schwab³⁷ emphasized three key technology trends necessary for further development as follows: - (1) Mixed reality, a new user interface that transforms your sight into a computer display where digital and physical objects coexist and interact in real-time. Data, applications, friends, and colleagues will be accessible wherever we are in the office, at the symposium, and so on; (2) Artificial intelligence (AI) will strengthen any professional experience, complementing, and enriching human capabilities with their expert conclusions, knowledge, and such a prediction power that is beyond public perception; and (3) Quantum computing will change the physical principles of computation and will give an opportunity necessary to solve extremely complicated problems.

In the 21st century, society has shifted from an economy based on commodities and manual labor to an economy based on knowledge and highly qualified human capital. Technological development happens faster and faster in our life.³⁸ Twenty-first-century skills consist of knowledge construction, real-world problem solving, skill communication, collaboration, use of information and communication technology for learning, and self-regulation³⁹ which are crucial for living life in such an Era.

³⁶ L. V. Lazorenko and Oksana M. Krasnenko, “**The Importance of Developing 21st Century Skills for Advanced Students**”, <http://www.baltijapublishing.lv/download/all-science-3/13.pdf>, 2019, pp. 251-252.

³⁷ K. Schwab, **Shaping the Fourth Industrial Revolution**, (Davos-Kloster: World Economic Forum, 2018).

³⁸ I. Jara, M. Claro, J. E. Hinostroza, E. San Martín, P. Rodríguez, T. Cabello, A. Ibieta and C. Labbé, “Understanding Factors Related to Chilean Students’ Digital Skills: A Mixed Methods Analysis”, **Computers and Education**, Vol. 88, (2015): 387-398.

³⁹ Partnership for 21st Century Learning, “**Framework for 21st Century Learning**”, www.p21.org/about-us/p21-framework, 2016.

A shift in advanced economies from manufacturing to information and knowledge services is significant. Information and communication technology is changing the nature of how work is conducted and the meaning of social relationships. The success of a technician or a professional person lies in being able to communicate, share, and use information to solve complex problems, in being able to adjust and innovate in response to new demands and changing circumstances, in being able to lead and expand the power of technology to create new knowledge, and in expanding human capacity and productivity.⁴⁰ Examples of 12 useful twenty-first-century skills are as follows:⁴¹ critical thinking, creativity, collaboration, communication, information literacy, media literacy, technology literacy, flexibility, leadership, initiative, productivity, and social skills.

Regarding the concept of the 21st century, two issues are reviewed as follows: -1) Issues in the Twenty-first Century, and 2) Education in the Twenty-first Century.

2.2.1 Issues in the Twenty-first Century

The present global issues concerned in the 21st century, according to the Current risk landscape shown in The Global Risks Report 2024⁴² sorted by percentage: Extreme weather 66%, AI-generated misinformation and disinformation 53%, Societal and/or political polarization 46%, Cost-of-living crisis 42%, Cyberattacks 39%, Economic downturn 33%, Disrupted supply chains for critical goods and resources 25%, Escalation or outbreak of interstate armed conflict(s) 25 %, Attacks on critical infrastructure 19%, Disrupted supply chains for food 18%, Censorship and erosion of free speech 16%, Disrupted supply chains for energy 14%,

⁴⁰ M. Binkley, O. Erstad, J. Herman, S. Raizen, M. Ripley, M. Miller-Ricci and M. Rumble, **“Defining Twenty-First Century Skills”**, In: P. Griffin, McGaw, B., E. Care, eds, *Assessment and Teaching of 21st Century Skills*, (Springer, Dordrecht, 2012), pp.17-66.

⁴¹ Indeed Editorial Team, **“12 Useful 21st-Century Skills and How They Benefit You in 2024”**, <https://in.indeed.com/career-advice/career-development/21st-century-skills>

⁴² The World Economic Forum, **The Global Risks Report 2024**, 19th ed. Insight Report, (Geneva: World Economic Forum, 2024), p. 13.

Public debt distress 14%, Skills or labor shortages 13%, Accidental or intentional nuclear event 12%, Violent civil strikes and riots 11%, Accidental or intentional release of biological agents 9%, Institutional collapse within the financial sector 7%, Housing bubble burst 4%, and Tech bubble burst 4%.

However, in the twenty-first century, where a variety of interconnected problems exists, there is no unique and single approach to the definition of ‘Twenty-First-Century Skills’ and multiple sources have identified a variety of competencies and skills and a broad range of attempts to synthesize these definitions and frameworks. Key examples include the ‘4Cs’ (critical thinking, creativity, collaboration, and communication), the ‘3Rs’ (reading, writing, and arithmetic), and the ‘3Ps’ (person, process and product).⁴³ Other terminologies associated with Twenty-First-Century Skills, in particular, ‘life skills’, ‘soft skills’, ‘transversal skills’, ‘critical skills’, and ‘digital skills’, are often regarded as synonymous with twenty-first-century skills. Soft skills are defined as a broad set of skills, 19 behaviors, and personal qualities that enable people to effectively navigate their environment, perform well, and achieve their goals.⁴⁴ Although this definition could be applicable to twenty-first-century skills, the difference relies on the lack of reference within ‘soft skills’ to current and future challenges associated with globalization, the world labor market, and the emerging knowledge economy. While there is a broad range of documented interventions for twenty-first-century skills training from around the world, there is currently little or no substantial evidence available on the most effective tools and approaches to deliver those skills.⁴⁵

⁴³ Chris Joynes, Serena Rossignoli and Esi Fenyiwa Amonoo-Kuofi, “**21st Century Skills: Evidence of Issues in Definition, Demand and Delivery for Development Contexts (K4D Helpdesk Report)**”, Brighton, UK: Institute of Development Studies, 2019, pp. 5-25.

⁴⁴ S. Gates, L. Lippman, N. Shadowen, H. Burke, O. Diener and M. Malkin, “**Key Soft Skills for Cross-Sectoral Youth Outcomes**”, (Washington, DC: USAID’s YouthPower: Implementation, YouthPower Action, 2016), p. 9.

⁴⁵ Chris Joynes, Serena Rossignoli and Esi Fenyiwa Amonoo-Kuofi, “**21st Century Skills: Evidence of Issues in Definition, Demand and Delivery for Development Contexts (K4D Helpdesk Report)**”, pp. 5-25.

2.2.2 Education in the Twenty-first Century

For education and the workplace in the current economy, the skills needed have been labeled twenty-first-century skills. Voogt and Roblin⁴⁶ illustrated that all frameworks include ICT-related skills, collaboration, communication, and social and cultural competencies. The twenty-first-century skills cannot only help students to become successful in all areas of formal school, but these skills are also necessary for a person to adapt and thrive in an ever-changing world.⁴⁷ Changing conditions in the information age have also led to changes in education. These changes are innovations. There are innovations in the field of education as is the case in all areas of life in our changing world and this change covers various factors. For example, this way students perceive life, students' lifestyles, schools' technological infrastructure, teacher skills, parents' expectations from schools, and so on, can be affected. Students and teachers play an active role in this change. Schools and programs must be transformed to lead individuals to acquire twenty-first-century skills such as critical thinking, problem-solving, creative thinking, and cooperative working skills. Furthermore, digital media and technology literacy skills are also essential.⁴⁸

The belief that creativity is a special gift found only in some individuals is incorrect. Included in creative thinking is a multi-faceted cognitive process present at different levels in everyone. Like intelligence, every individual can think creatively to a certain extent, and this potential is not fixed and unchangeable. Nevertheless, as with the development of intelligence, creative thinking skills can be developed when appropriate conditions are provided.⁴⁹

⁴⁶ J. Voogt and N.P. Roblin, "A Comparative Analysis of International Frameworks for 21st Century Competences: Implications for National Curriculum Policies", **Journal of Curriculum Studies**, 44(3), 2012: 299-321.

⁴⁷ Partnership for 21st Century Learning, "**Framework for 21st Century Learning**", www.p21.org/about-us/p21-framework, 2016.

⁴⁸ Atilla Dilekçi and Halit Karatay, "The effects of the 21st century skills curriculum on the development of students' creative thinking skills", **Thinking Skills and Creativity**, Vol. 47, (2023): <https://doi.org/10.1016/j.tsc.2022.101229>.

⁴⁹ Op. cit.

In the Buddhist context, post-twenty-first-century education should be applicable to the present, especially with the emergence of artificial intelligence (AI). Education, which comes in the form of accumulating information and reproducing it without spiritual intelligence, can become irrelevant. Therefore, humanity should focus on things that only human beings can do, such as developing individuals with love and compassion. In addition, the pedagogy of teaching and learning should be based on first-person inquiry, which is explorative, investigative, and contemplative so that learning is not just a transaction of information but is a continuous experiential and transformational process. Buddhism is essentially an educational training system that facilitates the transformation of human civilization leading to excellence and well-being. Some of the basic Buddhist teachings that are relevant to students of the 21st century are as follows:⁵⁰

- 1) Spiritual intelligence, i.e., to understand human needs,
- Loving Kindness, which is the first baby step,
- Identification of primary and secondary causes of happiness,
- Mindfulness and consciousness, which are tools for managing the mind,
- Identity, which is the basis of all human doings,
- Mindful of our mortal nature, and
- Assessment, i.e., looking for success.

2.2.3 Society in the Twenty-first Century

Thailand has taken approximately two decades to transform from an aging society to an aged society. Regarding the socio-economic critical issues related to policies and measures for the well-being of Thai older adults under the 2030 agenda for sustainable development and the upcoming development of the UN Convention on Human Rights for older people, the living standards of most of the Thai older population were poor.

⁵⁰ Lopen Lungtaen Gyatso, “**Buddhist Education in the 21st Century**”, <http://drukjournal.bt/buddhist-education-in-the-21st-century/>, 2020.

Low level of formal education as well as dependence on family transfers and old-age allowances from the government or less support from their family are critical issues that need to be addressed especially in the 21st century. One of the main challenges to becoming an active aging and healthy aging society points to the strength of lifelong learning, an education for older adults with ICT support. Therefore, integrated policies and participation from various stakeholders at all levels must be involved.⁵¹

The purpose of Buddhism is to create a heightened level of awareness in every human being in order to end suffering and to ensure the continuity of happiness from within, without any input from outside. Therefore, if we can use the skills of happiness in all aspects of life, especially in the economic process, family life, and material success, we will be able to do the same things joyfully. Only when one is happy and joyful from within is one able to access greater possibilities in life and Buddhism offers that opportunity in a myriad way.⁵²

In summary, In the 21st century, people need life skills to survive in the Fourth Industrial Revolution, which is based on the digital revolution. It is an era where technological breakthroughs have taken over people's lives and society in a frightening way. The twenty-first-century skills consist of knowledge construction, real-world problem solving, skill communication, collaboration, use of information and communication technology for learning, and self-regulation.

2.3 The Concept of Wisdom and Virtue in Theravāda Buddhism

Buddhism is an ancient religion that originated in India and is based on the teachings of Siddhartha Gautama, who became known as Buddha or the “enlightened one.” The philosophy of Buddhism revolves

⁵¹ D. Anantanasuwong, “Population Ageing In: Thailand: Critical Issues in the Twenty-First Century”, In P. Narot and N.Kiettikunwong (eds), “Education for the Elderly in the Asia Pacific”, **Education in the Asia-Pacific Region: Issues, Concerns and Prospects**, Vol. 59, (Springer, Singapore, 2021), pp. 31-56.

⁵² Lopen Lungtaen Gyatso, “**Buddhist Education in the 21st Century**”, <http://drukjournal.bt/buddhist-education-in-the-21st-century/>, 2020.

around the concept of wisdom and virtues. Moreover, Buddhism is one of the world's most ancient and widely practiced religions. Based on the Four Noble Truths and the Eightfold Path, its teachings aim to cessation suffering, attain enlightenment, and cultivate wisdom and virtue.

Morality, meditation, and wisdom constitute the three-fold basis of Theravāda Buddhist practice. As the foundation and prerequisite of the path, the moral life (*sīla*) is the first part of Venerable Buddhaghosa's great commentary *Visuddhimagga* and it is described by the Buddha as the foundation on which the path is built.⁵³

In *Common Buddhist Text: Guidance and Insight from the Buddha*, there is a connection between wisdom and virtue in the form of the Threefold Training:

The Buddhist path needs to address all three levels. Ethical discipline (*sīla*) restrains unwholesome bodily and verbal actions. Meditative concentration (*samādhi*) trains the mind so as to undermine unwholesome states and cultivate wholesome ones, and wisdom (*paññā*), aided by meditative calm, can come to dig out the roots of the underlying tendencies and intoxicating inclinations.⁵⁴

This paper explored the role of wisdom and virtue in Buddhism and how they are interrelated. It examined the Buddhist concept of wisdom and what it entails, as well as the different virtues emphasized in Buddhism and their relationship, and how they contribute to enlightenment.

Regarding The concept of wisdom and virtue in Theravāda Buddhism, five issues are reviewed as follows: -1) Meaning of Wisdom in Theravāda Buddhism, 2) Nature of Wisdom in Theravāda Buddhism, 3) Three Kinds of Wisdom in Theravāda Buddhism, 4) The Concept of Virtue in Theravāda Buddhism, and 5) The Contribution of Wisdom and Virtue.

⁵³ Bhadantācariya Buddhaghosa, **The Path of Purification**, Tr. by Bhikkhu Ñāṇamoli (Seattle: Buddhist Publication Society Pariyatti Editions, 1999); and **Numerical Discourses of the Buddha**, Tr. and Ed. by Nyanaponika Thera and Bhikkhu Bodhi, (Walnut Creek: AltaMira Press, 2000), is a selective translation of the *Aṅguttara-Nikāya*, AN XI.1, AN XI.2.

⁵⁴ Peter Haevey (Ed.), **Common Buddhist Text: Guidance and insight form the Buddha**, 2nd Ed., (Phra Nakhon Si Ayutthaya: Mahachulalongkornrajavidyalaya University Press, 2018), p. 308.

2.3.1 Meaning of Wisdom in Theravāda Buddhism

In Buddhism, wisdom refers to the understanding of the nature of reality, particularly the three characteristics of existence: impermanence (*aniccatā*), suffering (*dukkhatā*), and non-self (*anattatā*).

Wisdom is one of the three pillars of Buddhist practice, along with ethical conduct (*sīla*) and concentration (*samādhi*). It is considered to be the most important of the three, as it leads to the eradication of ignorance and the attainment of enlightenment. In Buddhism, wisdom is developed through the cultivation of insight (*vipassanā*), which involves a deep and penetrating understanding of the true nature of reality. This is achieved through the practice of mindfulness, meditation, and the study of Buddhist teachings. Buddhists believe that wisdom is essential for liberation from the cycle of birth, death, and rebirth (*samsāra*) and for attaining Nibbāna, a state of enlightenment, peace, and freedom from suffering.

Moreover, wisdom is understood to be a deep understanding of the Four Noble Truths: the truth of suffering, the truth of the origin of suffering, the truth of the cessation of suffering, and the truth of the path leading to the cessation of suffering. Ultimately, in Buddhism, wisdom is not just a matter of intellectual understanding, but also a matter of direct experience. It is the ability to see reality, without the distortions of our own biases and preconceptions, and to act following that understanding in a way that is beneficial to ourselves and others.

2.3.2 Nature of Wisdom in Theravāda Buddhism

Wisdom (*paññā*) is, with ethical discipline and meditative concentration, one of the three main aspects of Buddhist training. It encompasses the right view and right resolve factors of the path, especially the form of right view that goes beyond the right belief. It guides other aspects of the path but is only perfected at the end of the path⁵⁵. It needs to be in balance with the faculty of faith.

In Buddhism, wisdom (*prajñā*) is one of the three essential components of the Noble Eightfold Path, which is the path toward liberation from suffering and the attainment of enlightenment. Wisdom is

⁵⁵ A.I.231-232.

seen as an important aspect of Buddhist practice because it enables individuals to see the true nature of reality and to overcome the ignorance that causes suffering. Buddhism teaches that wisdom can be cultivated through the practice of mindfulness, meditation, and the study of Buddhist teachings. By developing a clear and direct awareness of our own experiences, we can come to understand the true nature of reality and overcome our attachment to illusory concepts and desires.

Wisdom is one of the two components of the Eightfold Path, along with morality and concentration. In Buddhism, it is the insight into the true nature of things, the understanding of the impermanence and satisfactoriness of all phenomena, and the realization of the interdependence and interconnectedness of all beings. It cannot be acquired through intellectual learning or study but through direct experience and practice. The Buddha mentions in Tipitaka that “What, monks, is wisdom? Monks, there is such thing as knowledge of the truth of suffering, such thing as knowledge of the truth of the cause of suffering, knowledge of the truth of extinction of suffering, knowledge of the truth of the way leading to the cessation of suffering. Such knowledge is called the right view.”⁵⁶

The Four Noble Truths as they really are the path of wisdom. This should be developed as explained above in the methods of development of right mindfulness and right concentration. Further elucidation will be provided here for a clear understanding. There are five types of Right view according to the commentary to Anguttaranikaya⁵⁷;

- (1) *Kamassakatā sammādiṭṭhi*,
- (2) *Jhāna sammādiṭṭhi*,
- (3) *Vipassanā sammādiṭṭhi*,
- (4) *Magga sammādiṭṭhi*,
- (5) *Phala sammādiṭṭhi*

Kamassakatā sammādiṭṭhi means belief in and acceptance of the view that there is *kamma* and there is the resultant effect of that *kamma*.

⁵⁶ D.II.249; M.I.88.

⁵⁷ AA.I.369; AA.II.63.

Any action is *kamma* and this action produces good or bad results. For instance, doers of evil deeds reap evil consequences. An evil deed is one of the roots of Criminals, unsustainability, and bad conditions, the lightest of which may be condemnation or reproof by society. Abusive language is bound to be replied to with abusive language; a stern look charged with ill-will will be returned with a stern, forbidding look, while a happy smile begets a happy smile. A friendly greeting is sure to be rewarded with amiable friendliness.

Sucarita-sammādiṭṭhi otherwise called *kammassakatā sammādiṭṭhi* forms the root of all good actions. Based on this root, evil deeds are avoided and simple good deeds such as charity (*dāna*) and morality (*sīla*) can be performed. The meritorious deeds of tranquility meditation and insight meditation can also be cultivated. For this reason, this *samādhi* and *sīla* are stated to be the preliminaries to the good deeds of concentration (*samādhi*) and wisdom (*paññā*).

“Monks, since you have asked for a brief teaching on meditation which you wish to practice in solitude, I urge you to work first for the purification of those *Dhammas* which form the starting points for the development of *samādhi* and *paññā*. And what are these preliminary requirements? They are purified *sīla* and straight view.”⁵⁸

“Monks, when you have purified your *sīla* and maintained the straight view, then leaning on your *sīla* and standing on it, you may go on to developing the four foundations of mindfulness in three modes: contemplating on internal objects, contemplating on external objects and then contemplating on internal, external objects”⁵⁹

Therefore, the Buddha said that wisdom of the real truth of suffering is the path to the right view. When the truth of suffering is discerned at contemplation employing the three characteristics of the impermanence state (*aniccatā*), the state of suffering (*dukkhatā*), and the state of non-self (*anattatā*), the task of comprehending the remaining three truths is accomplished.

⁵⁸ AA.III.

⁵⁹ S.III.124.

The cultivation of wisdom in Buddhism involves developing mindfulness, insight, and understanding. Mindfulness is the ability to be aware of one's thoughts, emotions, and sensations without judgment or attachment. Insight is the ability to see things as they are, without distortion or delusion. Understanding is the ability to comprehend the nature of reality and the interconnectedness of all things.

The development of Mindfulness, what, monks, is Right Mindfulness? In this teaching, a monk dwells contemplating on the body or material aggregates, which is impermanent, painful, uncontrollable, unbeautiful, unpleasant, perceiving it merely as impermanent, painful, uncontrollable, unbeautiful, unpleasant corporeality or material aggregates, perceive thus, he dwells intensely ardent, mindful, and rightly comprehending, having overcome covetousness and grief (*domanassa*) for the world of corporeality or the world of the five aggregates; such covetousness and grief on them are liable to arise unless rightly comprehended.

In addition, as mentioned in the section on Mindfulness with clear comprehension (*sampajañña*) paths (wisdom), all body movements involved in going forward or going back, looking straight on or looking askance, and bending or stretching the limbs should be noted.

The development of wisdom in Buddhism involves both theoretical and practical components. Theoretical wisdom involves studying and understanding Buddhist teachings and concepts, such as impermanence, non-self, and dependent origination. Practical wisdom involves cultivating mindfulness, developing insight through meditation, and applying Buddhist teachings to everyday life. One important aspect of wisdom in Buddhism is the understanding of the interdependence of all things. This understanding is essential for developing compassion and realizing the emptiness of self.

Therefore, wisdom is a crucial component of the Buddhist path, involving both theoretical understanding and practical application. Through the development of wisdom, practitioners can gain insight into the nature of reality and ultimately attain enlightenment. The wisdom aspect of Buddhism includes understanding the nature of existence, including the

impermanence of all things, the interconnectedness of all beings, and the ultimate goal of reaching enlightenment. Buddhists also believe in the concept of dependent origination, which suggests that everything in the universe is interconnected and dependent on each other. Buddhists also place great emphasis on meditation as a means of cultivating wisdom. By quieting the mind and focusing on the present moment, individuals can gain insight and develop a deeper understanding of reality.

2.3.3 Three Kinds of Wisdom in Theravāda Buddhism

Theravāda Buddhist commentator Ācariya Dhammapāla describes *paññā* as the comprehension of the characteristics of things or phenomena with skillful means. Dhammapāla states that *paññā* has the attribute of penetrating the true nature of phenomena. Abhidhamma commentaries relate that there are three types of *paññā*:

1. Learned wisdom (*suta-maya-paññā*), or knowledge or wisdom that is acquired from books or listening to others.
2. Reflective wisdom (*cinta-maya-paññā*), or knowledge or wisdom that is acquired from thought or logic and reasoning.
3. Wisdom from spiritual development (*bhāvanā-maya-paññā*), or knowledge or wisdom that is acquired from direct spiritual experience.

Buddhaghosa states in his commentary and meditation treatise, the Visuddhimagga, that there are many different types and aspects of *paññā* but does not define them all.⁶⁰ Buddhaghosa specifies *paññā* concerning Buddhist meditation as being specifically “insight wisdom” (*vipassanā-paññā*) which means insight knowledge endowed with virtue.

He defines *vipassanā-paññā* as “knowing in a particular mode separate from the modes of perceiving (*sañjānana*) and cognizing (*vijjānana*).”⁶¹ Buddhaghosa makes the analogy of how a child, villager, and money-changer sees money to explain his definition. The child can perceive (*sañjānana*) coins through the senses but does not know the value, the villager knows the value of the coins and is conscious (*vijjānana*) of

⁶⁰ Buddhaghosa, **The Path of Purification: Visuddhimagga**, Buddhist publication society, Translation by Ven. Nanamoli Bhikkhu, pp. 431-432.

⁶¹ Op. Cit.

the coins' characteristics as a medium of exchange, and the money-changer has an understanding (*paññā*) of the coins that are even deeper than the surface understanding the villager has because the money-changer can identify which coins are real or fake, which village created it, etc.

Paññā in the context of Buddhist meditation is described as essentially being the ability to understand the three characteristics of all things, namely impermanence, suffering, and non-self. He states that the function of *paññā* is “to abolish the darkness of delusion“ to understand the “individual essence of states”. This paradigm constitutes one of India's oldest and most fundamental ways of conceiving the process of spiritual practice.⁶² It is already mentioned in the Pāli Canon and later in Buddhaghosa's *Visuddhimagga* and Vasubandhu's *Abhidharmakośa*.

2.3.4 The Concept of Virtue in Theravāda Buddhism

Virtue is the moral and ethical aspect of Buddhist practice. It is the cultivation of wholesome qualities and the abandonment of unwholesome ones. Virtue is the foundation of Buddhist practice, as it creates the conditions for the development of wisdom and concentration. The cultivation of virtue involves the practice of the Five Precepts, which are abstention from killing, stealing, sexual misconduct, lying, and intoxicants.

Theravāda Buddhist virtue is considered a variety of virtue ethics, which considers the effects actions have on one's general condition or way of life as a whole because it emphasizes: (1) morality (*sīla*) as a way of life rather than a system of rules, (2) the cultivation of morality through wisdom, (3) Sustainable development, which is richly developed in the society and Buddhism, and (4) the need for skillfulness, fittingness, and appropriateness in applying morality to the situation.⁶³

⁶² For recent treatments, see Balagangadhara (2005: 1005–7) and especially, for Vasubandhu and Kamalaśīla, Nichols (2005)

⁶³ The view that Mahāyāna involves a kind of virtue ethic has been more extensively developed, especially given the claim that the Bodhisattva's compassion can override rules. Arguments for Zen and Mahāyāna virtue ethics are found in Simon P. James, *Zen Buddhism and Environmental Ethics*, (Aldershot: Ashgate, 2004) and David E. Cooper and Simon P. James, *Buddhism, Virtue and Environment*, (Aldershot: Ashgate, 2005).

The practice of virtue in Buddhism is not based on rules or commandments but on the understanding of the nature of karma. Karma is the law of cause and effect, which states that every action has consequences. The cultivation of virtue, therefore, is not only beneficial to oneself but to others as well. It creates positive karma, which leads to happiness and the cessation of suffering.

Virtues in Buddhism refer to moral and ethical values that guide individuals toward achieving enlightenment. These virtues are also known as *pāramitās*, which means “perfections” in Sanskrit. The six *pāramitās* are generosity, morality, patience, effort, meditation, and wisdom. Generosity is the first *pāramitā* and refers to the act of giving without expecting anything in return. Moral conduct refers to the ethical principles that guide individuals toward acting in a virtuous manner.

Patience encourages individuals to persevere in the face of difficulties, and effort involves actively working towards achieving enlightenment. Meditation is a crucial aspect of Buddhist practice, and it involves cultivating a tranquil and focused state of mind. Finally, wisdom is the culmination of all the virtues, as it involves the understanding of the ultimate nature of reality and the attainment of enlightenment.

Ideally, Theravāda Buddhist virtues are oriented towards a mindful loving-kindness that is developed and disclosed in practices of morality, meditation, and wisdom. The primary example of such mindfulness is the Buddha himself as the embodiment of purely skillful and spontaneous ethical responsiveness towards all beings. This openness and situatedness also open up possibilities for misunderstanding and misapplication when the person acts, speaks, and thinks without mindfulness. On the contrary, the noble person is: “One who is devoted to one’s own welfare and cultivates the virtues, while at the same time [being] devoted to the welfare of others by causing others to cultivate their virtues.”⁶⁴

⁶⁴ Kalupahana, Op. cit., 76.

2.3.5 The Contribution of Wisdom and Virtue

Wisdom and virtue are closely interconnected in Buddhism. Wisdom is the insight into the true nature of things, and virtue is the expression of that insight in one's behavior. Wisdom without virtue is empty and sterile, while virtue without wisdom is blind and dogmatic. The cultivation of wisdom and virtue in Buddhism is a gradual process that involves the development of both aspects in a balanced way. The practice of virtue creates the conditions for the development of wisdom, as it purifies the mind and creates the space for insight to arise. Wisdom, in turn, deepens and strengthens virtue, as it provides the understanding of the nature of reality and the interdependence of all beings.

The attainment of enlightenment in Buddhism involves the cultivation of wisdom and the purification of the mind. Wisdom and virtue are the two essential components of this process. Wisdom provides the understanding of the nature of reality, while virtue creates the conditions for the development of insight. The cultivation of wisdom and virtue leads to the purification of the mind, which is necessary for the attainment of enlightenment. The purified mind is free from defilements such as greed, hatred, and delusion, which are the causes of suffering. The attainment of enlightenment, therefore, is not only the attainment of wisdom but also the attainment of virtue.

In conclusion, wisdom and virtue are two essential components of Buddhist practice. They are closely interconnected and contribute to the attainment of enlightenment. The cultivation of wisdom involves developing mindfulness, insight, and understanding, while the cultivation of virtue involves the practice of the Five Precepts. The relationship between wisdom and virtue.

2.4 The Concept of Wisdom and Virtue in Mahayāna Buddhism

Mahāyāna Buddhism and its early teachings occurred in ancient India (c. 1st century BCE onwards), and now is considered one of the three main existing schools of Buddhism, the other being Theravāda and Vajrayāna. "The Mahāyāna, 'Great Vehicle' or 'Great Carriage' for

carrying all beings to Nirvana, is also, and perhaps more correctly and accurately, known as the *bodhisattvayāna*, the *bodhisattva*'s vehicle."⁶⁵ It is believed all sentient beings who practice and cultivate based on these schools could be called a *Bodhisattva*. Mahāyāna also refers to the path of the *bodhisattva* striving to become a fully awakened Buddha for the benefit of all sentient beings and is thus also called the “*Bodhisattva Vehicle*” (*bodhisattvayāna*).⁶⁶ *Bodhisattva*'s vehicle is the path of practice based on the aspiration of a supramundane being. In Mahāyāna Buddhism, a *bodhisattva* refers to a person who has generated and developed bodhicitta, a spontaneous vow, and compassionate mind with the goal of attaining Buddhahood for the benefit of all sentient beings. According to Mahāyāna's concept, a *bodhisattva* can be a lay person or a monastic monk/nun. Their main vow is to help and benefit all sentient beings who still suffer and need their help to escape from the cycle of Samara. It said that most *bodhisattva* will offer their whole life and others only to help others gain the happiness of enlightenment and liberation. Then everyone can achieve full enlightenment like the Buddha by accomplishing their VOWS.

Furthermore, their concepts and theories somehow are different from the Theravāda tradition. It is the reason why It is known as “a developed Buddhist school” that accepts the main scriptures and teachings of early Buddhism but also recognizes various doctrines and texts that are not accepted by Theravāda Buddhism as original. These include the Mahāyāna sūtras and their emphasis on the *bodhisattva* path and *prajñāpāramitā*.⁶⁷ Like other schools, Mahāyāna also promotes the practice of Threefold Training to help one eliminate ignorance - the source of suffering and attain Nirvana. It means that to end suffering, we must first cut off ignorance through the path of cultivating wisdom. Living with Wisdom and awareness, that person is virtuous, whereas a person living with virtue will gain wisdom. Therefore, Wisdom and Virtue are two very

⁶⁵ A.K. Warder, **Indian Buddhism**, 3rd Ed., (Delhi: Motilal Banarsidass Publishers, 1999), p. 338.

⁶⁶ Damien Keown, **A Dictionary of Buddhism**, (Oxford: Oxford University Press, 2003), p. 38.

⁶⁷ Op. Cit.

important teachings in Mahāyāna Buddhism. Mahāyāna Buddhism emphasizes mostly and mainly “*prajñāpāramitā*” as the highest wisdom for all sentient beings.

Regarding the concept of wisdom and virtue in Mahāyāna Buddhism, four issues are reviewed as follows: -1) Meaning of Wisdom in Mahāyāna Buddhism, 2) Nature of Wisdom in Mahāyāna Buddhism, 3) The Concept of Virtue in Mahāyāna Buddhism, and 4) Modern Applications of Wisdom and Virtue in Mahāyāna Buddhism.

2.4.1 Meaning of Wisdom in Mahāyāna Buddhism

Mahāyāna Buddhism doesn't recognize the normal knowledge from our daily life as wisdom, and according to this school, wisdom is something higher than mundane knowledge. It doesn't come from learning, it comes from awareness by practicing, transforming, and meditating. When it comes to wisdom in Mahāyāna Buddhism, people will refer to the phrase “*prajñāpāramitā*” or “transcendent knowledge” or “perfection of wisdom”. *Prajñāpāramitā* or Transcendent Knowledge is a deep knowledge of reality that the Buddhas and *bodhisattvas* attain. It is a transcendent, non-conceptual, and non-dual kind of knowledge into the true nature of things.⁶⁸ Here, Mahāyāna Buddhist wisdom refers to the concept of the “true nature of things” or “deep knowledge of reality”. This wisdom can be observed and realized by understanding the true nature of any Dhamma.

This wisdom is also associated with insight into the emptiness (*śūnyatā*) of dharmas or phenomena and their illusory nature (*māyā*).⁶⁹ There are two factors mentioned here: one is a deep understanding of the emptiness of all dharmas; the second is their illusory nature. The concept of the emptiness of all things is similar to that of Theravāda Buddhism. The biggest difference here is the illusory nature of all phenomena. They could be known as the nature of the concept of wisdom in Mahāyāna Buddhism.

⁶⁸ Williams, Paul, **Mahāyāna Buddhism: The Doctrinal Foundation**, (London and New York: Routledge, 2008), pp. 49 - 50.

⁶⁹ Paul Williams, (with Anthony Tribe), **Buddhist Thought: A Complete Introduction to the Indian Tradition**, (Oxford: Routledge, 2002), p. 134.

Generally, “*prajñā*” is the Sanskrit word to indicate wisdom in Buddhism. The term “*pāramitā*” was explained as referring to crossing the sea of *saṃsāra* the cycle of rebirth to the far shore of Nirvana or enlightenment. Consequently, *prajñāpāramitā* sometimes means crossing the sea of *saṃsāra* by means of wisdom.⁷⁰ There is nothing more complete than escaping from *saṃsāra* and achieving enlightenment and liberation, that’s why wisdom Mahāyāna Buddhism is called the perfection of wisdom. Thus, although the term perfection is used, it is a perfection that does not aim at completion.

Prajñāpāramitā is also associated with not grasping, not taking a stand on, or “not taking up” (*aparigrhīta*) anything in the world. The Aṣṭasāhasrikā *Prajñāpāramitā* Sūtra explains it as “not grasping at form, not grasping at sensation, perception, volitions and cognition”.⁷¹ How to gain the state of not grasping anything in the world, has to do with the nature of *prajñāpāramitā* which is the emptiness of all things.

2.4.2 Nature of Wisdom in Mahāyāna Buddhism

Prajñāpāramitā nature is expressed through its characteristic features, which are: 1. Emptiness; 2. Non-Illusion; 3. Nondualism; and 4. Suchness.

1. Wisdom as Emptiness

The nature of wisdom in Mahāyāna Buddhism was built and developed based on the concept of emptiness in Buddhism. That starts with the five aggregates - the elements that make up all things whether they are sentient or inanimate. According to Mahāyāna’s concept, the five aggregates have no substance, and are not permanent, so their essence is empty. That is the meaning of “the five aggregates of emptiness”. When concluding “the five aggregates are empty”, it does not mean denying the absence of the five aggregates. The view of emptiness is the view of the middle way. The middle way means not falling into two extremes:

⁷⁰ Arika Hirakawa, **A History of Indian Buddhism from Sakyamuni to Early Mahāyāna**, (Hawaii: University of Hawaii Press, 1990), pp. 277-278.

⁷¹ Matthew Bryan Orsborn, **Chiasmus in the Early Prajñāpāramitā: Literary Parallelism Connecting Criticism & Hermeneutics in an Early Mahāyāna Sūtra**, (Hong Kong: University of Hong Kong, 2012), pp. 233, 201.

existence and emptiness. The five aggregates are empty, all phenomena are also empty. It is the wisdom of emptiness or non-substantiality, through which the practitioner clings to nothing and is bound by nothing. That is how *prajñāpāramitā* is also associated with not grasping five aggregates as well as anything in the world.

The essence of man is “empty” because man is formed by many conditions and causes. When predestined conditions dissolve, that person also disintegrates. When meeting other suitable conditions to combine with another form. The human body and mind are formed by five aggregates, the aggregates are empty, so our essence is also empty. Even these empty phenomena are also said to be conceptual constructions.⁷²

But why, when realizing the person (the five aggregates) is empty, there is no more suffering? It is because we think that there is a real self that is why we suffer. And if we realize that man is just five different blocks combined to form, then man is not me, that is, no-self. If it is selfless, who will it take to suffer?

When we realize the empty nature of man and the universe, we will no longer cling, no longer hold on to the old conception of this body forever, then that is *prajñāpāramitā*.

2. Wisdom as Non-Illusion

Emptiness is the nature of all phenomena, they have no substance, and are not permanent, so their essence does not exist. This amounts to the idea that all phenomena (*dharma*s) without exception have “no essential unchanging core” they lack an essence or inherent nature and therefore have “no fundamentally real existence”.⁷³

Moreover, according to Interdependent Origination, since phenomena are based on various factors, if there is a lack of only one factor, the phenomena will not be formed normally or even could not be formed. One phenomenon also may depend on other phenomena. *Prajñāpāramitā* shows this kind of nature that all phenomena are

⁷² Paul Williams, (with Anthony Tribe), **Buddhist Thought: A Complete Introduction to the Indian Tradition**, (Oxford: Routledge, 2002), p.135.

⁷³ *Ibid.*, p. 52.

interdependent with each other and nothing can exist individually. Because of this, all dharmas including things, phenomena, even the teachings of the Buddha himself, *Nirvāṇa*, and all living beings, are like “illusions” or “magic” (*māyā*) and “dreams”.⁷⁴ The Vajracchedikā Prajñāpāramitā Sūtra or Diamond Sūtra states: “All phenomena in this world are like a dream, fantasy, bubbles, shadows; they are like dew, thunder, and lightning”.⁷⁵ Humans are truly living in our dreams of illusion and the *prajñāpāramitā* is the wisdom to show such non-illusion of reality.

3. Wisdom as Nondualism

Generally, what manifests outwardly is called appearances. The word general understood according to the conventional truth is an external sign that can be recognized by the senses. Moreover, this emptiness or lack of real existence applies even to the apparent arising and ceasing of phenomena. Because of this, all phenomena are also described as unarisen (*anuppāda*), unborn (*ajāta*), “beyond coming and going” in the Prajñāpāramitā literature.⁷⁶ Most famously, the Heart Sūtra states that “all phenomena are empty, that is, without characteristic, unproduced, unceased, stainless, not stainless, undiminished, unfilled”.⁷⁷ This is called Nondualism. Seeing things thoroughly with the mind of nondualism, a person with the perfection of wisdom will not give rise to a discriminating mind which brings the suffering of having to choose between like and dislike.

⁷⁴ See Shi Huifeng, “Is “Illusion” a Prajñāpāramitā Creation? The Birth and Death of a Buddhist Cognitive Metaphor”, Fo Guang University, **Journal of Buddhist Philosophy**, Vol. 2, (2016), Taipei: Fo Guang University, 2016.

⁷⁵ E. Conze, Diamond sūtra, Chapter 32, trs., “English Translation”, in his **Vajracchedikā Prajñāpāramitā**, Edited and Translated with Introduction and Glossary (Serie Orientale Roma XIII), Rome, 1957, pp. 65–92.

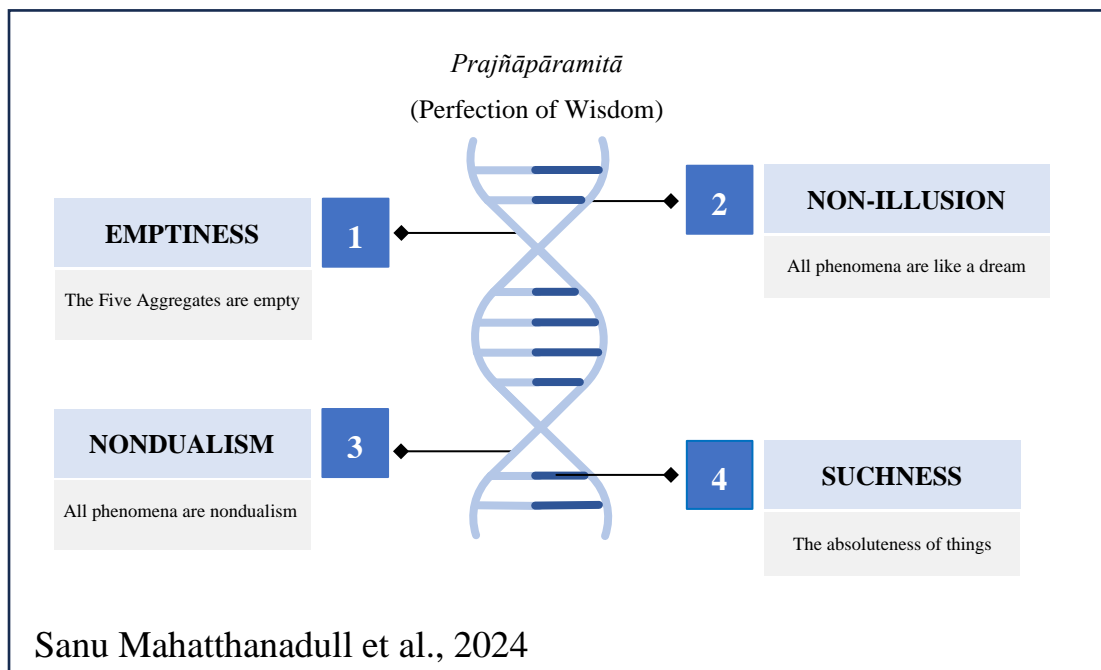
⁷⁶ Matthew Bryan Orsborn, **Chiasmus in the Early Prajñāpāramitā: Literary Parallelism Connecting Criticism & Hermeneutics in an Early Mahāyāna Sūtra**, (Hong Kong: University of Hong Kong, 2012), p. 233.

⁷⁷ Donald S. Lopez, **The Heart Sūtra Explained: Indian and Tibetan Commentaries**, (New York State University of New York (SUNY) Press, 1988), p. 19.

4. Wisdom as Suchness

Suchness or *tathatā* refers to the ultimate absoluteness of all things. Suchness can only be immovable, permanent, beyond all cognitive reasoning. Suchness refers to the opposite of the world of mental phenomena. The perception of true suchness means Enlightenment, going beyond the dualistic world, and realizing the unity of the object and the subject. The true likeness is synonymous with *Tathāgatagarbha*, the Buddha nature, and Dharma body. By seeing the nature of all phenomena as they really are, *prajñāpāramitā* is the wisdom that can bring one's mind to be beyond the dualism or dualistic word as explanation above. Attaining a state of fearless receptivity (*ksanti*) through the insight into the true nature of reality in an intuitive, non-conceptual manner is said to be the *prajñāpāramitā*, the highest spiritual wisdom. The following chart shows *prajñāpāramitā* nature with its four characteristic features:

Chart 2.1 *Prajñāpāramitā* with its Four Natures



2.4.3 The Concept of Virtue in Mahāyāna Buddhism

In today's life, virtues are considered one of the essential factors for maintaining and stabilizing peace for mankind. Buddhism also attaches

great importance to the preservation of virtues as an essential element to evaluate and recognize a Buddhist follower.

In Mahāyāna Buddhism, the concept of virtue is understood as morality, good conduct, moral conduct, or discipline. The practice of virtue is really important for practitioners on the path of *bodhisattva*. Although a Mahāyāna *bodhisattva* practitioner always focuses on the benefit of others as his goal, it is nevertheless a necessity to perfect oneself with full virtue. We cannot give to others what we do not have, neither is virtue. When a Mahāyāna Buddhist practitioner uses virtue to convert people, those who come in contact with us will see us as a virtuous person, so they appreciate that virtue. Therefore, on the path of cultivation, if there is no virtue, it is considered as non-cultivation. With the practice of virtue, one leads others to be on the virtuous path, cultivates virtue, lives with virtue, and uses virtue to touch people. The spread and influence of virtue from one person to another is vividly taught by the Buddha through the example of floral fragrance in the Dhammapada.

“The scent of flowers does not blow against the wind,
nor does the fragrance of sandalwood and jasmine,
but the fragrance of the virtuous blows against the wind;
the virtuous man pervades every direction”.⁷⁸

“Of little account is the fragrance of sandal-wood, lotus, jasmine;
above all these kinds of fragrance,
the fragrance of virtue is by far the best”⁷⁹

“Of little account is the fragrance of sandal;
the fragrance of the virtuous rises up to the gods as the highest”⁸⁰

The concept of northern Buddhist virtue is understood as doctrines and methods related to the formation of an ethical, didactic life, a life of always doing what is beneficial to oneself and for people; avoiding what harms yourself and others. Lifestyle embodies the spirit of wisdom

⁷⁸ Dhp.54.

⁷⁹ Dhp.55.

⁸⁰ Dhp.56.

and compassion of *bodhisattva*, or in other words, Virtue is the manifestation of Bodhicitta.⁸¹ Hence, living and practicing according to the *bodhisattva* path is considered Mahāyāna Buddhist virtues.

However, the Concept of Virtue in Mahāyāna Buddhism can be comprehended through the four features, they are: 1. Virtue as Precepts; 2. Virtue as Four Immeasurables (*brahmavihāra*); and 3. Virtue as Six Perfections (*Pāramitās*).

1. Virtue as Precepts

For all schools of Buddhism, morality or discipline is always considered the fundamental virtue of the practitioner. Precepts or moral guidelines in Mahāyāna Buddhism are the *Bodhisattva* vows and the *Bodhisattva* Precepts. The *Bodhisattva* Precepts which are derived from the Mahāyāna Brahmajāla Sūtra include the five precepts with some other additions such as the precept against slandering the Buddha's teachings. These exist above and beyond the existing monastic code or lay follower precepts.⁸² According to the Brahmajāla Sūtra,⁸³ 10 major and 48 minor precepts prohibit the eating of meat, storing of weapons, teaching for the sake of profit, and abandoning Mahāyāna teachings.

2. Virtue as Four Immeasurables (*Brahmavihāra*)

According to Mahāyāna Buddhism, Theravāda Buddhism's Four Immeasurables is also a method of practicing Virtue. Because the minds of *Buddhas* and *Bodhisattvas* always aim to save sentient beings through giving joy and ending suffering. The characteristics of the Four Immeasurables are also to eliminate suffering and bring happiness to sentient beings, so they are also considered the Virtue of *Bodhisattvas*. The Four Immeasurables (*brahmavihāra*) are immeasurable loving-kindness

⁸¹ Har Dayal, **The Bodhisattva Doctrine in Buddhist Sanskrit Literature**, (Delhi: Motilal Banarsidass Publishers, 1970), p. 59.

⁸² William M. Bodiford, **Soto Zen in Medieval Japan (Studies in East Asian Buddhism)**, (Hawaii: University of Hawaii Press, 2008), pp. 22–36.

⁸³ The Brahmajāla Sūtra, translated by Kumārajīva (c. 400 CE), has a list of ten major and forty-eight minor Bodhisattva vows, Robert Jr. Buswell, Donald S. Jr. Lopez, Eds., **Princeton Dictionary of Buddhism (bodhisattvaśīla)**, (New York: Princeton University Press, 2013), p. 137.

(*maitrī*), immeasurable compassion (*karunā*), immeasurable joy in the good fortune of others (*muditā*), and immeasurable equanimity (*upekṣā*).

3. Virtue as Six Perfections (*Pāramitās*)

As explained above, the phrase *pāramita* is understood as perfection, it means the factor that makes a being become more perfect. Perfection here implies the threefold training is improvement in morality, meditation, and wisdom respectively. Sixfold perfection is seen as a series of methods leading to the development of morality, concentration, and wisdom. Therefore, a Mahayanist who practices six perfections is also doing his development of virtue.

According to the Prajñapāramitā sūtras and a large number of other Mahāyāna texts list six perfections are⁸⁴:

Dāna pāramitā: generosity, giving of oneself

Śīla pāramitā: virtue, morality, discipline, proper conduct

Kṣānti pāramitā: patience, tolerance, forbearance, acceptance, endurance

Vīrya pāramitā: energy, diligence, vigour, effort

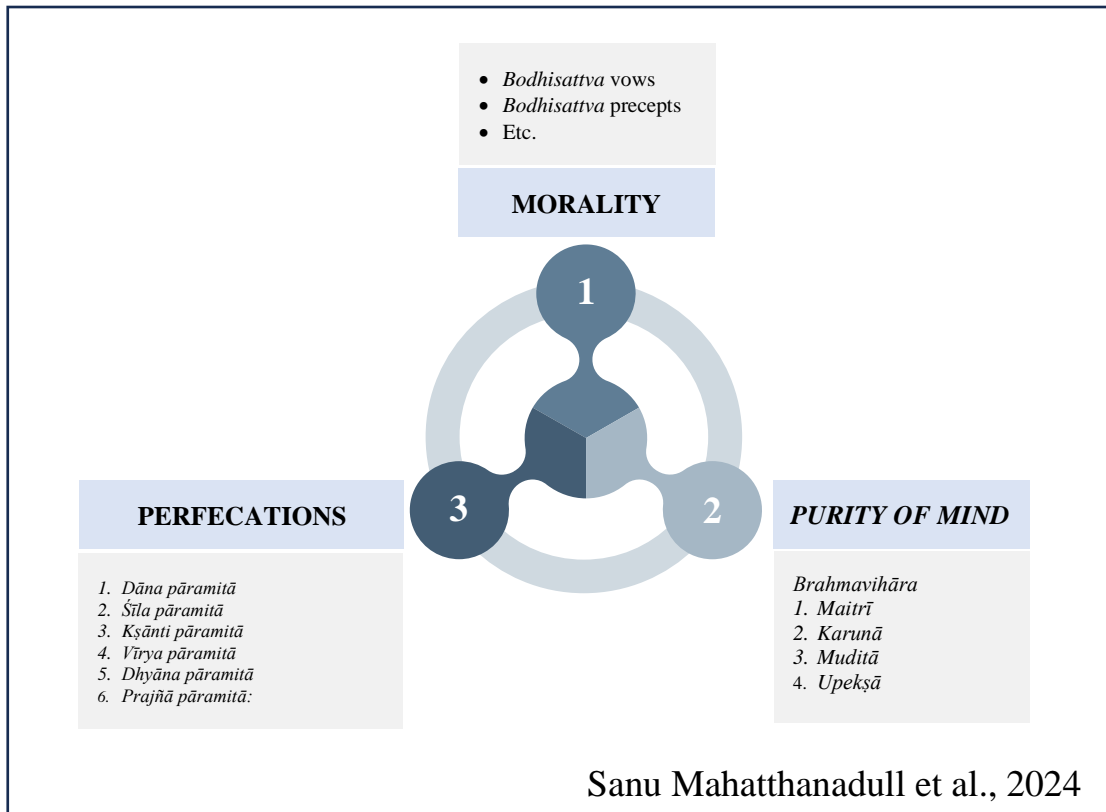
Dhyāna pāramitā: one-pointed concentration, contemplation

Prajñā pāramitā: wisdom, insight.

From this point, the development of virtue can be done by practicing six perfections, virtue thus reflects six perfections (*pāramitās*). The three different facets of virtues according to the Mahāyāna perspective can be shown in the chart as follows:

⁸⁴ Dale Stuart Wright, **The Six Perfections: Buddhism and the Cultivation of Character**, (Oxford: Oxford University Press, 2009), pp. 18-25.

Chart 2.2 The Three Facets of Mahāyāna Virtues



In conclusion, the three facets of Mahāyāna virtue refer to the ethical principles and practices that emphasize compassion, wisdom, and the aspiration to achieve enlightenment for the benefit of all beings. They are of (1) virtue as morality, (2) virtue as purity of mind, and (3) perfections.

Bodhisattva precepts are ethical guidelines undertaken by Mahāyāna Buddhists who aspire to attain enlightenment for the benefit of all sentient beings. The four *brahmavihāra* are considered fundamental virtues and meditation practices that cultivate benevolent qualities towards all beings, aiming to eliminate suffering and promote harmony. While the six perfections represent essential virtues and practices for aspiring *bodhisattvas* on the path to enlightenment.

2.4.4 Modern Applications of Wisdom and Virtue in Mahāyāna Buddhism

In a rapidly evolving world, the timeless principles of Mahāyāna Buddhism continue to resonate, offering profound insights into the

cultivation of virtue and compassionate living. As we navigate the complexities of the modern age, the application of virtuous ideals faces both new challenges and innovative opportunities, underscoring the relevance and adaptability of Mahāyāna's teachings.

While *prajñāpāramitā*, the vital factor in application, offers true wisdom and discernment in being aware of all things metaphysically around us, incorporating virtue into modern living involves conscientious consumption and environmental stewardship. Practitioners can adopt sustainable practices, reduce waste, and make ethical choices in areas such as food, clothing, and technology. By minimizing environmental impact, Mahāyāna practitioners embody compassion for the planet and its inhabitants, aligning with the *Bodhisattva*'s commitment to the well-being of all sentient beings.

With wisdom shedding light and purified mind, Mahāyāna's stand on compassion extends beyond personal practice to encompass active engagement with societal issues. Modern Mahāyāna practitioners can participate in volunteer work, humanitarian efforts, and social justice movements. By advocating for the vulnerable, marginalized, and underserved, practitioners can manifest virtue through tangible acts of compassion and altruism.

Mahāyāna's intellectual message of universal compassion aligns with interfaith dialogue and understanding. By engaging in respectful conversations with individuals from diverse religious and cultural backgrounds, practitioners foster mutual respect, harmony, and unity demonstrating the transformative power of virtuous interactions in a globalized world.

Modern Mahāyāna practitioners can embody virtue through ethical leadership and service roles in their professional lives. By integrating compassion, honesty, and integrity into their work, they contribute to positive change and create environments that inspire others to embrace virtuous principles.

The wisdom and virtue of Mahāyāna Buddhism transcend time and culture, offering a profound roadmap for virtuous living in the modern world. As practitioners strive to embody compassion, wisdom, and

altruism, they engage with contemporary challenges and opportunities, enriching their lives and those of others. By infusing daily actions with the spirit of the *Bodhisattva* ideal, modern Mahāyāna practitioners exemplify the enduring relevance of wisdom and virtue as a dynamic force for positive transformation in an ever-evolving era.

2.5 The Concept of Wisdom and Virtue in Vajrayāna Buddhism

It is essential to bear in mind that Vajrayāna translated into “Thunderbolt Vehicle” or “Diamond Vehicle”. In addition, it sometimes goes by the name of Mantrayāna, Tantrayāna, and so on. Before studying the virtue and wisdom in Vajrayāna, one should understand some core teachings of Vajrayāna Buddhism as follows:

Most modern scholars believe that “the Vajrayāna as, a relatively late branch from the Mahāyāna, seems to have started somewhere around the 5th century CE”.⁸⁵ Despite nothing wrong with the saying Vajrayāna is a part of Mahāyāna Buddhism since it also aims to achieve Buddhahood to liberate entire sentient beings with the power of *bodhicitta* (བྱང་ཆུབ་སེམས་).⁸⁶

Yet the Vajrayāna started somewhere around the 5th century CE” is misleading and baseless argument. In the root text of Kālacakra Tantra, the Buddha claims:

སྟོན་པས་བྱ་རྒྱུ་ལྷན་པོ་ལྟེན་པའི་རིམ། །ཤེས་རབ་པ་ལོ་ལྟེན་ཆུལ་བཞིན། །

ཚོས་བཟུན་དཔལ་ལྷན་འབྲས་སྤྲུངས་སུ། །དེ་བཞིན་གསང་ཐགས་ཆུལ་རབ་བཟུན། །

“The Buddha preached the Mantrayana precisely

At the Sridhanyakuta

Just like turned the dharma wheel of *Prajñāpāramitā*,

⁸⁵ **Buddhist Schools: Theravada, Mahāyāna and Vajrayāna**, online PDF, link: https://buddho.org/buddhism-history-and-schools/?gclid=Cj0KCQjwyLGjBhDKARIsAFRNgW-KnYHsXwNPDQmPuoGncYyRg_oNn-cz7R8-RnED4h23rcEJdYBmIYAaAsmPEALw_wcB

⁸⁶ Śāntideva, *Bodhisattvacaryāvatāra*, **Guide to Bodhisattva’s way of life**, (Bhutan: KMT press Thimphu Bhutan, 2003), p. 7.

At Vulture Peak Mountain (Mount Kailash)⁸⁷

The verse illustrates that Shakyamuni Buddha had completely renounced the worldly lifestyle after seeing the imperfections of *samsāra*, at the age of twenty-nine. He then committed to serious practice for six years and achieved the Buddhahood. The Buddha taught the remarkable teaching known as Vajrayāna to special mentees including Chandra Vakra the King of Śambhala at the Sridhanyakuta, and Prajñāpāramitā to common disciples such as Śāriputra, etc... at Vulture Peak Mountain known as Mount Kailash simultaneously.

The Buddha had sermonized the *prajñāpāramitā* or turned the second dharma wheel which is well known to those capable of hearing Mahāyāna teachings whereas Tantric teachings are quite hidden to ordinary disciples. As the teaching contains extremely profound concepts and has to be secret. It therefore remains ambiguous and possibility of understanding otherwise. The more the idea is vast and profound the less chance to understand correctly.

Perhaps these are the juncture where people develop the fallacious view on tantric teaching. The Vajrayāna Buddhism however is *Buddhavacana* and has been started during the historical Buddha himself. Therefore, stating “the Vajrayāna as, a relatively late branch from the Mahāyāna, seems to have started somewhere around the 5th century CE” is logically not reliable.

Regarding the concept of wisdom and virtue in Vajrayāna Buddhism, five issues are reviewed as follows: -1) The Concept of Three Roots: *Guru*, *Deva*, and *Dākinī* (རྩ་བ་གསུམ་) in Buddhist Tantric Tradition, 2) The Tantra and Tantric Practitioners in India, Tibet, and Bhutan, 3) The Differences between Sutrayāna and Tantrayāna, 4) Virtue in Vajrayāna Buddhism, and 5) Wisdom in Vajrayāna Buddhism.

⁸⁷ The Buddha, **Root Verse of Kālacakra Tantra** (རྩ་བ་འཛོལ་ཙ་ལྷུད་), (Bhutan: KMT press Thimphu Bhutan, 2012), p. 5.

2.5.1 The Concept of Three Roots: *Guru*, *Deva*, and *Dākinī* (རྩ་བ་གསུམ་) in Buddhist Tantric Tradition

The three roots *Guru*, *Deva*, and *Dakini* (རྩ་བ་གསུམ་) are tremendously important since they are the source of all the resources to accomplish the mission of enlightenment. Kunkhyen Pema Karpo one of the Drukpa Kagyu's (འབྲུག་པ་བཀའ་བརྒྱུད་) Legendry scholars said:

ཕྱིན་ཚབས་རྩ་བའི་རྣམ་དང། |

དངོས་གྲུབ་བྱུང་བའི་ཡི་དམ་ལྷ། |

བར་ཚད་སེལ་བའི་འཁའ་འགྲོ་དང། |

The spiritual guide (*guru*), is the root of bless

The Deity (*deva*) is the source of spiritual attainment (*siddhi*)

The Female-deity (*dākinī*) is the dispeller of obstacles.⁸⁸

Since they are a source of all wisdom and virtue, they are the one and only practice that one can rely upon in the Vajrayāna tradition. Sometimes *dharmapāla* the protectors of dharma also added as part of practice, to promote one's works which can help other living beings. Because no matter how great your insights are, if you cannot benefit others with your spiritual qualities, it is considered worthless and useless.

1. *Guru* means the spiritual guide whose insight and knowledge is equivalent to the Buddhas of three times⁸⁹. Back in the day, mentorship between teacher and student was tremendously healthy as the procedure of finding a teacher requires a lot of time and effort. To receive and give the ultimate teaching so-called empowerment, oral transmission, and instruction (དབང་ལུང་མྱེད་གསུམ་), both mentor and mentee necessarily need to inspect each other for six years in total whether he/she is qualified for the teaching. Especially the pupil should search the *guru* carefully with the following strategies:

⁸⁸ See Kun mkhyen pad ma dkar po, **Lha sang** (བསངས་དབེ་བཏུ་ཤིས་རེ་རྣོང་), (Bhutan: Phama press Thimphu Bhutan, 1999), p. 13.

⁸⁹ Three-times consist of past, present, and future.

དང་པོ་སྐྱ་མ་བརྟུགས་ལ་མཁས་པ་དང་། །བར་དུ་སྐྱ་མ་བརྟུགས་ལ་མཁས་པ་དང་། །
ཐ་མར་དགོངས་སྟོན་བསྐྱབ་ལ་མཁས་པ་ཡི། །སྐྱེས་བུ་དེ་ནི་ཡང་དག་ལམ་ལ་འགོ། །

Being wise to analyze the (character of) mentor in the beginning,

Being wise to rely upon mentor in the middle,

Being wise to apply the teaching in the end.

The person will follow the right path⁹⁰.

Once the student is mentored by the teacher, it must please the teacher as unconditionally as possible just like Ācārya Bhava Deva explains in the text entitled “Fifty Teachers” (སྐྱ་མ་ཕྱེ་བཅུ་བ།). The text presumably describes how to be respectful to one’s teacher in fifty ways which includes: not even stepping on the shadow of a master and so on. Nevertheless, showing 100 percent in-depth adherence to the master is relatively necessary when it comes to tantric practice.⁹¹

2. Deva or Deity is called *yidam* (ཡི་དམ) in dzongkha and *iṣṭadevatā* in Sanskrit. The dzongkha word “*yidam*” is sometimes translated as “meditational deity” or “tutelary deity”. Yidam has to be introduced by one’s root-master based on the pupil’s karmic connection. There are numberless of deities in tantric Buddhism including Chakrasamvara (བདེ་མཚོག་འཁོར་ལོ་མོ་), Kalachakra (དུས་ཀྱི་འཁོར་ལོ་མོ་), Hevajra (ཀྱེ་དོར་རྗེ་), Yamantaka (འཇམ་དབལ་གཤེན་རྗེ་), Avalokiteśvara (སྤྱན་རས་གཟིགས་), Tārā (རྗེ་བརྒྱན་སྒྲོལ་མ་) etc. Some of which are wrathful whereas others are peaceful in appearance and both male and female in gender.⁹²

3. Dākinī in Sanskrit, Khandroma (མཁའ་འཁྲོལ་མ་) in Dzongkha literally means “sky dweller” or “sky dancer” is the most sacred aspect of the feminine principle in Tantric Buddhism, embodying both human being and divinity in feminine form. It also has to be introduced by one’s root master based on the pupil’s karmic connection.

⁹⁰ The Buddha, the chapter on **Bodhisattva Sadaparudita in Prajñāpāramitā Sūtra**, (Bhutan: KMT press Thimphu Bhutan, 2006), pp. 355-368.

⁹¹ Zhabdarung Ringpoche, **the Aspiration of Seven Spiritual Practice** (དགོ་སྤྱོད་བདུན་མའི་སྟོན་ལམ), 2017, (Thimphu Bhutan, Dratshang press, 2010), p. 12.

⁹² Kunkhen Padma Karpo, **Mgon po lha mang gi cho ga**, 2017, (Thimphu Bhutan, Dratshang press, 2018), pp. 23-25.

The *Khandro* (མཁའ་འགྲོ་མ) might appear differently in various contexts; when needed, she may appear as fierce and intense or playful and nurturing. At other times she may appear outrageous or repulsive to cut through conceptual thoughts and mistaken perception. She may appear as a human being, as a goddess, either peaceful or wrathful. There are numberless of *ḍākinī* are there in tantric scripture.

Normally, the *Khadro* or *ḍākinī* represents the ever-changing flow of energy with which the yogic practitioner must work in order to become realized. Ultimately, all women are seen as some kind of *ḍākinī* manifestation.⁹³

In Lhasa, Tibet, a man once criticized Master Drukpa Kunley, the Divine Madman,⁹⁴ for his unorthodox behavior. The man accused him of neglecting dharma practice, consuming alcohol, and pursuing women instead. Drukpa Kunley hymns are as follows:

བརྒྱན་ས་མི་ངན་བརྒྱན་ས་བཟང་། །བརྒྱན་ས་དོན་རྗེ་འཆང་ནས་ཡིན། །

The lineage is not mischief but noble, it's originated from Vajradhara

ཞླ་མ་མི་ངན་ཞླ་མ་བཟང་། །ཞླ་མ་དཔལ་ལྷན་འབྲུག་ས་ཡིན། །

The *Guru* is not mischief but noble, it's Palden Drukpa (Tsangpa Gyare)⁹⁵

ཡི་དམ་མི་ངན་ཡི་དམ་བཟང་། །ཡི་དམ་བདེ་མཚོག་འཁོར་ལོ་ཡིན། །

The *Deva* is not mischief but noble, it's Chakrasamvara.

མཁའ་འགྲོ་མི་ངན་མཁའ་འགྲོ་བཟང་། །མཁའ་འགྲོ་དོན་རྗེ་ཕག་མོ་ཡིན། །

The *Deva* is not mischief but noble, it's Vajravārāhī.

ཚོས་སྦྱོང་མི་ངན་ཚོས་སྦྱོང་བཟང་། །ཚོས་སྦྱོང་མགོན་པོ་ཕྱག་བཞེ་ཡིན། །

⁹³ Kunkhen Padma Karpo, **the General Detailed Classification of Tantras** (རྒྱན་ཐེ་ལྷི་ནམ), 2017, (Thimphu Bhutan, Dratshang press, 2018), pp. 23-25.

⁹⁴ Master Drukpa Kunley (1455-1529 CE.).

⁹⁵ Master Drogon Tsangpa Gyare (1161-1211 CE.), the founder of the Drukpa Lineage of Tibetan Buddhism.

The *dharmapāla* is not mischief but noble, its Four-armed Mahākāla.⁹⁶

Most of the Yogis from Drukpa-Kagyud school practice in the way that Master Drukpa Kunley did, yet that's not always the case. In terms of *Guru*, there are not many differences but *Deva*, *Ḍākinī*, and *Dharmapāla* tend to go for their choices.

2.5.2 The Tantra and Tantric Practitioners in India, Tibet, and Bhutan

All Tantric works of literature can be classified into two groups namely: Buddhist Tantra and Hindu Tantra. As the Sakya Jetsun Chimey states:

Tantra literally means “thread”, “loom”, or “war”, and in the Vajrayāna view, tantra texts weave together “strands” of sutras. Vajrayāna holds that the Tantras, like the Sutras, were taught by the historical Buddha in his tantric form (known as Vajradhara) or by other enlightened beings.⁹⁷

The Buddhist Tantra primarily refers to the canon that talks about the concepts of Vajrayāna Buddhism. There are four types of tantras including Kriyayoga, Charyayoga, Yogatantra, and Anuttarayogatantra.⁹⁸

Tantra is a spiritual tradition that has been practiced in various forms across India, Tibet, and Bhutan for centuries. Tantric practitioners in these countries use a range of techniques and practices to achieve spiritual growth and liberation, including meditation, visualization, mantra recitation, and ritual.

In India, Tantra has a long history and has been practiced by various groups, including Hindus, Buddhists, and Jains. Tantric practitioners in India are known as tantriks or sadhaks, and they can be

⁹⁶ Drukpa Kunleg, **Autobiography (Tibetan version)**, (Bhutan: KMT press Phuentsholing Bhutan, 1990), pp. 24-25.

⁹⁷ **“Buddhism for Beginner”**, On online, link: <https://tricycle.org/beginners/buddhism/what-is-buddhist-tantra/>, (Accessed May 02, 2023).

⁹⁸ Kunkhen Padma Karpo, **the General Detailed Classification of Tantras** (ལྷན་ཞེ་སྒྱི་ནས་), 2017, (Thimphu Bhutan: Dratshang press, 2018). p. 2.

found across the country. Some of the well-known schools of Tantra in India include the Shakti and Shaiva traditions.

In Tibet, Tantra is an integral part of Tibetan Buddhism, and it is known as Vajrayāna, which means “diamond vehicle” or “indestructible path.” Tantric practitioners in Tibet are known as lamas or yogis, and they can be found in monasteries and other sacred places throughout the country. The Dalai Lama, the spiritual leader of Tibetan Buddhism, is a well-known practitioner of Tantra.⁹⁹

In Bhutan, Tantra is also an important part of the country’s spiritual tradition. Bhutanese Tantric practitioners are known as *ngagpas* (male) or *ngakmas* (female), and they practice a unique form of Vajrayāna that incorporates elements (ritual instruments) of the Bon religion, which is a pre-Buddhist shamanic tradition that is native to Tibet. Tantric practitioners in Bhutan can be found in monasteries, temples, and other sacred sites throughout the country.

It’s worth noting that Tantra is often associated with esoteric and secretive practices, and many Tantric practitioners keep their practices hidden from the public eye. However, many Tantric teachers and communities are open to sharing their knowledge and practices with others who are interested in exploring this spiritual tradition.

2.5.3 The Differences between Sutrayāna and Tantrayāna

The Sutrayāna is a term used in Buddhist traditions, particularly in Vajrayāna or Himalayan Buddhism, to refer to the path of practice based on the sutras or Buddhist scriptures. It is one of the two *yānas* or vehicles of Buddhist practice, the other being the Vajrayāna. The Sutrayāna path involves studying and practicing the teachings of the Buddha as they are presented in the sutras, with emphasis on the Four Noble Truths, the Eightfold Path, and various other teachings related to ethical conduct, meditation, and wisdom.¹⁰⁰ The Sutrayāna involved with Mahāyāna and Theravāda Buddhism.

⁹⁹ Gedun Rinchen, **Lho Druk Cho ‘byung “history of south Druk” (Tibetan version)**, (Bhutan: KMT press Phuentsholing Bhutan, 1990), pp. 45-50.

¹⁰⁰ Kunkhen Padma Karpo, **the General Detailed Classification of Tantras** (ལྷན་ཞེ་སྒྲི་ནས་), 2017, (Thimphu Bhutan: Dratshang press, 2018), p. 237.

There are many perspectives when it comes to the differences between Tantrayāna and Sutrāyāna. And the Ācārya *Tre Pi Tta Ka* (སློབ་དཔོན་ཉི་མི་ཉལ་ཀ) quite precisely distinguished them in the text entitle: the Torch of Three Methods (རྩལ་གསུམ་སློན):

དོན་གཅིག་ན་ཡང་མ་སྐྱོངས་དང་། །ཐབས་མང་དཀའ་བ་མེད་པ་དང་། །
དབང་པོ་རྣམས་པོ་ལོ་དབང་བྱས་ནས། །ལྷགས་ཀྱི་ཐེག་པ་བྱུང་བར་འཕགས། །

Though the meaning does not contradict, fact that without being deluded

Numerous strategies, without difficulties

And meant for Sharp-minded (wise-one)

The Mantrayana is distinctive superiority.¹⁰¹

The verse from the Torch of Three Methods describes that there is no difference between Sutrāyāna and Tantrayāna when it comes to the concept of ultimate wisdom. Yet the Mantrayāna is a remarkable vehicle compared to the rest by such factors including numerous strategies, without difficulties, and sharp-minded.

It shows, in Sutrāyāna one utilizes suffering as a path whereas the Tantrayāna practices joy as a path and the Sutrāyāna takes three numberless eons to accomplish the Buddhahood whereas Tantrayāna takes only one lifetime or just one moment for a specific person. There is a big difference between the two in terms of the way they practice.¹⁰² Since Tantrayāna has many strategies that require less effort various options are available to the practitioner. It is therefore definitely superior to the rest and is just for sharp-minded or wise ones.

On top of that, Milarepa (1040-1123) one of the saints from the Kagyu tradition states more precisely,

སློབ་པོ་སློན་ནས་བྱུང་མེད་ཀྱང་། །ཐབས་ལ་གསང་ལྷགས་བྱུང་བར་འཕགས། །

¹⁰¹ Lob Dpon Tre Pi Tta Ka (སློབ་དཔོན་ཉི་མི་ཉལ་ཀ), **the Torch of Three Methods (རྩལ་གསུམ་སློན) (Dzongkha version)**, (Thimphu Bhutan: Centre for Bhutan Studies, 2010), p.4.

¹⁰² Kunkhen Padma Karpo, **the General Detailed Classification of Tantras (རྒྱད་ཐེ་བྱི་ནམ)**, 2017, (Thimphu Bhutan: Dratshang press, 2018), p. 24.

Though the (two *yānas*) are identical from the aspect of wisdom Mantrayāna has been distinguished by the methods.¹⁰³

2.5.4 Virtue in Vajrayāna Buddhism

It is necessary to gain an understanding of general virtue in Vajrayāna Buddhism and that uncommon in Vajrayāna Buddhism.

1. The General Virtue in Vajrayāna Buddhism

Master Kunkhyen Pema Karpo¹⁰⁴ an important figure in Drukpa Kagyu lineage says:

ཚོས་སྤྱོད་དང་བལ་བ་དེ་ཉིད་ལས། །ལོངས་སྤྱོད་རྗེས་དང་སྤུལ་སྤྱོད་གཞན་དོན་མཛད། །
དེ་ཡི་ཞལ་ནས་གསུངས་པའི་བཀའ་རྒྱུ་ལས། །འདས་ཉིད་ལྷན་བསད་པར་བཟོད་པར་གསོལ། །

“From the Reality-body (*dharmakāya*) which is free from fabrication,

Enjoyment-body (*sambhogakāya*) and then Transformation-body (*nirmāṇakāya*)

The teachings that are taught (by the Buddha)

Please forbear (one has) violate and belittle to them.”¹⁰⁵

The verse is on seeking forgiveness from Mahākāla the supreme *dharma*-protector, for one being not adherence to the commandment of do’s and don’ts in the teachings of the Buddha which is *dharmakāya* by nature and embodied to *sambhogakāya* for noble disciples and *nirmāṇakāya* for ordinary beings. It is technically committing the ten virtues and ten non-virtues that frequently appear in the Buddhist doctrines.

Ācārya Aśvaghōṣa¹⁰⁶ claims:

བདེ་གཤེགས་བཀའ་ལས་འདས་པ་ནི། །རྣམ་བཤེས་པ་ཡིན་པར་བཤད། །

Violating the Sugata’s teaching

¹⁰³ Milarepa, **The Collection of Hymns (Tibetan version)**, (Bhutan: KMT press Phuentsholing Bhutan, 1990), p. 233.

¹⁰⁴ Master Kunkhyen Pema Karpo (1527-1592 CE.).

¹⁰⁵ Kunkhen Padma Karpo, **Mgon po lha mang gi cho ga**, 2017, (Thimphu Bhutan: Dratshang press, 2018), p. 67.

¹⁰⁶ Ācārya Aśvaghōṣa (80-150 CE.).

Is called second transgression¹⁰⁷

Since the concept of the verse originated from the Tantra, it's well-known to all the Vajrayāna sects and no Tantric schools disagree with it. Violating Sugata's teaching means conducting the Ten Non-virtues that are not supposed to be committed in every Buddhist school.

Normally, Virtue and Non-virtues in Vajrayāna are not something different than what we are familiar with in common Buddhism. It is inclusive of all the virtues and non-virtues that one can think of. There are Ten-virtues and non-virtues as one might know already. In case did not, to understand them one should begin by explaining the non-virtues. Avoiding or abandoning such actions forms the basis of the path of Buddhist Ethics. The Ten Non-virtues can be divided into three groups as they are expressed through bodily, verbal, or mental action. They are: - (1) Killing, (2) Stealing, and (3) Sexual misconduct for bodily action; (4) Lying, (5) Divisive speech, (6) Harsh speech, and (7) Pointless gossip for verbal action; and (8) Covetousness, (9) Harmful intent, and (10) Wrong view (denial of cause and effect) for mental action.

The Ten-Virtues are not merely the absence of the Ten Non-Virtues but are engaging in their opposites. For example, instead of merely avoiding killing, we protect life. Instead of merely avoiding mindless gossip, we say things that are intentional, helpful, and meaningful-or keep quiet! These Ten Virtues are: - (1) Protect life, (2) Give Generously, (3) Preserve one's discipline for physical body; (4) Speak honestly, (5) Reconcile, (6) Speak pleasantly, and (7) Speak meaningfully for speech, and (8) Generosity, (9) Loving Kindness, and (1) Correct View of Reality for mind.¹⁰⁸

All of the abovementioned reflect the general virtue in Vajrayāna Buddhism. It shows that virtue is possible in Buddhist teachings in many dimensions.

¹⁰⁷ Ācārya Aśvaghōṣa, **Jajrayānamūlapatti** (རྟམ་པའི་ལྟོ་བོ་ལྟོ་བོ་བཞུགས་པའི་ལྟོ་བོ་), (Tibetan version), (Bhutan: KMT press Phuentsholing Bhutan, 2008), p. 12.

¹⁰⁸ Nāgārjuna, **Surhlekha** (A friendly letter to the king), (Bhutan: KMT press Thimphu Bhutan, 2006), p. 3.

2. The Uncommon Virtues in Vajrayāna Buddhism

On top of that the tantric practitioners must preserve precepts so-called *samaya*. It perhaps can be translated as tantric commitments, vows, oaths, etc... The *samaya* is a set of vows or precepts given to initiates of an esoteric Vajrayāna Buddhist order as part of the *abhiṣeka* (empowerment or initiation) ceremony that creates a bond between the *guru* and disciple.

There are fourteen root-offences, just like *Pārajāyika* to fully ordained monk, for one who has taken the vow as follows:¹⁰⁹

(1) As the master who gave empowerment to oneself is the source of enlightenment despising him/her is the first root offense. (2) Violating the Sugata's teaching is the second. (3) Having malice on fellow so-called *vajra-friend* is the third. (4) Giving up on loving-kindness is the fourth. (5) Neglecting Bodhicitta is the fifth. (6) Disparaging other spiritual traditions is the sixth. (7) Perching the tantric teaching to those who are not capable of listening is the seventh. (8) Being harsh on one's five aggregates is the eighth. 9. Doubting the essence quality (*dharmadhātu*) is the ninth. (10) Cultivating loving-kindness on those who deserve deference-action is the tenth. (11) Giving a name to the nameless *dharma* (emptiness) is the eleventh. (12) Discouraging the beginner with teachings of emptiness is the twelfth. (13) Intentionally violating the tantric rules is the thirteenth. (14) Condemning females is the fourteenth.¹¹⁰

However as master Jigme Lingpa¹¹¹ explains in the Treasury of Knowledge (ཡོན་ཏན་མཛད་):

བསམ་པ་དགོ་དང་མི་དགོའི་བྱེ་བྲག་ལས། །དགོ་མྱིག་གཟུགས་བརྟན་ཆེ་རྒྱུང་རྗེས་མི་འགྲོ། །

The stanza suggests that virtue and non-virtue do not depend on how they look but rather on whether the intention is pure. For instance, if

¹⁰⁹ Ācārya Aśvaghōṣa, *Jajrayānamūlapatti* (རྩ་ལྗང་བརྩམས་པའི་), (Tibetan version), (Bhutan: KMT press Phuentsholing Bhutan, 2008), p. 12.

¹¹⁰ ལྷགས་ལྗོན་གྱི་རྩ་བའི་ཐང་བྱ་བུ་བཞི་སྟེ། རྗོ་རྗོ་བ་དཔོན་ལ་བརྟན་པ་དང་། བདེ་གཤེགས་བཀའ་ལས་འདས་པ། རྗོ་རྗོ་བའི་ལྷན་ལ་འཁྱུ་བ། བྱམས་པ་འདོན་བ། བྱང་སེམས་འདོན་བ། ཚོས་ལ་སྦྱོད་བ། གསང་བ་སྦྱོག་བ། ལུང་པོ་ལ་བརྟན་བ། རང་བཞིན་དག་པའི་ཚོས་ལ་ཐེ་ཚོམ་ཟ་བ། མངོན་སྦྱོད་བྱ་བར་འོས་པའི་ཡུལ་ལ་བྱམས་བ། མིང་དང་བྲལ་བའི་ཚོས་ལ་རྟོག་གེས་སྦོས་འཇལ་བ། དད་ཕན་སེམས་ལྷན་འབྲིན་བ། དམ་ཚུལ་ལྗོ་བཞིན་མི་བཞེན་བ། ཤེས་རབ་མར་སྦོད་བ། བཅས་བུུ་བཞིའོ།

¹¹¹ Master Jigme Lingpa (1730-1798 CE.).

a person feeds millions of people with the best quality food and his intention is to gain name and fame. It's seemingly virtue indeed it is not.¹¹² In Vajrayāna or Mahayāna in general, intention is a key element to turn the action into virtue or non-virtue.

To sum up, there are many *samayas* that one should take care of; all of which are covered by *samaya* of body, speech, and mind. Meaning realizing all the visual, auditory, and mental objects are respectively body, speech, and mind of Buddha. It is not made up by one's imagination but is the reality.¹¹³

2.5.5 Wisdom in Vajrayāna Buddhism

There is no difference between Vajrayāna and sutrayāna in terms of wisdom. Wisdom is defined as primordial consciousness that has been perceiver of reality or the ultimate truth and the truth is one and only.¹¹⁴ To gain a comprehensive understanding of wisdom in Vajrayāna Buddhism it's necessarily needed to study the Mādhyamaka. The Mādhyamaka, Middle Way, or Middle Path is a higher doctrine in Buddhism. It's a concept of the Second Dharma Wheel Prajñāpāramitā Sūtras¹¹⁵, preached by the Lord Shakyamuni Buddha at Rajgir in Magadha for the disciples such as *Bodhisattvas*, *Śrāvakas*, gods, humans, serpents, and other spirits.

According to Maitreya Buddha¹¹⁶ and Āchārya Nāgārjuna¹¹⁷, the concept of 'wisdom' is mentioned in the Second Dharma Wheel of Buddha, which is Prajñāpāramitā-Sutra and in many occasions, wisdom or

¹¹² Jigme Lingpa, **The Treasury of knowledge** (ཡོན་ཏན་མཛོད་), (Bhutan: KMT press Phuentsoling Bhutan, 2021), p. 12.

¹¹³ Kun mkhyen pad ma dkar po, **Lha sang** (བསངས་དཔེ་བཀའ་ཤིས་ལེ་སྐོང་), (Bhutan: Phama press Thimphu Bhutan, 1999), p.17.

¹¹⁴ Dge 'dun rinchen, **The Short Description of Mādhyamaka** (དབུ་མའི་བསྟན་འཛིན་), (Bhutan: Phama press Thimphu Bhutan, 2009), p. 9.

¹¹⁵ Also known as Heart Sūtras.

¹¹⁶ Jeffrey Hopkins and Jongkok Yi (trs.), **Maitreya's Ornament for the Clear Realizations**, (N.P: UMA Institute for Tibetan Studies, 2015), p. 286.

¹¹⁷ Nāgārjuna, **Refutation of Objections** (རྩོད་བརྟོག་), (Tibetan version), (India: Sera Jey Library Press, 2016), p. 64.

གང་ཞིག་སྐོང་དང་ཉེན་འབྱུང་དག། །དབུ་མའི་ལམ་ལུ་དོན་གཅིག་པམ། །

śūnyatā pratītyasamutpādaś ca madhyamā pratipat

prajñā refers to the realization of emptiness (*śūnyatā*), interdependent (*pratītyasamutpāda*), great seal (*mahāmudrā*), and which is middle way (*mādhyamaka*). All kinds of the world's sufferings arise from actions and defilements, and having wisdom on Mādhyamaka eliminates the entire actions and defilements. Once it is free from the two, this is what refers to achieved freedom or liberation. The Āchārya Nāgārjuna and all the modern Buddhist scholars emphasized that *mādhyamaka* is the essence of dharma that has been taught by the Buddha. It is fundamental to practice for achieving all spiritual goals in Buddhism.

1. The Founder of Mādhyamaka Philosophy

The Mādhyamaka is a philosophy as well as a practical Dharma. One could simply argue that it is simply sort of founded by all Tathagatas, Pratyekabuddhas, and Śrāvakas for numberless of eons. Certainly, during the period of Shakyamuni Buddha, Mādhyamaka philosophy had a strong influence on Buddhist society, but, unfortunately, after some time, Prajñāpāramitā Sūtras the source of the philosophy had been lost from the world.

Nevertheless, after four hundred years since the Buddha entered *mahāparinirvana*, Āchārya Nāgārjuna was born in a Brahma family. When he was a child, he spent most of his time staying with the abbot Sarahapa in the Nalanda monastery from whom he was educated. Later on, he went to Nāgār's land and took the Prajñāpāramitā Sutras from their place which had been kept in there for some years.¹¹⁸

Āchārya Nāgārjuna spread the Mādhyamaka tradition to the world mainly through writing six logical works of the Mādhyamaka, namely: - The Root Knowledge of the Middle Way (*Mūlamadhyamakakārikā*), The Refutation of Criticism (*Vigraha-Vyavartani*), The Seventy Stanzas on Emptiness (*Shunyata Saptali*), The Sixty Stanzas of Reasoning (*Yuktisastika-Karika*), and The Finely Woven (*Vaidalya Sutra*), which were later passed down to Āryadeva, Buddhapalita, Bhavaviveka, Santideva so forth.

¹¹⁸ Redawa, **Biography of Āchārya Nāgārjuna**, (Thimphu Bhutan, Dratshang press, 2018), pp. 23-25.

Therefore, in the view of the new generations or particularly that of southern Asia, those who followed Theravāda tradition, Mādhyamaka is a school that was founded by Āchārya Nāgārjuna. This is not the case. The assumption is logically unsound as mentioned earlier. Countless Tathagatas, Pratyekabuddhas, and Śrāvakas achieved enlightenment by this path. For example, if one intends to obtain Tathagatas, Pratyekabuddhas, or Śrāvakas it must practice the union of compassion and wisdom.¹¹⁹

However, one could argue that during the time of Lord Shakyamuni's *Buddhadharma*, Mādhyamaka philosophy was established by Buddha himself. From the time the Buddha preached the Mādhyamaka to the time of Āchārya Nāgārjuna, the Mādhyamaka never had any different traditions but after Āchārya Nāgārjuna onwards, the Mādhyamaka School was separated into two subdivisions Prasaṅgika and Svatantrkas.

After Āchārya Nāgārjuna, Buddhapālita composed a commentary on Mūlamadhyamakakārikā called Buddhapālita which explains the text by Prasaṅgika tradition. After him, Bhāviveka rejected the Buddhapālita's exegetical tradition and interpretation of the Mūlamadhyamaka by the tradition of Svatantrkas through the commentary by the name of Madhyamakahrdayavstti Tyarkajvala. After him, Chandrakirti came and gave feedback to the Bhāviveka's system and then gave commentary on the text which illustrates Buddhapālita's perspective.

Later on, the Prasaṅgika tradition gained popularity and immense followers in India, Tibet, and many other countries. Great numbers of Indian scholars are commonly agreed with the tradition of Chandrakirti's system. And this great tradition was widely spread out in Tibet. Nearly all Himalayan Buddhist scholars are both philosophers and practitioners of the Prasaṅgika tradition.

¹¹⁹ Chandrakirti, *Madhyamakāvatāra-tīka (Self-commentary on Introduction to the Middle Way, (Tibetan version)*, (Bhutan: KMT press Thimphu Bhutan, 2003), p.17.

2. The Identification of *Mādhyamaka*

The term *mādhyamaka* refers to the state of being free from the complexities of the four extremes. These four extremes are extreme of existence, non-existence, both existence and non-existence, and neither of them.¹²⁰

The first one is extreme existence which refers to the perspective that believes in the existence of previous life and future life, karmic causality, or all of phenomena from form to omniscience. The second one is extreme non-existence which refers to all these things are do not exist. The third one is both extremes which refer to that all phenomena are sometimes existence and sometimes non-existence. The fourth one is neither of them which refers to that all phenomena are neither existence nor non-existence.¹²¹

Every philosopher who considered being lower than *Mādhyamaka* believes in any of those four extremes because *Yogācāra* agrees with *eighth-consciousness* or *storehouse-consciousness* (*ālayavijñāna*), *Hīnayāna* accepts the substance without dissipation and acquisition, and *Sāṃkhya* agrees with the existence of gods. *Cārvāka* belongs to the fourth extreme as they don't believe in previous lives and future lives or karmic causality.

In short, all the mistaken views are classified into two parts: extreme of existence and extreme of non-existence. Therefore, all of *Mādhyamaka Śāstras* mostly refute those two extremes by the logic of the middle path. As long as one stops thinking about both of those extremes, then it'll be easy to cease the rest two either at once or gradually. Eventually, it cannot get any conceptual object by logical evidence and that is called *mādhyamaka-drsti*, middle view, or genuine wisdom.

The *mādhyamaka* is the object of realization for *Śrāvaka*, *Pratyekabuddha*, and the *Tathāgata*. There are many remarkable

¹²⁰ Āryadeva, *Catu:shatakash'astrā Karika (The four hundred verse treatise), (Tibetan version)*, (Bhutan: KMT press Phuentsholing Bhutan, 1990), p. 17.

¹²¹ Gorampa Sonam Senge, *A commentary on Madhyamakāvātāra*, (Taiwan: The corporate body of Buddha education foundation, Taipei Taiwan, 2005), p. 34.

interpretations by great Indian and Tibetan scholars as well. To discuss them, the researchers have chosen to study three popular masters such as Rje rin po che from Dge ldan tradition, Go rams pa bsod nams seng+ge from the Sa skya tradition, and Kun mkhyen pad+ma dkar po from Bka' brgyud tradition.

“The *mādhyamaka* or ultimate-sphere (*dharmadhātu*) can be common objects of three vehicles. There's no difference among them. There's only one - *dharmadhātu* yet there is something dissimilar among objects of *dharmadhātu*, between Mahāyāna and Hīnayāna. For Mahāyāna, an object is to be comprehended with many types of reasons, and for Hīnayāna it's to be comprehended with less reasons.” said Rje rin po che.¹²²

Go rams pa bsod nams seng+ge rejected the Rje rin po che's tradition as follows: to you, Hīnayāna's wisdom is much sharper than that of Mahāyāna, the fact that one *dharmadhātu* for Hīnayāna can be realized by fewer methods while Mahāyāna requires more, if that is the case, it's impossible. Then he presented his system: one *dharmadhātu* that is free from the first and second extremes is for Hīnayāna, and that *dharmadhātu* free from the third and fourth extreme is the object of Mahāyāna's wisdom.

“That is also illogical or unacceptable, the reason is that since *dharmadhātu* is indivisible, how could there be various types of it which realized by different wisdom? He analogizes with someone looking at the moon. When we look at the moon from the Earth, it's the size of the plate, and when look at it from little short distance, it's bigger than the plate. Finally, when it has arrived at the moon and look, it's huge and broad. There is only one object, the moon, but differentiation is focused on three different people from different places.

Similarly, the *dharmadhātu* comprehended by a Hīnayāna noble person, it's not that clear enough, like looking at the moon from the earth. When viewed by a noble person of Mahāyāna, it'll be a little bit clearer than the first, like when looking at the moon from a shorter distance. When

¹²² Rje rin po che, **Dbu ma dgongs pa rb sel (A Commentary on Madhyamakāvatāra)**, (New Delhi India, 2010), p. 34.

it is realized by the Buddha, it's very clear like that someone is looking at the moon when he has arrived there.” said Kun mkhyen pad+ma dkar po.¹²³

Logically, a *dharmadhātu* is free from the first extreme and the second is the object perceived by the wisdom of Hīnayāna. It's not going to be *mādhyamaka* or *dharmadhātu*, because it's not free from the third and fourth extreme. As long as it's not free from any of the extremes, that cannot be the middle view (*mādhyamaka-drsti*). If it's free from the rest of the two extremes, then, how could one argue that there is a difference between Hīnayāna's object and Hīnayāna's object?

There are uncountable quotations to support either by the Buddha himself or other great Indian scholars as follows:

1. Buddha said in the entire of Prajñāpāramitā Sūtras,

གཟུགས་ཀྱི་དེ་བཞིན་ཉིད་དང་འཛོམ་བའི་དེ་བཞིན་ཉིད་དབྱེར་མེད་པ་སོགས་གསུངས་སོ།།

There are no differences between Suchness of form and feeling etc...

2. Lord Maitreya said in Prajñāpāramitā Śāstra,

ཚོས་ཀྱི་དབྱེངས་ལ་དབྱེར་མེད་ཕྱིར། །རིགས་ནི་ཐ་དད་ཅང་མ་ཡིན། །

Because *Dharmadhātu* has no difference,

Buddha nature has no difference.¹²⁴

3. Mahāyānottaratantraśāstra,

དེ་བཞིན་དབྱེར་མེད་ཕྱིར་དང་། །

Fact that suchness has no difference.¹²⁵

4. Āchārya Nāgārjuna said in Mūlamadhyamakakārikā,

གཅིག་གི་རྟོང་ཉིད་གང་ཡིན་པ། །དེ་ནི་ཀུན་གྱི་རྟོང་ཉིད་ཡིན། །

¹²³ Kunkhyen Pema Karpo, **Dbu m'I gzung gsum gsal byed (Tibetan version)**, (Bhutan: Thimphu, Phama printing and publishers, 2009), pp. 133-135.

¹²⁴ Lord Maitreya, **Prajñāpāramitā Śāstra**, (Taiwan: The corporate body of Buddha education foundation, Taipei Taiwan, 2005), p. 16.

¹²⁵ Lord Maitreya, **Mahāyānottaratantraśāstra**, (Taiwan: The corporate body of Buddha education foundation, Taipei Taiwan, 2005), p. 34.

Emptiness of one is emptiness of all.¹²⁶

5. Āryadeva,

དངོས་པོ་གཅིག་གི་སྒྲོང་པོ་གང་། །དེ་ནི་ཀུན་གྱི་སྒྲོང་པོར་བཤད། །

གཅིག་གི་སྒྲོང་ཉིད་གང་ཡིན་པ། །དེ་ནི་ཀུན་གྱི་སྒྲོང་པ་ཉིད། །

He who sees the nature of a phenomenon

Is said to be seen the nature of everything.

For the emptiness of a phenomenon

Is the emptiness of everything.¹²⁷

3. The Importance of Mādhayamaka to Fulfill the Mission of Enlightenment

If someone wants to achieve the Arhatship of Śrāvaka, that of Pratyekabuddha, or even the Buddhahood, they just need to rely on the middle path. Here is a list of quotes that are supportive of this statement:

1. The Buddha said in the sutra.

གང་དག་བདེ་གཤེགས་ཉན་ཐོས་འགྱུར་བར་བྱ་སྒྲུལ་དང་། །རང་སངས་རྒྱས་དང་དེ་བཞིན་ཚོས་རྒྱལ་འགྱུར་འདོད་པ། །

བཞོད་པ་འདི་ལ་མ་བརྟེན་ཐོབ་པར་མི་རུས་ཏེ།

Those who wanted to become the Sugata's Śrāvaka,

Pratyekabuddha as well as wants to become Dharma king (the Buddha)

Cannot achieve without depending on the patience (the Mādhayamaka).

2. Āchārya Nāgārjuna

སངས་རྒྱས་རང་སངས་རྒྱས་རྣམས་དང་། །ཉན་ཐོས་རྣམས་ཀྱིས་ངེས་བརྟེན་མ། །

ཁྱོད་ཉིད་གཅིག་ཕྱ་ཐར་པའི་ལམ། །དེ་སྒྲར་གཞན་དག་མེད་པར་ངེས། །

All Buddha and Pratyekabuddhas,

¹²⁶ Nāgārjuna, *Mūlamadhyamakakārikā (Knowledge of the Middle Way)*, (Bhutan: KMT press Thimphu Bhutan, 2004), p. 17.

¹²⁷ Āryadeva, *Catu:shatakash'astra Karika (Four Hundred Verse Treatise), (Tibetan version)*, (Bhutan: KMT press Phuentsholing Bhutan, 1990), p. 23.

All Śrāvaka's must rely on the mother,
 Only yourself is the way to freedom,
 Certainly, there is nothing else is like it.¹²⁸

3. Candrakīrti in Madhyamakāvātāra

སློབ་དཔོན་ལྷན་སྐྱབས་ལྷན་གྱི་ལམ་ལས་ནི། བྱི་རོལ་གྱུར་ལ་ནི་བའི་ཐབས་མེད་དོ། །
 དེ་དག་ལྷན་རྒྱུ་རྒྱུ་དེ་ཉིད་བདེན་ལས་ཉམས། །དེ་ལས་ཉམས་པས་ཐར་བ་གྲུབ་ཡོད་མིན། །

He who goes otherwise

From the path of master Nāgārjuna, cannot attain the peace

They are impaired from conventional and ultimate truth

And falling from the two truths would not get the liberation¹²⁹

Nevertheless, there are many commentaries and interpretations by great legendary scholars. And no matter how different their opinions are, it definitely will lead to the Enlightenment. Seemingly all of these teachings are wrong or right. In the end, it's similar to a wise man feeding people, he will never force them to give non-vegetarian meals to those who prefer vegetarians as they may not like it and the food will be wasted.

Likewise, when the lord Buddha taught his disciples, he would never teach by force. For instance, he never taught Mahāyāna-teachings to those who were suitable with Theravāda teachings. If the disciple naturally belongs to the Śrāvakayāna family but the Mahāyāna master teaches him the Mahāyāna doctrine. Probably, he or she will repudiate Mahāyāna which is not skillful to do.

In some cases, we may hear some of the teachings differently than once own and it is not supposed to be criticized without genuine reason. Yet, sometimes situation demands to reject misinterpretation with the logical argument. However, it should be remembered one thing that the

¹²⁸ Nāgārjuna, **Dharmadhatu-stotra (Praise of dharmadhatu)**, (Bhutan: KMT press Thimphu Bhutan, 2004), p. 8.

¹²⁹ Candrakīrti, **Madhyamakāvātāra (Introduction to the Middle Way), (Tibetan version)**, (Bhutan: KMT press Thimphu Bhutan, 2003), p. 14; Candrakīrti, **Madhyamakāvātāra-tīka (Self-commentary on Introduction to the Middle Way), (Tibetan version)**, (Bhutan: KMT press Thimphu Bhutan, 2003), pp.110-113.

ultimate refuge is the Lord Buddha who never lies, and therefore relying on his teaching is a crucial point.

2.6 Theories of Sciences and Integration

In this point, the theories of sciences may be divided into 3 categories, namely: - 1) Types of Science, 2) Theories of Pure Sciences, and 3) Theories of Applied Sciences, 4) Theory of and Integration. The details are as follows:

2.6.1 Types of Science

Pure and applied sciences are the two broad categories of scientific knowledge. Pure science refers to the scientific knowledge that is concerned with understanding natural phenomena without any immediate practical application. Pure Sciences refer to the study of natural phenomena and the fundamental laws of the universe. It encompasses a range of disciplines including physics, chemistry, biology, mathematics, and astronomy. The pursuit of knowledge in these fields has led to a deeper understanding of the world around us and has revolutionized our way of life. James Mattingly stated, “Most sciences seem to have both a pure side and a practical side. The pure side seeks understanding of the world for its own sake.”¹³⁰ The practical side leads to applications to solve various problems.

Applied science, on the other hand, refers to the scientific knowledge that is used to solve practical problems or to create new products or technologies. Both pure and applied sciences are crucial for advancing our understanding of the world and improving our lives. The 20th-century conceptual revolutions paved the way for the flourishing of applied science.

Breakthroughs in health care, such as the discovery of vaccines and antibiotics, and new developments in transportation, telecommunications, and space exploration gave credence to the belief

¹³⁰ James Mattingly (ed.), **The Sage Encyclopedia of Theory in Science, Technology, Engineering, and Mathematics**, (Thousand Oaks: SAGE Publications, Inc., 2023), p. 230.

that applied science could hold the answers to many issues, directly impacting people's quality of life in modern societies.¹³¹

2.6.2 Theories of Pure Sciences

Science is a systematic and logical approach to discovering how the universe works, based on empirical evidence and experimentation. Scientists use various methods to investigate phenomena and formulate theories to explain them. A scientific theory is a well-substantiated explanation of some aspect of the natural world that is acquired through the scientific method and repeatedly tested and confirmed through observation and experimentation.

1. Theories in Physics

Physics is a vast field that aims to understand the fundamental nature of the universe, from the smallest particles to the largest structures. Theories in physics are frameworks that help explain the behavior of the universe, and they have been developed and refined over centuries of scientific inquiry.

a. Newton's Laws of Motion

Sir Isaac Newton was a renowned mathematician, physicist, and astronomer who made significant contributions to our understanding of the physical world. Among his most influential works are his three laws of motion, which form the foundation of classical mechanics. At this point, we will examine each of these laws in detail and explore their implications for the way objects move.

First Law: Law of Inertia The first law of motion, also known as the law of inertia, states that an object at rest will remain at rest and an object in motion will remain in motion with a constant velocity unless acted upon by an external force. This law highlights the importance of balance in the universe and the fact that objects don't change their motion on their own. Newton's first law can be found in his book "Philosophiæ Naturalis Principia Mathematica" (1687), in which he states, "Everybody continues

¹³¹ Ibid., p. 813.

in its state of rest, or of uniform motion in a right line unless it is compelled to change that state by forces impressed upon it.”¹³²

Second Law: Law of Acceleration The second law of motion, also known as the law of acceleration, states that the acceleration of an object is directly proportional to the force applied to it and inversely proportional to its mass. This law emphasizes the relationship between force and motion and helps us understand how objects respond to external forces. He states, “The alteration of motion is ever proportional to the motive force impress’d; and is made in the direction of the right line in which that force is impress’d.”¹³³

Third Law: Law of Action-Reaction The third law of motion, also known as the law of action-reaction, states that for every action, there is an equal and opposite reaction. This law highlights the idea that forces always occur in pairs and that every force is accompanied by a reaction force of equal magnitude but opposite direction. Newton’s third law states, “To every action, there is always opposed an equal reaction: or the mutual actions of two bodies upon each other are always equal, and directed to contrary parts.”¹³⁴

Implications of Newton’s Laws Newton's laws of motion have several important implications for the way objects move. For example, they help us understand why objects move in the way they do, how to calculate the forces acting on objects, and how to predict the future motion of objects. Additionally, these laws have had significant practical applications in areas such as engineering, transportation, and space exploration.

In summary, Newton’s laws of motion are a fundamental aspect of our understanding of the physical world. They help us understand the relationship between force and motion, the importance of balance in the universe, and the fact that every action has an equal and opposite reaction. By studying these laws, we can gain a deeper appreciation for the workings

¹³² Isaac Newton, **Philosophiæ Naturalis Principia Mathematica**, (London: Royal Society of London, 1687), p. 14.

¹³³ Ibid., p. 19.

¹³⁴ Ibid., p. 20.

of the natural world and use this knowledge to improve our lives in countless ways.

b. Albert Einstein's Theory of Relativity

One of the most important theories in physics is the Theory of Relativity or Special relativity, contrary to some historical descriptions, does accommodate accelerations as well as accelerating frames of reference”¹³⁵ proposed by Albert Einstein in his paper “On the Electrodynamics of Moving Bodies”¹³⁶ This theory explains how time and space are relative to the observer's frame of reference, and it also includes the famous equation $E=mc^2$,¹³⁷ which explains the relationship between mass and energy.

c. Theory of Quantum Mechanics

Another important theory in physics is the Theory of Quantum Mechanics which was developed from the quantum theory. Quantum theory is the theory devised by Max Planck in 1900 to account for the emission of the black-body radiation from hot bodies. According to this theory, energy is emitted in quanta, each of which has an energy equal to $h\nu$, where h is the *Planck constant and ν is the frequency of the radiation. This theory led to the modern theory of the interaction between matter and radiation known as *quantum mechanics, which generalizes and replaces classical mechanics and Maxwell's electromagnetic theory.¹³⁸ Quantum mechanics theory explains the behavior of subatomic particles.¹³⁹ This theory was developed in the early 20th century by physicists such as Max Planck, Werner Heisenberg, and Erwin Schrödinger, and it has since been confirmed through numerous experiments. Alison George argues:

¹³⁵ Don Koks, **Explorations in Mathematical Physics: The Concepts Behind an Elegant Language**, (Springer Science & Business Media, 2006), p. 234; Andrew M. Steane, **Relativity Made Relatively Easy**, (Oxford: Oxford University Press, 2012), p. 226.

¹³⁶ Albert Einstein, “On the Electrodynamics of Moving Bodie”, **Annalen der Physik**, Vol. 17 No. 10, (1905): 891-921.

¹³⁷ John Daintith; Elizabeth Martin, **A Dictionary of Science**, Sixth Ed., (New York: Oxford University Press), 2010), p. 267.

¹³⁸ *Ibid.*, p. 682.

¹³⁹ Max Planck, “Über das Gesetz der Energieverteilung im Normalspektrum”, **Annalen der Physik**, Vol. 4 No. 3, (1900): 553-563.

Max Planck's mathematical manoeuvre back in 1900 has grown an entirely new view of the world, where our reliable old reality is replaced by uncertainties, split identities, and spooky connections that can stretch across the cosmos.¹⁴⁰

Various sub-quantum theories can be found available such as quantum chromodynamics (QCD), quantum electrodynamics (QED), quantum field theory, quantum flavourdynamics (QFD), Quantum mechanics, quantum theory of radiation¹⁴¹ Relativistic Quantum Field Theory (RQF) explains the basic degrees of freedom in quantum field theory (QFT)¹⁴² and so on.

The abovementioned theories in Physics are just a few of the many important frameworks that have helped us understand the behavior of the universe. As our understanding of physics continues to grow, we can expect even more exciting and groundbreaking discoveries in the future.

2. Theories in Chemistry

One of the most fundamental theories in chemistry is the Atomic Theory, which states that all matter is composed of atoms. This theory was first proposed by John Dalton in the early 19th century, and it has since been confirmed through numerous experiments and observations.

Another important theory in chemistry is the Theory of Chemical Bonding, which explains how atoms combine to form molecules. This theory was first proposed by Linus Pauling in the mid-20th century, and it has since been confirmed through numerous experiments and observations.¹⁴³

¹⁴⁰ Alison George (ed. in chief), **The Quantum World: The Disturbing Theory at the Heart of Reality**, (London: Carmelite House, 2017), p. 181.

¹⁴¹ John Daintith; Elizabeth Martin, **A Dictionary of Science**, pp. 678-679, 682.

¹⁴² Michael Strickland, **Relativistic Quantum Field Theory, Vol. 2: Path integral formalism**, (San Rafael: Morgan & Claypool Publishers, 2019), p. xi.

¹⁴³ Linus Pauling, "The Nature of the Chemical Bond", **Journal of the American Chemical Society**, Vol. 61 No. 6, (1939): 1466-1475.

3. Theories in Biology

One of the most famous theories in biology is the Theory of Evolution, proposed by Charles Darwin in his book “On the Origin of Species” (1859). The theory of evolution explains how species evolve through the process of natural selection. This theory has been extensively tested and confirmed through numerous experiments and observations, and it is widely accepted by the scientific community. The term “biology” was coined by Lam Arck in 1802. The branch of science dealing with properties and interactions of physico-chemical systems of sufficient complexity for the term ‘living’ (or ‘dead’) to be applied.¹⁴⁴ The Oxford Dictionary of Biochemistry and Molecular Biology defined it as the scientific study of living organisms, including their structure, functioning, development, distribution, interrelationships, and evolution.¹⁴⁵ It can be said that biology is a science that searches for the nature of life.

Another notable theory in biology is the Cell Theory, which states that all living organisms are composed of cells and that cells are the basic unit of life. The Cell Theory was first proposed by Matthias Schleiden and Theodor Schwann in the mid-19th century, and it has since been confirmed by countless experiments and observations. Claire Waterton discussed in her study¹⁴⁶ DNA barcoding, as an integrative state-of-the-art DNA sequencing and informatics-based genomic technoscience, promised not only faster, cheaper, and more citizen-inclusive global identification, classification, and recording of species, but also a global moral transformation of humankind and its evident indifference to nature and biodiversity’s destruction, through revitalized access to and knowledge of nature.

¹⁴⁴ M. Abercrombie et. al., **The New Penguin Dictionary of Biology**, 8th edition, (London: Penguin Books Ltd., 1990), p 61.

¹⁴⁵ A. D. Smith (Managing Ed.), **Oxford Dictionary of Biochemistry and Molecular Biology**, Revised Ed., (New York: Oxford University Press Inc., 2000), p. 71.

¹⁴⁶ Claire Waterton, Rebecca Ellis, and Brian Wynne, **Barcoding Nature: Shifting Cultures of Taxonomy in an Age of Biodiversity Loss**, (Abingdon: Routledge, 2013), p.12.

4. Theories in Astronomy

Astronomy is the scientific discipline striving to understand celestial objects, including planets, stars, galaxies, and other phenomena that exist outside of Earth's atmosphere. Throughout history, people have been fascinated by the night sky and have sought to understand the universe and their place in it. Theories in astronomy have been developed over the years to help explain various phenomena and provide insights into the workings of the cosmos. Astronomy, trigonometry, and geometry¹⁴⁷ These three disciplines have a closely linked history with the world's great scientists and philosophers, including Nicholas Copernicus¹⁴⁸ Georg Joachim Reticus,¹⁴⁹ Jamshid al Kashi,¹⁵⁰ Galileo Galilei,¹⁵¹ Johannes Kepler,¹⁵² Girard Desargues,¹⁵³ and René Descartes.¹⁵⁴

One of the earliest theories in astronomy is the geocentric model, which was developed by the ancient Greeks. According to this model, the Earth is at the center of the universe, with the Sun, planets, and stars orbiting around it. This theory was popular for centuries until the heliocentric model was proposed by Copernicus in the 16th century. The heliocentric model states that the Sun is at the center of the solar system, with the planets orbiting around it. This theory was supported by

¹⁴⁷ James Mattingly (ed.), **The Sage Encyclopedia of Theory in Science, Technology, Engineering, and Mathematics**, pp. 529-530.

¹⁴⁸ Nicholas Copernicus (1473-1543). He gave the revolutionary heliocentric model in *De Revolutionibus Orbium Coelestium*, published in the year he died.

¹⁴⁹ Georg Joachim Reticus (1514-1576). He worked thoroughly on Copernican astronomy and wrote explanatory commentaries on his propositions. He also took trigonometry to its present form by writing an elaborate treatise entitled *Opus Palatinum de Triangulis* on the trigonometric functions.

¹⁵⁰ Jamshid al Kashi (1380-1429).

¹⁵¹ Galileo Galilei (1564-1642) He claimed that the motion of the planets was actually the motion of falling bodies. His discoveries, pioneering the use of telescope, paved way for the acceptance of the heliocentric model of Copernicus.

¹⁵² Johannes Kepler (1571-1630). He took the subject even further by providing laws of planetary motion, which laid the foundation for Newton to establish his universal law of gravitation.

¹⁵³ Girard Desargues (1591-1661).

¹⁵⁴ René Descartes (1596-1650). He was the first person to associate geometric shapes to algebraic equations in a two-dimensional system (hence named after him as the Cartesian coordinate system) bridging algebra and geometry.

observations made by Galileo and others, and it eventually replaced the geocentric model as the dominant theory in astronomy. Modern theories have opened up a new perspective on the multiverse through quantum theory as the following argument:

It's not just quantum mechanics that leads to the inescapable conclusion that our universe is just a speck in a vast sea of universes. Different branches of physics spin off very different kinds of multiverses. Our current theory of how the universe came to be predicts an infinite expanse of other universes.¹⁵⁵

In addition to these major theories, many other theories in astronomy help explain various phenomena. For example, the theory of nucleosynthesis explains how elements heavier than hydrogen and helium are created in stars, while the theory of planetary formation describes how planets are formed from the dust and gas in protoplanetary disks around young stars. There are also theories about the nature of dark matter and dark energy, which make up most of the mass-energy content of the universe.

To sum up, theories in astronomy have played a critical role in helping us understand the universe and our place in it. From the geocentric model to the Big Bang theory, these theories have evolved as our observations and understanding of the universe have improved. While there is still much, we do not know about the universe, these theories provide a framework for further exploration and discovery.

In conclusion, theories in Physics, Chemistry, Biology, and Astronomy are an essential part of science, and they help us to understand the natural world around us. Such theories have been extensively tested and confirmed through numerous experiments and observations, and they provide us with a framework for understanding the fundamental principles that govern the universe. By continuing to develop and test theories, scientists can deepen our understanding of the natural world and help us address some of the most pressing challenges facing our planet.

¹⁵⁵ Alison George (ed. in chief), **The Quantum World: The Disturbing Theory at the Heart of Reality**, p. 52.

2.6.3 Theories of Applied Sciences

Applied sciences refer to the use of scientific principles and knowledge to create practical solutions to real-world problems. They play an essential role in society as they provide solutions to a wide range of challenges faced by individuals, industries, and the environment. They can also refer to the practical applications of scientific knowledge for the advancement of society. The field encompasses a range of disciplines, including engineering, medicine, agriculture, and technology, among others. Applied sciences play a crucial role in our lives, contributing to the development of new technologies, medicines, and products that improve our quality of life. At this point, we will discuss the significance of applied sciences and their impact on society.

1. Theories in Engineering

Engineering theory refers to the principles, laws, and equations that govern the behavior of physical systems and provide the framework for the design and optimization of engineered products and processes. Theories in engineering are based on a combination of empirical observations, mathematical models, and physical laws, and are essential for engineers to understand the behavior of systems and make informed decisions about their design, operation, and maintenance. In this study, we will discuss the importance of engineering theory and the types of engineering theory.

Engineering theory is important for several reasons. First, it provides a conceptual framework that allows engineers to understand the behavior of complex systems and predict how they will respond to different stimuli. This understanding is critical for designing and optimizing systems to meet specific performance criteria. Second, engineering theory enables engineers to develop mathematical models of systems that can be used to simulate their behavior and evaluate their performance under different conditions. This is especially important for complex systems, where empirical testing may not be practical or may be prohibitively expensive. Third, engineering theory provides a common language and set of concepts that allows engineers to communicate and collaborate effectively with each other, as well as with scientists, mathematicians, and other professionals.

There are several types of engineering theory, each of which is focused on a specific aspect of engineering. Some of the most important types of engineering theory include: (1) Statics and Dynamics Theory: This theory deals with the study of forces and their effects on structures that are at rest or in motion, respectively. (2) Material Science Theory: This theory is concerned with the study of the physical and chemical properties of materials, and how these properties affect the behavior of engineering systems. (3) Thermodynamics Theory: This theory deals with the study of the relationship between heat, work, and energy in engineering systems. (4) Control Theory:¹⁵⁶ An interdisciplinary engineering discipline, that deals with the behavior of dynamic systems by designing a way of influencing a particular physical system so that it behaves according to certain desired specifications. It includes system analysis and synthesis of controllers that enable the controlled system to achieve and maintain the proposed dynamics. Engineering can be studied together with multiple sciences like bioengineering, biomedical engineering¹⁵⁷, engineering psychology, cognitive engineering, computer-aided engineering (CAE), knowledge engineering (KE), and system engineering¹⁵⁸ for instance.

2. Theories in Medicine

One of the most significant contributions of applied sciences is in the field of medicine. The development of new drugs and medical procedures has revolutionized healthcare, leading to longer life expectancies and improved quality of life for millions of people worldwide. For example, the discovery of antibiotics in the 1920s and their subsequent development into a wide range of drugs has saved countless lives by treating bacterial infections that were once deadly. Similarly, the

¹⁵⁶ Rihard Karba; Juš Kocijan; Tadej Bajd; Mojca Žagar Karer; Gorazd Karer, **Terminological Dictionary of Automatic Control, Systems and Robotics**, (ZRC SAZU: Springer, 2024), p. 19.

¹⁵⁷ Heather Bateman et. al., **Dictionary of Medical Terms**, Fourth edition, (London: A & C Black Publishers Ltd., 2007), p 42.

¹⁵⁸ “Engineering psychology, a branch of psychology devoted to the study of humans as functional systems and system components” - Phillip A. Laplante (ed. in chief), **Dictionary of Computer Science, Engineering, and Technology**, (New York: CRC Press LLC, 2001), pp. 84, 94, 159, 268, 484.

development of vaccines has helped to eradicate or control many infectious diseases that were once widespread, such as smallpox, polio, and measles.

Another area of applied sciences that has had a significant impact on society is the field of biomedical engineering. Biomedical engineering is the application of engineering principles and techniques to solve problems in medicine and biology. Biomedical engineers work on a variety of projects, including the development of prosthetic limbs, the design of medical devices, and the creation of new drugs and therapies. The field of biomedical engineering is constantly evolving, with new technologies and therapies being developed every year. One of the most promising areas of research in biomedical engineering is regenerative medicine, which aims to create new tissues and organs to replace damaged or diseased ones.

One of the oldest medical theories is the humoral theory, which was developed by ancient Greek and Roman physicians, including Hippocrates and Galen. According to this theory, the human body contains four humors - blood, phlegm, yellow bile, and black bile - and disease arises from an imbalance in these humors. Treatment involved balancing the humor through techniques such as bloodletting, purging, and dietary changes. While the humoral theory is no longer widely accepted, it laid the foundation for understanding the human body and the concept of homeostasis.

Another influential medical theory is the germ theory of disease, which emerged in the 19th century. This theory, proposed by scientists such as Louis Pasteur and Robert Koch, posits that disease is caused by microorganisms, such as bacteria and viruses, that invade the body. Treatment involves targeting these microorganisms through the use of antibiotics and vaccines. The germ theory revolutionized medicine and led to significant advancements in public health, including the development of sanitation systems and the control of infectious diseases.

The biopsychosocial model¹⁵⁹ is a more recent theory that takes into account the complex interplay between biological, psychological, and social factors in health and disease. Developed in the 1970s by George

¹⁵⁹ Look in James Mattingly (ed.), **The Sage Encyclopedia of Theory in Science, Technology, Engineering, and Mathematics**, pp. 102-103.

Engel, this theory posits that physical symptoms are influenced by a range of factors, including genetics, lifestyle, stress, and social support. Treatment involves addressing these factors through a multidisciplinary approach that may include medication, therapy, lifestyle changes, and social support.

While these are just a few examples of medical theories, they illustrate the evolution of medical thought over time. As new scientific discoveries are made and new technologies are developed, our understanding of health and disease continues to evolve.

3. Theories in Agriculture¹⁶⁰

Another area where applied sciences have made significant contributions is agriculture. Advances in agricultural sciences have led to increased crop yields, improved livestock health, and more efficient farming practices. These developments have helped to feed an ever-growing global population and reduce food insecurity. For example, genetically modified crops have been developed that are resistant to pests, drought, and other environmental stresses, leading to higher yields and reduced reliance on chemical pesticides and fertilizers.

Agriculture is one of the oldest human activities and has been practiced for thousands of years. Over time, various theories have been developed to explain the principles of agriculture, the dynamics of agricultural systems, and the factors that affect agricultural productivity. In this study, we will discuss some of the key theories of agriculture, including the Malthusian theory, the Green Revolution, and the agroecological approach, among others.

The Malthusian theory of agriculture,¹⁶¹ developed by Thomas Malthus in the late 18th century, posits that population growth will eventually outstrip the resources needed to sustain it. Malthus argued that

¹⁶⁰ Look in Jules Pretty, Camilla Toulmin & Stella Williams, “Sustainable intensification in African agriculture”, **International Journal of Agricultural Sustainability**, Vol. 9 No. 1, (2011): 5-24.; Shiva Vandana, “The Violence of the Green Revolution”, **Journal of Peasant Studies**, Vol. 43 No. 2, (2016): 377-397.

¹⁶¹ Look in James Mattingly (ed.), **The Sage Encyclopedia of Theory in Science, Technology, Engineering, and Mathematics**, pp. 612-613.

food production can only increase arithmetically, while population growth increases geometrically, leading to an eventual collapse of human society due to food scarcity. This theory influenced early agricultural policies in the 19th century, which aimed to increase agricultural productivity to feed a rapidly growing population.

The Green Revolution, which began in the mid-20th century, was a response to the Malthusian theory and the perceived need to increase agricultural productivity to feed a rapidly growing global population. The Green Revolution involved the use of high-yielding crop varieties, modern farming techniques, and the use of chemical fertilizers and pesticides. This approach succeeded in increasing food production and reducing hunger in many parts of the world, but it also had negative impacts on the environment and social equity, leading to the emergence of alternative approaches such as agroecology.

Agroecology is an approach to agriculture that emphasizes ecological principles, such as biodiversity, natural resource conservation, and ecosystem services. Agroecology seeks to promote sustainable and equitable agricultural systems that are resilient to environmental and social change. This approach challenges the assumptions of the Green Revolution and argues that it is possible to increase agricultural productivity without compromising the environment or social justice. Agroecology is gaining popularity as a viable alternative to conventional agriculture and has been adopted by a growing number of farmers, NGOs, and governments around the world.

Another important theory in agriculture is the theory of comparative advantage, developed by David Ricardo in the early 19th century. This theory posits that countries should specialize in producing the goods in which they have a comparative advantage, based on their natural resources, labor, and technology. This theory has important implications for global agriculture, as it suggests that countries should trade agricultural goods based on their relative advantages, leading to increased efficiency and productivity in the global agricultural system.

In conclusion, agriculture is a complex and multifaceted activity that is influenced by a variety of factors, including economic, social,

political, and environmental forces. The theories discussed in this study provide different perspectives on the principles of agriculture and the factors that affect agricultural productivity. While the Malthusian theory and the Green Revolution have had significant impacts on global agriculture, the emerging approach of agroecology offers a promising alternative that seeks to promote sustainable and equitable agricultural systems that are resilient to environmental and social change.

4. Theories in Technology

Applied sciences have also revolutionized the way we communicate and access information. The development of the internet, smartphones, and other digital technologies has enabled instant communication and access to vast amounts of information, transforming the way we work, learn, and socialize. Social media platforms have created new ways for people to connect and collaborate, leading to the formation of online communities that span the globe. The term “Technology” refers to the application of scientific knowledge, which comprises techniques, skills, methods, tools, devices, and processes.¹⁶²

Technology is an ever-evolving field that has significantly transformed our world. It has changed the way we communicate, work, learn, and interact with one another. The development of new technologies has led to the creation of theories that attempt to explain how technology is created, used, and adopted. In this essay, we will explore some of the most prominent technology theories, including Technological Determinism, Social Construction of Technology, and Actor-Network Theory, and examine their key tenets, criticisms, and real-world applications.

Technological Determinism is a theory that argues that technology shapes society, and its development is autonomous from human agency¹⁶³ This theory posits that technology is a force that drives social

¹⁶² Rihard Karba; Juš Kocijan; Tadej Bajd; Mojca Žagar Karer; Gorazd Karer, **Terminological Dictionary of Automatic Control, Systems and Robotics**, (ZRC SAZU: Springer, 2024), p. 214.

¹⁶³ Bruce Bimber, “The Three Faces of Technological Determinism”, **In Does Technology Drive History?**, (Cambridge: MIT press, 2014): 25-49.

change and determines the course of human history. Technological Determinism suggests that technology has an inherent logic and that it progresses along a predetermined path, regardless of social or cultural factors.

Proponents of Technological Determinism argue that technology is a powerful force that shapes social and cultural norms, institutions, and practices. They contend that technological innovations have brought about significant changes in human history, such as the Industrial Revolution, which led to the modern era's emergence. Critics, however, argue that Technological Determinism is too deterministic and ignores the social, cultural, and political factors that influence technological development.

Social Construction of Technology is another theory that posits that technology is socially constructed and that its development is influenced by social, cultural, and political factors.¹⁶⁴ This theory suggests that technology is not a neutral force but rather a product of social negotiations and debates. According to Social Construction of Technology, the development and adoption of technology are influenced by a wide range of actors, including users, designers, and policymakers.

Proponents of Social Construction of Technology argue that technology is not predetermined or autonomous, but rather the product of social interactions and negotiations. They contend that technology is influenced by power relations, cultural values, and social norms. Critics, however, argue that the Social Construction of Technology is too social and cultural-centered and ignores the technical and economic factors that shape technological development.

Actor Network Theory (ANT) is a theory that focuses on the complex interactions between humans and non-humans in the development and adoption of technology.¹⁶⁵ This theory suggests that technology is the product of a network of actors that includes humans, machines, institutions,

¹⁶⁴ Wiebe E. Bijker; Thomas P. Hughes; Trevor Pinch, **The Social Construction of Technological Systems: New Directions in the Sociology and History of Technology**, (Cambridge: MIT Press, 2012), p. x.

¹⁶⁵ Look in James Mattingly (ed.), **The Sage Encyclopedia of Theory in Science, Technology, Engineering, and Mathematics**, pp. 22-24.

and social structures. According to ANT, technology is not just a product of human agency but is also shaped by non-human actors, such as machines, artifacts, and infrastructures.

Proponents of ANT argue that technology is a product of a network of actors that includes humans, machines, and institutions. They contend that technology is a result of the interactions between humans and non-humans and that these interactions are essential to understanding technological development. Critics, however, argue that ANT is too complex and challenging to apply in practical situations.

In conclusion, technology theories are essential tools for understanding how technology is created, used, and adopted in society. The theories discussed in this essay, including Technological Determinism, Social Construction of Technology, and Actor-Network Theory, provide different perspectives on the relationship between technology and society. While each theory has its strengths and weaknesses, they all contribute to our understanding of the complex and dynamic nature of technology in our world.

5. Theories in Renewable Energy

One area of Applied Sciences that has seen significant growth in recent years is the field of renewable energy. We should pay attention to the quotation, “Record growth in renewables, but world missed historic chance for a clean energy recovery.”¹⁶⁶ Renewable energy sources such as solar, wind, and hydroelectric power have the potential to significantly reduce our dependence on fossil fuels and mitigate the impacts of climate change. The development of renewable energy technologies is a multidisciplinary effort that involves scientists and engineers from various fields, including physics, chemistry, materials science, and electrical engineering, among others. The implementation of renewable energy sources requires a deep understanding of the fundamental scientific principles that underpin these technologies and their interactions with the environment.

¹⁶⁶ Lisa Mastny; Kelly Trumbull (eds.), **Renewable Energy Data in Perspective: Drawn from the Renewables 2022 Global Status Report**, (Paris: REN21 Secretariat, 2022), p. 4.

The definition of “renewable energy sources” is given “sources of energy that do not use up the earth's finite mineral resources.”¹⁶⁷ Renewable energy is defined as energy that is derived from natural resources such as sunlight, wind, rain, tides, and geothermal heat that are replenished naturally over time. This form of energy is considered to be sustainable, and it has gained significant attention in recent years due to its potential to reduce greenhouse gas emissions and combat climate change. In this essay, we will explore the theory behind renewable energy and its potential to transform the global energy sector.

Renewable energy theory is based on the premise that it is possible to create a sustainable energy system that can meet the world’s energy demands without relying on fossil fuels. The primary goal of renewable energy is to provide clean and affordable energy to meet the needs of current and future generations while reducing the environmental impact of energy production. This theory is rooted in the belief that it is possible to create a world in which energy is generated from sources that are naturally replenished and that do not contribute to climate change.

One of the key factors that make renewable energy attractive is its potential to reduce greenhouse gas emissions. The burning of fossil fuels is one of the primary sources of greenhouse gas emissions, which contribute to global warming and climate change. Renewable energy, on the other hand, does not produce emissions, and therefore, it has the potential to significantly reduce the amount of greenhouse gases in the atmosphere. In fact, according to the International Energy Agency (IEA), renewable energy sources could account for 85% of global electricity generation by 2050, significantly reducing greenhouse gas emissions.

Another important factor that makes renewable energy attractive is its ability to create jobs and stimulate economic growth. The renewable energy sector is one of the fastest-growing industries globally, and it has the potential to create millions of new jobs in the coming years. According to the International Renewable Energy Agency (IRENA), the renewable energy sector could create up to 28 million new jobs by 2050.

¹⁶⁷ John Daintith; Elizabeth Martin, **A Dictionary of Science**, p. 708.

Despite the many benefits of renewable energy, there are still several challenges that must be addressed to ensure its widespread adoption. One of the primary challenges is the intermittency of renewable energy sources such as wind and solar power. These sources are only available at certain times of the day, which can make it challenging to meet the energy demands of the grid. To address this challenge, researchers are working to develop new energy storage technologies that can store excess energy when it is available and release it when it is needed.

It is so interesting to know that in most countries today. In countries where good resources and cheap financing are available, wind and solar PV plants will challenge existing fossil fuel plants. Solar projects now offer some of the lowest-cost electricity in history. Overall, renewables are set to account for 95% of the net increase in global power capacity through 2025.¹⁶⁸ The recent data about renewable energy should remind us to realize the importance of renewable energy more or less, namely:

Over the past few decades, the climate crisis and the UN Sustainable Development Goals have been prominent drivers of the shift to renewables. With the dramatic decline in renewable energy costs, and volatile fossil fuel prices, economics have become an additional driver. The costs of newly commissioned utility-scale solar photovoltaic (PV) projects fell 89% between 2010 and 2021, from USD 0.40 per kilowatt-hour (kWh) to USD 0.046 per kWh. The Russian Federation's invasion of Ukraine also has shined a spotlight on the issue of energy security and energy independence, motivating the deployment of renewables. These realities should leave no further ground for the development of fossil fuels.¹⁶⁹

To sum up, renewable energy theory is based on the premise that it is possible to create a sustainable energy system that can meet the world's energy demands without relying on fossil fuels. Renewable energy has the potential to significantly reduce greenhouse gas emissions, create jobs, and

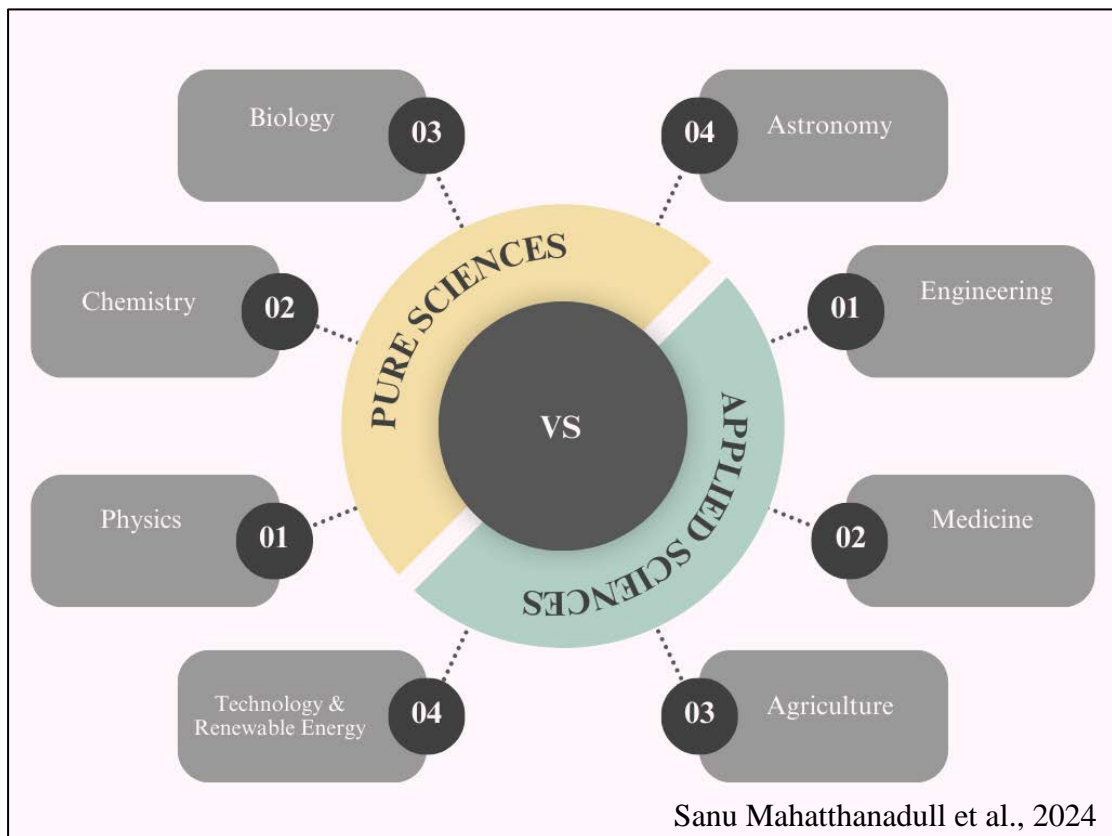
¹⁶⁸ Heymi Bahar, **Renewables 2020 Analysis and Forecast to 2025**, (International Energy Agency, 2020), p. 12.

¹⁶⁹ Rana Adib (executive Director), **Renewable Energy Data in Perspective: Drawn from the Renewables 2022 Global Status Report**, (Paris: UN Environment Programme, 2020), p. 8.

stimulate economic growth. Despite the challenges that must be addressed, renewable energy is a promising technology that can transform the global energy sector and help combat climate change.

In conclusion, applied sciences have made significant contributions to society, improving our health, products, services, food security, communication, and overall quality and standard of life. The practical applications of scientific knowledge have led to innovations and advancements that would have been unimaginable just a few decades ago. As we continue to face new challenges, such as climate change, resource depletion, and emerging diseases, the importance of applied sciences in finding solutions will only continue to grow.

Chart 2.3 Pure Sciences and Applied Sciences



2.6.4 Theory of Integration

Regarding the theory of integration, the three issues are reviewed here as follows: -1) Integrated Knowledge Model, 2) Integrated Religion-Learning Studies, and 3) The Integral Theory.

1. Integrated Knowledge Model

To begin this review, the contemporary era is a must. Bhikkhu P.A. Payutto characterizes the 21st century era as something to make clear between of what big effect from the 20th century have passed results to the 21st century. Especially, people in the 21st century will inherit the fruits of twentieth-century man's destruction of the environment. All these problems stem from the problem of hatred or violence perpetuated under the power of what we call in Buddhism *dosa*, or aversion, and *lobha*, desire, or greed. These two forces, greed, and hatred, are very important forces in our minds. With the development of technology or high technology, which deals with **information** and **communication**, greed and hatred have much more effective tools.¹⁷⁰ He further narrates two kinds of science in the book "Toward Sustainable Science":

Technology is dependent for its existence on the knowledge obtained through science. It is the tool, or channel, through which humanity has worked to manipulate nature to pursue material comfort. But at the same time, the dangers that threaten us are also contingent on this technology. Technology is thus both an instrument for finding happiness and a catalyst for danger. Therefore, technology tarnishes the quality of life and pollutes the environment. Only true moral awareness can alleviate these destructive influences.¹⁷¹

The science of technology, information technology (IT), artificial intelligence (AI)¹⁷², data science, etc., is important in this era because it is a leap forward for mankind in developing the world with technological tools. In addition, the science of human communication is also important because humans must always search for knowledge. Yoshiteru Nakamori has mentioned the integrating knowledge models in his book "Knowledge

¹⁷⁰ Bhikkhu P.A. Payutto, **A Buddhist Solution for the Twenty-first Century**, (Bangkok: Sahadhammika Co., Ltd., 1994), pp. 64-65.

¹⁷¹ P.A. Payutto, **Toward Sustainable Science**, (Bangkok: Buddhadhamma Foundation, 1995), pp. 35-36.

¹⁷² Artificial intelligence (AI) refers to "A subfield of computer science, which studies machines capable of performing tasks that typically require human intelligence." - Rihard Karba; Juš Kocijan; Tadej Bajd; Mojca Žagar Karer; Gorazd Karer, **Terminological Dictionary of Automatic Control, Systems and Robotics**, p. 19.

Construction Methodology: Fusing Systems Thinking and Knowledge Management”¹⁷³

It deals with 3 different integrating models characterizing debate, experiment, and hermeneutic. Firstly, the Inter-subjective EDIS Model: The EDIS (Enlightenment-Debate-Immersion-Selection model emphasizes Debate. This creative model is aimed not at organizational knowledge creation but at the individual creation of scientific and technological knowledge supported by a group. Secondly, the Experimental EEIS Model: The EEIS (Enlightenment-Experiment-Interpretation-Selection) model emphasizes Experiment. The process of Interpretation is necessary to convert the experimental data into the researcher’s knowledge. Lastly, the Hermeneutic EAIR Model: The hermeneutic circle describes the relation of a researcher to the object of study represented by historical or literary texts. The EAIR (Enlightenment-Analysis-Hermeneutic Immersion-Reflection) model emphasizes Analysis.

2. Integrated Religion-Learning Studies

It is undeniable that religion plays a more or less important role in integration. Ahmad Zainuri, Sukarno, and Miftachul Huda¹⁷⁴ emphasized the integration of pedagogical science with the Islamic religion in their research work “Understanding Scientific Literacy and Pedagogy Competence: A Critical Insight into Religious Integration Thinking Skills”. It can be said that the integration of science values can be done by (prospective) teachers since they formulate learning plans, implementation of learning, and assessment of learning outcomes. With good pedagogical skills and scientific literacy, the elements of science will easily be found in the study of Islamic religion.

¹⁷³ Yoshiteru Nakamori, **Knowledge Construction Methodology: Fusing Systems Thinking and Knowledge Management**, (Singapore: Springer Nature Singapore Pte Ltd., 2020), p. 74.

¹⁷⁴ Ahmad Zainuri, Sukarno, and Miftachul Huda, “Understanding Scientific Literacy and Pedagogy Competence: A Critical Insight into Religious Integration Thinking Skills”, **Journal of Educational and Social Research**, Vol.12 No.1 (January 2022): 273-281.

Fabian Völker argued in his research work “Methodology and Mysticism: For an Integral Study of Religion”¹⁷⁵ that the integral study of Science-Religion is required. He claimed the holistic approach requires, as its constitutive basis, an integrative methodology, one that is in principle able to combine all fruitful lines of inquiry in a methodically differentiated and reflexively judicious manner and, thus, to allow each of the complementary ways of looking to have their legitimacy respected as they unfold their specific questions. Seeking robust support for the methodological pluralism of an integral study of religion, which will keep it from succumbing to the empiricist reductionism of the cultural studies perspective, a transcendental philosophical method should be considered as a basis. Furthermore, this empowers a critical expansion and deepening of new approaches to the phenomenology of religion and constructive interaction with the intercultural philosophy of religion.

3. The Integral Theory

Theories that involve integrating multiple disciplines are not seen very often. One such theory is the Integral Theory. Ken Wilber, the founder of this theory, proposed Integral Methodological Pluralism (IMP) in his book “Integral Spirituality: A Starting New Role for Religion in the Modern and Postmodern World”¹⁷⁶ Based on the book, he elaborated on the 8 primordial perspectives as the inside and the outside view of a holon in any of the 4 quadrants. These 8 primordial perspectives are called Integral Perspectivism. We inhabit these 8 spaces, these zones, these lifeworlds, as practical realities. Each of these zones is not just a perspective, but an action, an injunction, a concrete set of actions in a real-world zone. Each injunction brings forth or discloses the phenomena that are apprehended through the various perspectives. It is not that perspectives come first and actions or injunctions come later; they simultaneously co-arise (actually, tetra-arise). “Perspectives” simply locate the perceiving holon in AQAL space. To take such-and-such a perspective is to be arising in this particular area of the AQAL matrix. (In

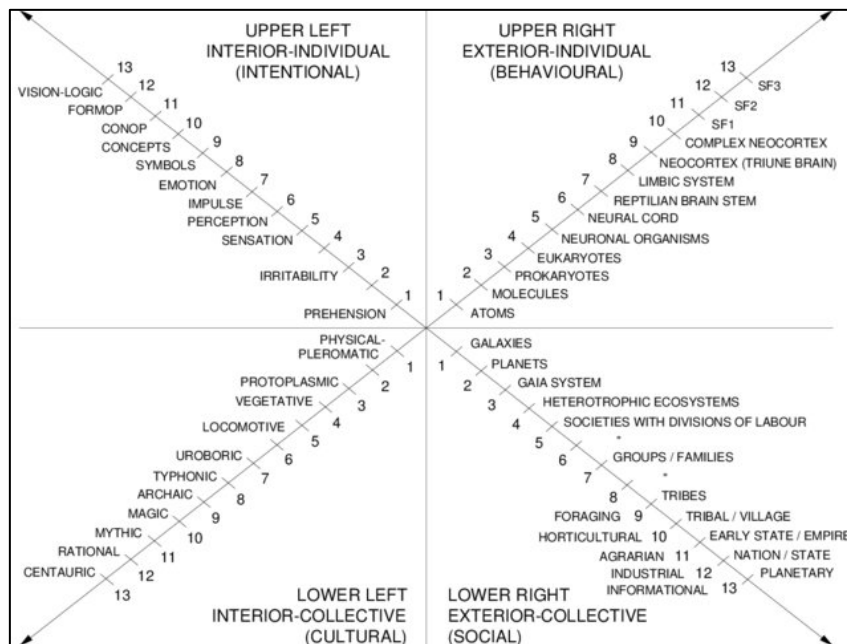
¹⁷⁵ Fabian Völker, “Methodology and Mysticism: For an Integral Study of Religion”, *Religions*, Vol.13 No.161 (2022): 1-19.

¹⁷⁶ Ken Wilber, **Integral Spirituality: A Starting New Role for Religion in the Modern and Postmodern World**, (London: Integral Books, 2006), pp. 34-35.

fact, we will soon give the “address” of a holon in the AQAL matrix as **address = altitude + perspective**, where altitude means a degree of development and perspective means the perspective or quadrant it is in.).

The Integral Methodological Pluralism coined by Ken Wilber can be shown in the following figure:

Chart 2.4 Ken Wilber’s Four Quadrants

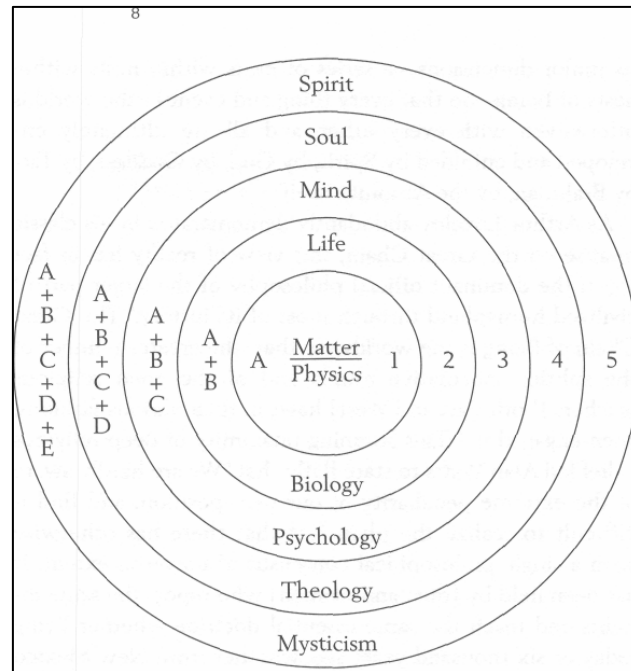


He elaborated on the integration of modern sciences with religions such as biology, psychology, theology, mysticism, etc. in his book “The Marriage of Sense and Soul: Integrating Science and Religion”¹⁷⁷ From the book, it can be conferred that the Great Chain of Being is perhaps a bit of a misnomer, because the actual view is more like the Great Nest of Being, with each senior dimension enveloping or enfolding its junior dimension(s) a situation often described as “transcend and include.” Spirit transcends but includes the soul, which transcends but includes the mind, which transcends but includes the vital body, which transcends but includes matter. This is why the Great Nest is most

¹⁷⁷ Ken Wilber, *The Marriage of Sense and Soul: Integrating Science and Religion*, (New York: Random House, 1998), pp. 9-10.

accurately portrayed as a series of concentric spheres or circles. Ken Wilber's The Great Nest of Being can be shown as follows:

Chart 2.5 Ken Wilber's The Great Nest of Being



From the theory, it is found that his attempt to integrate various disciplines may be successful in fulfilling the overall satisfaction to a certain extent. However, the challenge of the integrated discipline lies in the limitation of precise and accurate access. In addition, the enlightened interpretation without any distortion of the essence and the subtlety of the knowledge set of each discipline may not be achieved because each discipline has countless subdivisions. This challenge is best described by Mark D. Forman. In integral psychotherapy, he argued the approaches that the therapists are dealing with in the integration under the integral psychotherapeutic process must be clear:

It is important that we define more clearly the “major approaches” to psychotherapy that Integral attempts to incorporate, including physiological/pharmacological, behavioral, psychodynamic,

cognitive, humanistic, multicultural, feminist, somatic, and transpersonal approaches.¹⁷⁸

In addition to the approaches that integrators must pay attention to in the integration process, many other factors are extremely important in the entire process of integrating all disciplines. This issue will be studied in detail by the researchers and will be further elaborated and discussed in detail in the next research results.

2.7 Related Research Works

In reviewing research works from three sects of Buddhism relevant to the objectives of this research, the researchers classified them into four topics as follows: - 1) Related Research Works from Theravāda Sect, 2) Related Research Works from Mahāyāna Sect, 3) Related Research Works from Vajrayāna Sect, and 4) Related Research Works from the Three Sects. The details are as follows:

2.7.1 Related Research Works from Theravāda Sect

1. **Sanu Mahatthanadull**¹⁷⁹ has mentioned the equilibrium of the human body systems by integrating Buddhism and physiological discipline in his Ph.D. dissertation “Buddhist Integrated Approach for the Equilibrium of Human Body Systems”.

The research findings can be concluded that from the Buddhist viewpoint, the human body systems cannot be maintained by themselves, but they have to depend on the supporting factors both internal and external to cause those systems to be maintained forever according to the principle of *Paṭiccaṣamuppāda*. When these factors are of suitable relationship, the equilibrium will arise. Therefore, in Buddhism, there is a way of setting up the equilibrium of the human body systems by using the items of the

¹⁷⁸ Mark D. Forman, **A Guide to Integral Psychotherapy: Complexity, Integration, and Spirituality in Practice**, (Albany: State University of New York Press, 2010), p. 28.

¹⁷⁹ Sanu Mahatthanadull, “Buddhist Integrated Approach for the Equilibrium of Human Body Systems”, (Thai Version), **Ph.D. Dissertation in Buddhist Studies**, (Graduate School: Mahachulalongkornrajavidyalaya University, 2549 B.E.), pp. Abstract A-B, 127.

practice suitable for those life-supporting factors according to the principle of the Middle Path.

2. Sanu Mahatthanadull¹⁸⁰ has studied the integration between Buddhism and Biology in his research “Buddhist Biology: Systematic Relationship of Life and Environment, and the Creation of Supportive Factors for Development of Life-based on the Seven Suitable (*Sappāya*)”.

The research findings marked the concordance between the Seven *Sappāyas* and the biological principle of homeostasis. The Buddhist teachings on the seven suitable and the biological principle of homeostasis shared indistinguishable similarities. They both deal with the balance-managing system between the inside and outside of the human body. When the Twos are integrated, the seven *sappāyas* are classified into two categories thus: 1) Organism-related factors, and 2) Environment-related factors. Organism Related Factors (close-typed balancing system). This category directly related to organisms in both physical and mental facets included the third, fourth, and seventh factors respectively. Environment-related factors (open-typed balancing system), another category that distinctively referred to only physical-side factors that related to all interactions between lives and the environment by means of their life-long perpetual exchange of matter and energy between external and internal. They are the first, second, fifth, and sixth factors respectively.

3. Sanu Mahatthanadull; Phramaha Nantakorn Piyabhani; Orachorn Kraichakr and Sarita Mahatthanadull¹⁸¹ have integrated Buddhism and Biofeedback theory in their research “A Conceptual Model of Bi-Dimensional Development for Happiness Access by Biofeedback Process”.

¹⁸⁰ Sanu Mahatthanadull, “Buddhist Biology: Systematic Relationship of Life and Environment, and the Creation of Supportive Factors for Development of Life based on the Seven Suitable (*Sappāya*)”, International Conference on Social Science and Management (ICSSAM), **Conference Proceedings**, Osaka, Japan (May 10-12, 2016): 283-296.

¹⁸¹ Sanu Mahatthanadull; Phramaha Nantakorn Piyabhani; Orachorn Kraichakr and Sarita Mahatthanadull, “A Conceptual Model of Bi-Dimensional Development for Happiness Access by Biofeedback Process”, **Journal of MCU Peace Studies**, Vol.8 No.2 (March-April 2020): 377-387.

The finding showed the way that GNH practices the four pillars focusing on the middle path and contentment for individual and social happiness. While biofeedback has a strong character, that is its tools. Biofeedback plays a crucial role as a tool to help practitioners realize happiness as well as to help increase the ability to assess the relationships between meditation progress and physiological responses in meditation phenomena. Finally, when all of the knowledge is integrated, the Model named “A Conceptual Model of Bi-Dimensional Development for Happiness Access by Biofeedback Process” is the output from MENTAL and WISDOM of life. Where “happiness” can be tangibly reached, they are (1) individual happiness while staying in the phenomenon of concentration; and (2) social happiness, the 4 aspects of happiness as implied by Vajrayāna GNH.

4. Sanu Mahatthanadull and Sarita Mahatthanadull¹⁸² have integrated Buddhism with Psychology in their research “Human Behaviors in Promoting Balance of Family according to Buddhist Psychology”.

The finding showed the theories in psychology described relationships, beliefs, behaviors, and equilibrium of the family. In addition, the fivefold supportive behavior is key to promoting the sustainable balance of family according to Buddhist Psychology. They are Emotional, Esteem, Social Network, Tangible, and Informational support.

5. Sanu Mahatthanadull and Sarita Mahatthanadull¹⁸³ have proposed **four Buddhist integrated ways** of well-being promotion in their research “Holistic Well-beings Promotion for Balanced Way of Life according to Buddhist Psychology”.

From the research, it can be concluded that there are four ways of Well-beings promotion, which are, (1) practicing contentment to promote physical well-being; (2) observing the Five Precepts, having good friends, practicing the principles of service, promoting moral well-being;

¹⁸² Sanu Mahatthanadull and Sarita Mahatthanadull, “Human Behaviors in Promoting Balance of Family according to Buddhist Psychology”, **Journal of MCU Peace Studies**, Vol.8 No.1 (January-February 2020): 21-31.

¹⁸³ Sanu Mahatthanadull and Sarita Mahatthanadull, “Holistic Well-beings Promotion for Balanced Way of Life according to Buddhist Psychology”, **JIBSC**, Vol. 6 No. 1 (January-June 2020): 111-121.

(3) practicing tranquil meditation and the Mindfulness-Based Cognitive Therapy (MBCT) to promote the mental well-being; and (4) augmenting the wisdom by the practice of the four foundations of mindfulness and the fourfold paths. As a result, the “Well-beings” and “Balance Way”, the highest purpose will be finally achieved.

6. Alex C. Huynh, Harrison Oakes, Garrett R. Shay, and Ian McGregor¹⁸⁴ declared about wisdom and virtue in this research paper, “The Wisdom in Virtue: Pursuit of Virtue Predicts Wise Reasoning About Personal Conflict”.

The finding results can be concluded that Buddhism across two studies supports prior findings regarding Solomon’s paradox: Participants more strongly endorsed wise-reasoning strategies for resolving other people’s social conflict than resolving their own. In both wisdom and virtue, greater endorsement of the pursuit of virtue was associated with greater endorsement of wise-reasoning strategies for one’s personal development.

7. Gabor Kovacs¹⁸⁵ has mentioned the Buddhist sustainability development goals that interpretation of the United Nations (UN) from a Buddhist perspective in the research article “Buddhist Approach to Sustainability and Achieving Millennium Development Goals”.

The research findings can be concluded that in the Buddhist viewpoint, the four noble truths, deal with the cessation of suffering and declare its instrument, which is the *ariyo atthaṅgiko maggo* or the Noble Eightfold Path. This path is the Middle Way or the Threefold Practice, the instrument of purifying the human character. Its eight divisions can be grouped into three parts: (i) wisdom (which includes Right View and Right Decision); (ii) virtues (which includes Right Speech, Right Action and

¹⁸⁴ Alex C. Huynh, Harrison Oakes, Garrett R. Shay, and Ian McGregor, “The wisdom in Virtue: Pursuit of Virtue Predicts Wise Reasoning About Personal Conflict”, **Research Article**, Department of Psychology, (University of Waterloo, 2017), p. Abstract 1.

¹⁸⁵ Gabor Kovacs, “Buddhist Approach to sustainability and Achieving Millennium Development Goals”, **Conference Research Papers**, (Corvinus University of Budapest, 2014), p. 121.

Right Livelihood); and (iii) concentration (which is including Right Effort, Right Mindfulness and Right Concentration).

8. Jason Swartwood and Valerie Tiberius¹⁸⁶ has stated the wisdom, philosophy, and psychology in “Philosophical Foundation of Wisdom”.

The finding reviewing philosophical work on wisdom we’ve seen that the same point applies to wisdom. Accounts of wisdom simultaneously prescribe ways of being and also make assumptions about what human beings are like. Providing a plausible account of what wisdom is and how we can develop it thus requires applying the tools both of philosophy and empirical psychology.

9. Sauwalak Kittiprapas¹⁸⁷ have discussed human mind development and an appropriate path for individuals and socioeconomics to achieve the objective of sustainable development in a revised research paper “Buddhist Sustainable Development through Inner Happiness”.

The paper proposes a new approach and concept of Buddhist Sustainable Development (BSD), which is human-centered sustainable development, driven by inner happiness (happiness at the mind and wisdom levels). By applying Buddhist happiness concepts, human beings can be happy with reasonable and moderated levels of consumption and resource use as well as exhibiting more compassion and loving kindness towards others and nature.

10. Christian U. Becker and Jack Hamblin¹⁸⁸ have mentioned the role individuals play in sustainability against the backdrop of the ethical dimensions of sustainability in the research article “Conceptualizing Personhood for Sustainability: A Buddhist Virtue Ethics Perspective”.

¹⁸⁶ Jason Swartwood and Valerie Tiberius, “Philosophical Foundations of Wisdom”, In **The Cambridge Handbook of Wisdom**, eds. by Robert Sternberg and Judith Gluek, (Cambridge University Press, 2019): 10-39.

¹⁸⁷ Sauwalak Kittiprapas, “Buddhist Sustainable Development Through Inner Happiness”, **International Research Associates for Happy Societies (IRAH)**, (Faculty of Economics, Rangsit Universtiy, Bangkok, 2016), p. Abstract III.

¹⁸⁸ Christian U. Becker and Jack Hamblin, “Conceptualizing Personhood for sustainability: A Buddhist Virtue Ethics Perspective”, **A Research Article MDPI**, (Basel, Switzerland, 2021), p. Abstract.

The research paper outlined the ethical dimensions of sustainability and discussed the role of individual morality in sustainability from a virtue ethics perspective. We employ a Buddhist virtue ethical approach for conceptualizing a model of the sustainable person that is characterized by sustainability virtues, interdependent personhood, and an inherent concern for the well-being of others, nature, and future beings.

11. Ratrapee Pipattanawong¹⁸⁹ have mentioned the integrated development of Human wisdom in the Buddhist Approach in his research “Integrated Development of Human Wisdom in Buddhist Approach”.

The finding indicated that multiple intelligences could be applied to the development of a disciplined mind and respectful mind to simultaneously develop skills in various sciences and morals. This would be done by applying the seven steps of dhamma to the development of six intelligences involving learning skills to produce a disciplined mind, and four intelligences relating to human relationships and living with the integration of the Dhamma Principles which produce the respectful mind.

12. Sashika Rangani Abeydeera¹⁹⁰ has discussed the potential and challenges of Buddhism in informing organizations’ pursuit of sustainability in the thesis, “Buddhist and Sustainability-Related Organizational Practice: A Sri Lanka Focus”.

The findings showed that the academic contributions of the thesis include a multi-level and Multidimensional approach to investigating Buddhism’s influence in an organization’s pursuit of sustainability, identification of specific challenges, and expansion of possible alternative interpretations of Buddhism. The research also elaborates on which Buddhist principles and values appear to have the most traction in the organizational context.

¹⁸⁹ Ratrapee Pipattanawong, Phrasedhavinaiyaros (Suthep Pasiviko), Phrasrivinayaphon Sairung Indavudho, and Suvin Ruksat, “Integrated Development of Human Wisdom in Buddhist Approach”, **Journal of MCU Social Science Review**, Vol. 8 No.4, (October - December, 2019): 155-167.

¹⁹⁰ Sashika Rangani Abeydeera, “Buddhism and Sustainability-Related Organizational Practices: A Sri Lankan Focus”, **Ph.D. Thesis in Doctor of Philosophy**, (Faculty of Business, Economics and Law: Auckland University of Technology, 2016), p. Abstract.

13. Mukesh Kumar Verma¹⁹¹ has mentioned the ways of sustainable development is a process of Buddhist teachings that sees all things and phenomena in the research “Buddhist Way of Sustainable Development: Theory and Practice”.

The finding showed that The Buddha explained the ways to earn and share wealth virtuously and trail the path of spirituality to establish sustainable development, peace, and harmony in society. Buddhism is against the lustful attachment to insatiable things. Consumption according to Buddhism is not the final goal of a society. From the above perspective, the paper will examine the various approaches to sustainable development and responsible consumption.

14. Pahalawattage Premasiri¹⁹² discusses the Buddhist Economics can be seen as an attempt to relate economics to ethical issues taking into account the traditional Buddhist teachings that seek to establish the economic aspect of social life on a firm ethical foundation in the research, “Role of Ethics in Socio-Economic Development: A Buddhist Perspective”.

The research finding can be concluded that the Buddhist teachings recognize the psychological fact that there is no ultimate point of satisfaction in the gratification of sense desires (*kāme hi lokamhi na h’atthi titti*). It is for this reason that it is maintained that the greatest wealth is contentment (*santutṭhi paramaṃ dhanam*). Unlike a materialist value system, Buddhism introduces a concept of noble wealth (*ariyadhana*). Noble wealth consists entirely of ethical virtues enumerated in the Buddhist tradition as (1) *Saddhā* (confidence in the good teachings), (2) *Sīla* (good conduct involving ethical restraints), (3) *Hiri* (a sense of ethical shame to indulge in morally reprehensible behavior), (4) *Ottappa* (a sense

¹⁹¹ Mukesh Kumar Verma, “Buddhist Way of Sustainable Development: Theory and Practice”, **United Nation Day of Vesak Buddhist: Approach to responsible consumption and sustainable development**, (UNDV, Vietnam, 2015), p. 373.

¹⁹² Pahalawattage Premasiri, “Role of Ethics in Socio-Economic Development: A Buddhist Perspective”, **Research of Buddhist Virtues in Socio-Economic Development: ICDV Conference Volume**, (Mahachulalongkornrajavidyalaya University, 2011), p.136.

of moral dread to do what is wrong, (5) *Suta* (learning conducive to moral well-being), (6) *Cāga* (generosity) and (7) *Paññā* (wisdom or insight). Economic development by trading off these ethical values for monetary gain is considered to be not worth attaining.

15. Bhikkhu Brahmali¹⁹³ has mentioned the Buddhist teachings of Buddhism are firmly rooted in the principles of non-violence and compassion, making it impossible to argue in favor of conflict and violence in the research, “Buddhist Wisdom to Achieve World Peace”.

The finding showed that the concept of oneself can be applied to promote peace in two ways. Compassion and forgiveness, crucial for a peaceful society, depend on recognizing the conditioned nature of human beings. The teaching of non-self extends this conditionality to its logical conclusion, emphasizing that compassion and forgiveness are always appropriate responses.

16. Elizabeth C Sites et al.¹⁹⁴ have studied the integration of faith and learning in their research “A Phenomenology of the Integration of Faith and Learning”.

From the study, it can be inferred by examining how eight student-nominated faculty who teach at an evangelical Christian liberal arts university described their understanding and practice of the Integration of Faith and Learning (IFL). Collected data via informal, conversational, taped interviews led to the emergence of two primary themes: the Inseparability of Faith from Practice and the Outworking of Faith in Practice. The findings highlight the need to create a more conducive context in which students can learn IFL and call for a re-examination of the already murky discourse surrounding definitional aspects of IFL. The study proposes to move the discourse forward by offering a new, yet-to-be-discussed construct that emanated from the participants of this study. A conceptual model describing its relationship with IFL is proposed.

¹⁹³ Bhikkhu Brahmali, “Buddhist Wisdom to Achieve World Peace”, **Conference Papers of Buddhist Wisdom Coping with Global Crises**, (Mahachulalongkornrajavidyalaya University, 2023), p. 22.

¹⁹⁴ Elizabeth C. Sites, Fernando L. Garzon, Frederick A. Milacci, Barbara Boothe, “A Phenomenology of the Integration of Faith and Learning”, **Journal of Psychology and Theology**, Vol. 37 No. 1, (2009): 28-38.

2.7.2 Related Research Works from Mahāyāna Sect

17. Ven. Dr. Nguyen Anh Tuan¹⁹⁵ has discussed a Buddhist approach to Engaged Buddhism using *pañcasīla* as a virtue in Thailand in his Ph.D. Dissertation named “A Buddhist Approach of Socially Engaged Buddhism for an Establishment of The Five-Precepts Society in Thailand”.

From the study, the findings indicated that Thailand has faced many social problems, some of which are of a serious nature that greatly affect the lives of Thai people. These issues are divided into five main groups corresponding to the 5 precepts. Most Ven. Thich Nhat Hanh’s practice and experience, as well as the Five Precepts Village project of Thai Saṅgha, actions influence and are successful in helping others to pursue a moral life. Besides the activities run by the Five Precepts Village project, He also provides a new method of observing the five precepts which is called “Five Mindfulness Training”.

18. Ulrich Pagel¹⁹⁶ studied *bodhisattva* ideal and *Bodhisattva* Path is of wisdom and virtues in a Ph.D. Dissertation entitled “The Bodhisattvapiṭaka: Its Doctrines, Practices and their Position in Mahāyana Literature”.

From the study, it can be inferred that the content of the Bodhisattvapiṭaka indicates that its exposition belongs to the earliest treatises on the *bodhisattva*. The practices and doctrines that are expounded are invariably rudimentary and show little of the complexities that characterize their discussions in later *bodhisattva* literature. The Bodhisattvapiṭaka’s inclusion into the Mahdratnakuta rested probably on its pioneering account of the *bodhisattvacarya*. Being by far the longest work on the *bodhisattva* in the whole collection, it expounds important practices and constitutes the hub for the remaining *bodhisattva* writings in the Mahdratnakuta. The position of the Bodhisattvapiṭaka in Mahāyana

¹⁹⁵ Ven. Nguyen Anh Tuan; Phramaha Hansa Dhammaso; and Sanu Mahatthanadull, “A Buddhist Approach of Socially Engaged Buddhism for an Establishment of The Five-Precepts Society in Thailand”, **Journal of International Buddhist Studies**, Vol. 12 No. 2 (2021): 64-75.

¹⁹⁶ Ulrich Pagel, “The Bodhisattvapiṭaka: Its Doctrines, Practices and their Position in Mahāyana Literature”, **A Ph.D. Dissertation**, (London: University of London, 1992), pp.138-298.

literature. The research also mentions the Path of a *bodhisattva* which consists of wisdom and virtues. The researcher has analyzed very clearly the practice of Mahāyana virtues in the practice of Six *Pāramitā*.

2.7.3 Related Research Works from Vajrayāna Sect

19. Dorji Phuntsho¹⁹⁷ has mentioned in his research paper about Guru as the key mentor with wisdom and virtue in his Ph.D. Dissertation “The Guru Disciple Relationship in Vajrayāna Tradition: A Sacred Path to Enlightenment”.

From the research, the findings indicated that the Guru is the guide and the initiator or an ignitor for the disciples guided by compassion and wisdom, serving as a spiritual mentor, providing instruction, guidance, and personal example. The Guru or Master in Vajrayāna practices is equal to all the Buddhas. Making our connection with our Guru, whether through seeing, hearing a voice, remembering, or being touched by his hand, will lead us toward the path of enlightenment. To have complete confidence in the Guru is the only way towards the progressing path of enlightenment in Vajrayāna practices. The blessing of wisdom and compassion of our Vajra master will melt the core of our beings and can release the gold of Buddha nature within us and it’s fundamental to all schools of Tibetan Buddhism.

20. Alexander Studholme¹⁹⁸ has studied on development of Perfection of Wisdom using *Om Maṇipadme Hūṃ* Mantra as a medium in his Ph.D. Dissertation “On Early History of the *Om Maṇipadme Hūṃ* Mantra: A Study of the Kāraṇḍavyūha Sūtra”.

From the findings, it can be inferred that *Om Maṇipadme Hūṃ* is presented in many different ways as analogous to the Perfection of Wisdom and, finally, as greater than the Perfection of Wisdom. This would appear to express the idea that *Om Maṇipadme Hūṃ*, as a form of the *praṇava*, supersedes the Perfection of Wisdom as the supreme principle of the

¹⁹⁷ Dorji Phuntsho, “The Guru Disciple Relationship in Vajrayāna Tradition: A Sacred Path to Enlightenment”, **Interdisciplinary Journal of Applied and Basic Subjects**, Vol. 3 No. 5, (2022): 1-8.

¹⁹⁸ Alexander Studholme, “On Early History of the *Om Maṇipadme Hūṃ* Mantra: A Study of the Kāraṇḍavyūha Sūtra”, **Ph.D. Dissertation in Doctor of Philosophy**, (Faculty of Arts, Centre for Buddhist Studies: University of Bristol, 1999), p. 8.

Mahāyāna. Then, certain aspects of the Vajrayāna tantric-style origins of the formula are preserved. Initiation into the use of *Oṃ Maṇipadme Hūṃ*, for instance, is said to be dependent on the use of a tantric-style mandala. However, the central figure of this mandala is not Avalokiteśvara, but the Buddha Amitābha.

21. Catherine Dalton¹⁹⁹ has studied the development of “Nondual wisdom” by a guru in her Ph.D. Dissertation “Enacting Perfection: Buddhajñānapāda’s Vision of a Tantric Buddhist World”.

From the study, it may be inferred that Buddhajñānapāda’s writings are among the early tantric works to place a strong emphasis on nondual wisdom, which came to hold a major doctrinal role in later tantric traditions. The term tantric resonance was given, describing it as the “wisdom of the nonduality of the profound and the luminous”, the empty aspect of the mind integrated with its expression as the illusory form of the deity. This nondual wisdom was, for Buddhajñānapāda, the very identity of the mind and all phenomena, and even served as the source of the phenomenal world. Nondual wisdom, identified with the awakened state, suchness itself, was something that could be and indeed had to be “transferred” by a guru to his disciple during the higher tantric initiations so that a disciple could experience it directly and cultivate it employing yogic practice, to come to the final state of perfect awakening.

2.7.4 Related Research Works from the Three Sects

22. Punjaphut Thirathamrongwee and Wonchai Mongkolpradit²⁰⁰ have mentioned the common goal of the Three Buddhist Sects in the Buddhism-architecture integration in their research “A Study of the Principles of Three Major Sects for Creating Buddhist Sacred Places”.

¹⁹⁹ Catherine Dalton, “Enacting Perfection: *Buddhajñānapāda*’s Vision of a Tantric Buddhist World”, **Ph.D. Dissertation in Buddhist Studies**, (Graduate School: University of California, Berkeley, 2019), p. 295.

²⁰⁰ Punjaphut Thirathamrongwee; Wonchai Mongkolpradit, “A Study of the Principles of Three Major Sects for Creating Buddhist Sacred Places”, **Nakhara: Journal of Environmental Design and Planning**, Vol. 20 No. 2 (2021): 1-17.

From the findings, it can be inferred the Buddhist architecture of the three sects is holistic as every sect has the same spiritual goals as its foundation. The research recognizes the dimensions of the various principles of each Buddhist sect and addresses significant issues of spiritual cultivation, spiritual bonding, and spiritual anchors to qualify an area (space of virtues-concentration-wisdom) as a path of learning, practice, and development of the human mind and for one to achieve the enlightened state of Dharma in the soulless morality according to the teachings of the Buddha. In practice, the presented criteria are intended for the development of areas in terms of context and environment to elevate the efficacy of activities within the virtues-concentration-wisdom framework.

From the above research review, it was found that many research studies specifically studied only wisdom or virtue, including important principles relating to wisdom and virtue, for example, the Four Noble Truths, *Paṭiccasamuppāda*, *ariyo aṭṭhaṅgiko maggo*, etc. Some researchers proposed Buddhist wisdom to achieve world peace; and the role of virtue in socio-economic development; and proposed the application of Buddhist wisdom and virtues, together with philosophy, and psychology, to solve personal and social conflicts, and to establish sustainable development, peace, and harmony in society. In addition, many research studies presented knowledge about the SDGs or attempted to integrate important Buddhist content and principles with modern sciences, such as Buddhist biology, Buddhist architecture, etc. Importantly, some research papers have discovered Buddhist Sustainable Development (BSD) driven by inner happiness, and have found an interesting integration of wisdom with psychology.

Not only Theravāda but also Mahāyāna research related to wisdom and virtue was found to address the five precepts of engaged Buddhism, the *Bodhisattva* Path, and the Six *Pāramitā*. Vajrayāna research has also been found to present other important principles that are different from Theravāda and Mahāyāna, such as *guru*, *oṃ maṇipadme hūṃ mantra*, etc. In addition, there is also research that integrated the three sects of Buddhism into the architecture in the design of Buddhist sacred places under the principle of *tisikkha*.

In conclusion, no research has created a new theory of “Buddhism integration” specifically, either by integrating Buddhism with modern sciences, by integrating modern sciences with Buddhism, by integrating both disciplines mutually, or by integrating in other ways. Therefore, this research presents a “new theory” of Buddhism Integration for Sustainable Development of Wisdom and Virtue in the 21st Century.

Chapter 3

Research Methodology

In this research “A Theory of Buddhism Integration for Sustainable Development of Wisdom and Virtue in the 21st Century”, the following three objectives were examined, namely: - (1) to investigate the development of wisdom and virtue in the 21st century according to Buddhism and the United Nations Sustainable Development Goals (SDGs), (2) to create a theory of Buddhism integration for sustainable development of wisdom and virtue in the 21st century, and (3) to validate a theory of Buddhism integration for sustainable development of wisdom and virtue in the 21st century.

The research methodology can be presented in six areas, namely: - 1) Format of the Research, 2) Key Informants and Focus Group Discussion Specialists, 3) Research Tools, 4) Collection of Data, 5) Data Analysis, and 6) Summary of the Research Process. The details for each area are as follows:

3.1 Format of the Research

This is a qualitative research work with documentary and field studies. The methodology of the research has been established by employing the research materials and instruments, such as the collection and analysis of data from primary and secondary sources, in-depth interviews, Focus Group Discussions (FGDs),¹ as well as the use of technological devices, etc. The research findings are to create a series body

¹ Brenda L. Berkelaar, “**Interviews and Focus Groups in Qualitative Organizational Communication Research**”, in *The Sage Handbook of Qualitative Research in Organizational Communication*, Eds. by Boris H. J. M. Brummans; Bryan C. Taylor; and Anu Sivunen, (London: Sage, 2024): 298-318; Pranee Liamputtong, “**Focus Group Interviewing Method**”, eds. by Alissa Ruth; Amber Wutich; and H. Russell Bernard, *The Handbook of Teaching Qualitative and Mixed Research Methods: A Step-by-Step Guide for Instructors*, (Oxon: Routledge, 2024): 68-71.

of knowledge respectively based on the research's objectives in the following three dimensions: - (1) An investigation on the development of wisdom and virtue in the 21st century according to Buddhism and United Nations Sustainable Development Goals (SDGs), (2) A creation of a theory of Buddhism integration for sustainable development of wisdom and virtue in the 21st century, and (3) A validation of such proposed Theory of Buddhism integration for sustainable development of wisdom and virtue in the 21st century.

3.2 Key Informants and Focus Group Discussion Specialists²

This is qualitative research by analyzing data from documents and field studies relating to A Theory of Buddhism Integration for Sustainable Development of Wisdom and Virtue in the 21st Century. Based on the first and second objectives, some data and information gathering from textual collection and in-depth interviews were carried out. In particular, the third objective required a validation against the proposed theory, thus the Focus Group Discussions (FGDs) from various scholars in each Buddhist sect of Theravāda, Mahāyāna, and Vajrayāna were invited to complete such mission and “to share their views, experiences, stories, and the insightful with rich data produced”³ The key informants for in-depth interviews, the specialists for FGDs, and the areas for field studies research were carefully selected with the purposive and snowball sampling method based on the significance of the studies.

There are a total of 25 experts and scholars who are monks and Buddhist scholars from the three Buddhist sects from local and international salient universities, institutions, and organizations. Their

² See Topic 1.4.1 Scope of Sources of Data, and Topic 1.4.3 Scope of Key Informants and Focus Group Discussion Specialists in Chapter 1 for comparison.

³ Roger O’Sullivan, “**Focus Groups**”, in *The A-Z of Social Research: A Dictionary of Key Social Science Research Concepts*, Eds. by Robert L. Miller and John D. Brewer, (London: SAGE Publications Ltd., 2003), p. 120; And in David L. Morgan, “**Focus Groups**”, in *The Sage Dictionary of Social Research Methods*, Compiled and ed. by Victor Jupp, (London: SAGE Publications Ltd., 2006), p. 121; And in Amanda M. Rosen, **Effective Research Methods for Any Project**, (Chantilly: The Great Courses, 2019), p. 103; And in Herman Aguinis, **Research Methodology: Best Practices for Rigorous, Credible, and Impactful Research**, (California: Sage, 2024), p. 478.

expertise meets to requirements of using integration theory to either integrate Buddhism with sciences; or integrate sciences with Buddhism to expose the phenomena of life and the world to be more easily understood through the process and viewpoint of multidisciplinary studies.

The in-depth interviews concern a group of 15 key informants. The FGDs deal with 10 specialists. There are a total of 11 countries among the domestic and international organizations around the world, namely: - (1) USA, (2) Australia, (3) UK, (4) Thailand, (5) Japan, (6) Indonesia, (7) Vietnam, (8) China, (9) India, (10) Hongkong, and (11) Tibet. The name list is classified here:

AAA: In-depth Interviews

1. Ven. Bhikkhu Bodhi, President of the Buddhist Association of the United States (BAUS), NY, USA;
2. Bhikkhu Brahmali, Bodhinyana Monastery, Australia;
3. Emeritus Prof. Dr. Peter Harvey, Lecturer and Buddhist Researcher, University of Sunderland, United Kingdom;
4. Prof. Dr. Frank Johnny Hoffman, Lecturer, IBSC, MCU, Thailand;
5. Assoc. Prof. Dr. G Clinton Godart, Graduate School of International Cultural Studies, Tohoku University, Japan;
6. Dr. Mark Blum, Distinguished Chair in Japanese Studies, University of California, USA;
7. Dr. Asoka Bandarage, Distinguished (Adjunct) Professor, California Institute for Integral Studies, USA;
8. Assoc. Prof. Dr. Peerasak Vorasuntharosoth, Former Dean of Engineering Faculty, KMITL, and Former Director of Thailand Institute of Scientific and Technological Research, Thailand;
9. Assoc. Prof. Dr. Cherdsak Maneeruttanarungroj, Biochemist and Molecular Biologist, Department of Biology, School of Science, KMITL, Thailand;

10. Ven. Junaidi Anuwar, Dr., Mahāyāna Teacher, Thai Plum Village International Mindfulness Practice Center, Indonesia;

11. Ven. Nam Nguyen Van, Dr., Mahāyāna Lecturer, Khanh Hoa Buddhist College, Vietnam;

12. Ven. Shi Chingyun, Dr., Chan Master, Buddhism Academic of China HeBei, China;

13. Ven. Geshe Sonam Wangden (Ph.D.), Vajrayāna Master, Lharam Geshe, Sera Jey Monastic University, South India;

14. Ven. Gen Ngawang Norbu, Head of Thukdam Research Center, Sera Jey Monastic University, South India;

15. Ven. Geshe Thabkhe (Ph.D.), Vajrayāna Master, Sera Jey Monastery, South India.

BBB: Focus Group Discussions

Theravāda FGD⁴

1. Most Ven. Phra Methavinairos, Assoc. Prof. Dr. Mahamakut Buddhist University, Buddhamonthon, Nakhon Pathom, Thailand;

2. Ven. Phramaha Somphong Khunakaro, Asst. Prof. Dr. Vice-Director of IBSC, MCU, Thailand;

3. Ven. Piyaratana Walmoruve, Asst. Prof. Dr. Director of BA (Buddhist Studies) English Programme, Faculty of Buddhism, MCU, Thailand;

4. Assoc. Prof. Dr. Praves Intongpan, Department of Philosophy and Religion, Faculty of Humanities, Kasetsart University, Thailand;

Mahāyāna FGD⁵

5. Ven. Phamaha Anon Anando, Asst. Prof. Dr. IBSC Lecturer, MCU, Thailand;

⁴ Focus Group Discussion (FGD): Theravāda View, August 30th, 2023 from 1.00-3.00 p.m. on the 2nd Floor, Buddhapaññā Meeting Room, Phra Buddhaghosācāra Building, International Buddhist Studies College (IBSC) Mahachulalongkornrajavidyalaya University, Wang Noi, Ayutthaya.

⁵ Focus Group Discussion (FGD): Mahāyāna View, September 14th, 2023, 1.00 - 3.00 p.m. via Zoom Application 7767776667 Password 2020.

6. Ven. Laidong, Dr. Executive Director of Guangdong Buddhist Association, Executive Dean of Guangzhou Kelin Academy, China;

7. Ven. Thich Phap Kham, Dr. Director of Hongkong Plum Village International Buddhist Meditation Center, Hong Kong;

Vajrayāna FGD⁶

8. Ven. Tulku Tenzin Gyurmey Rinpoche, The president of TSF, TTS & DCH., Junior English Translator of HH Dalai Lama, Tibet;

9. Ven. Geshe Lharampa Thabkhe Lodoe, Dr. Director of Sera Jey Modern Education, Ex-Director of Sera Jey Science Center, South India;

10. Ven. Geshe Ngawang Norbu, Ex-Director of Sera Jey Science Center, Ex-Director of Sera Jey Modern Education, South India.

CCC: Locations for Field Studies

The location of this research is fixed in 24 Institutes and Organizations:

1. Buddhist Association of the United States (BAUS), NY, USA;
2. Japanese Studies, University of California, USA;
3. California Institute for Integral Studies, USA;
4. Bodhinyana Monastery, Australia;
5. University of Sunderland, United Kingdom;
6. IBSC, MCU, Thailand;
7. Engineering Faculty, KMITL and Thailand Institute of Scientific and Technological Research, Thailand;
8. Department of Biology, School of Science, KMITL, Thailand;
9. Mahamakut Buddhist University, Buddhamonthon, Nakhon Pathom, Thailand;
10. Department of Philosophy and Religion, Faculty of Humanities, Kasetsart University, Thailand;
11. Ministry of Education, Thailand;
12. Faculty of Buddhism, MCU, Thailand;

⁶ Focus Group Discussion (FGD): Vajrayāna View, September 20th, 2023 from 6.00 - 8.00 p.m. via Zoom Application 7767776667 Password 2020.

13. Graduate School of International Cultural Studies, Tohoku University, Japan;
14. Thai Plum Village International Mindfulness Practice Center, Indonesia;
15. Khanh Hoa Buddhist College, Vietnam;
16. Buddhism Academic of China HeBei, China;
17. Guangdong Buddhist Association, Guangzhou Kelin Academy, China;
18. Sera Jey Monastic University, South India;
19. Sera Jey Monastery, South India;
20. Sera Jey Modern Education, South India;
21. Sera Jey Science Center, South India;
22. Thukdam Research Center, Sera Jey Monastic University, South India;
23. Hongkong Plum Village International Buddhist Meditation Center, Hong Kong;
24. TSF, TTS & DCH. Tibet.

3.3 Research Tools

The research tools enabled the research team to construct concepts and theories, to manage those data and information, as well as systemic theory development and validation. The essential research tools employed in this work consisted of in-depth interviews, FGDs among the three Buddhist sects, as well as the use of technological devices in data collection and analysis, such as systematic analysis of related equipment.

AAA: CVI Examiners

The in-depth interview forms' content validity⁷ was examined with the Content Validity Index (CVI) by the 5 experts, namely: -

⁷ Animesh Hazari, **Research Methodology for Allied Health Professionals: A Comprehensive Guide to Thesis & Dissertation**, (Singapore: Springer, 2023), p. 77; Donna M. Mertens, **Research and Evaluation in Education and Psychology: Integrating Diversity with Quantitative, Qualitative, and Mixed Methods**, 6th ed., (Thousand Oaks: Sage, 2024), p. 312; See CVR for comparison in Herman Aguinis, **Research Methodology: Best Practices for Rigorous, Credible, and Impactful Research**, (California: Sage, 2024), p. 147.

1. Most Venerable Associate Professor Dr. Phra Methavinairos, Mahamakut Buddhist University, Thailand;

2. Associate Professor Dr. Praves Intongpan, Department of Philosophy and Religion, Faculty of Humanities, Kasetsart University, Thailand; and

3. Associate Professor Dr. Amnaj Buasiri, Committee of Education Council, Ministry of Education, Thailand.

4. Assoc. Prof. Dr. Suvin Raksat, Assistance to the rector for Academic Administration, Mahamakut Buddhist University, Thailand.

5. Assoc. Prof. Dr. Konit Srithong, Vice-Director of IBSC, MCU, Thailand.

The research tools that have been chosen and employed to be suitable for the type of research are listed as follows:

1. Question forms for in-depth interviews,
 2. Question forms for FGDs,
 3. CVI Form (interviews),
 4. Personal computers & types of equipment,
 5. Laptop computers & types of equipment,
 6. Internet network coverage,
 7. Emails and electronic calendars,
 8. Online applications for team meetings and interviews, e.g., Zoom, Google Meet, Google Form,
 9. Camera and video recordings,
 10. Audio recordings,
- Etc.

These were effective and important tools for conducting research throughout the process from beginning to end.

BBB: Question Forms for In-depth Interviews

The question forms for in-depth interviews were validated and revised according to the suggestions of the CVI experts, before being used for the actual interviews. The forms consisted of five questions which were mainly based on the first and second objectives of the research. They are as follows:

- Question 1:** How can one appropriately develop wisdom (*paññā*) and virtue (*sīla - samādhi*) in the context of the 21st Century?
- Question 2:** Based on your answer to Question 1, how do you think it is related to the Sustainable Development Goals (SDGs)?
- Question 3:** Do you think science promotes Buddhism or Buddhism promotes science? In what ways?
- Question 4:** How do you expect to see the theory of Buddhism Integration (BI Theory) for sustainable development of wisdom and virtue in the 21st Century?
- Question 5:** The research team theorized the Buddhism Integration Theory (BI Theory) with two rules, namely: - (1) The Rule of Dual-Relational Integration (DRI), and (2) The Rule of Holistic-Relational Integration (HRI). Do you think they're appropriate? Please elaborate on how.

CCC: Question Forms for FGDs

The question forms for FGDs consisted of two key questions which were specifically based on the 3rd objective of the research. They are as follows:

- Question 1:** Please validate the Buddhism Integration Theory (BI Theory) in this research and provide necessary suggestions for the research team.
- Question 2:** Please validate the Buddhist Sustainable Development Goals (BSDGs) of wisdom and virtue stated in the BI Theory with some suggestions.

3.4 Collection of Data

This research is a qualitative study using the qualitative method with documentary and field studies as a basis starting by first collecting data from the primary source of the Pāli Canon (Tipiṭaka), Commentaries (Atthakathā), etc. respectively by using the Pāli Text Society's Pāli version and English translation series. Besides, the primary source of various science theories was also focused. Second, the secondary sources were explored by usage of later Buddhist works of literature such as Sub-

commentaries (Tīkā), Sub-Subcommentaries (Anutīkā), Yojanā, Saddāvisesa, and Special Texts (Pakaraṇa-visesa), textbooks, research works, Doctor of Philosophy dissertations and Ph.D. thematic papers, journals, books, encyclopedias, dictionaries, newspapers, including online sources from websites, etc. All these sources were based on five languages, namely: - Pāli, Sanskrit, English, Thai, and Tibetan languages. In addition, from the Buddhism-Science integration perspective, the primary and secondary sources from modern sciences such as physics, chemistry, biology, psychology, etc. textbooks were explored in the same manner as Buddhism. In addition to those abovementioned sources, as previously mentioned, sources of data also came from the in-depth interviews with 15 key informants and FGDs with 10 specialists from a total of 11 countries⁸ from around the world, covering all three Buddhist schools. Such information was specifically used in Chapter 4 where the analytical study and theory-validation were performed.

In preparation for data collection, the research team organized group meetings to review, determine, and plan all research data collection in the following areas: - (1) The types of data collection. The research team agreed on documentary and field-study data collection through in-depth interviews and FGDs in line with the research topic and objectives, (2) The time frame for data collection, and (3) The budget and responsible persons for data collection. The collection of data for this research was divided into topics based on the three objectives in the following ways:

3.4.1 Data Collection for the First Objective

To investigate the development of wisdom and virtue in the 21st century according to Buddhism and the United Nations Sustainable Development Goals (SDGs): The research team determined the methods of data collection as follows: - (1) **Documentary Data**: by reading, analyzing, and summarizing the main points of the studies, and (2) **Field Data**: through in-depth interviews, both face-to-face and via emails, using a communication-based approach as a main pattern of communication in interviewing opinions.

⁸ See Topic 1.4.1 Scope of Sources of Data, and Topic 1.4.3 Scope of Key Informants and Focus Group Discussion Specialists in Chapter 1 for comparison.

3.4.2 Data Collection for the Second Objective

To create a theory of Buddhism integration for sustainable development of wisdom and virtue in the 21st century: The research team determined the methods of data collection as follows: - (1) **Documentary Data**: by reading, analyzing, and summarizing the main points of the studies, and (2) **Field Data**: through in-depth interviews, both face-to-face and via emails, using a communication-based approach as a main pattern of communication in interviewing opinions.

3.4.3 Data Collection for the Third Objective

To validate a theory of Buddhism integration for sustainable development of wisdom and virtue in the 21st century: The research team determined the methods of data collection as **Field Data**: through FGDs, both onsite and via Zoom online meetings, using a communication-based approach as a main pattern of communication.

3.5 Data Analysis

In this research, the data was analyzed using the following five qualitative analyses:

First, the research team primarily used **content analysis** to help categorize large amounts of textual data from Buddhism, science, and integrative sciences, as well as to organize many matrix data, visual data, etc. in a well-structured manner; Second, **thematic analysis** was mainly used for organizing and comprehending the substance key concepts of the data, particularly (1) the key principles of Buddhism, such as wisdom (*paññā*) and virtue (*kuṇa-dhamma*), the ultimate truths (*paramattha-dhamma*), the threefold training (*tisikkha*), the four developments (*bhāvanā*), the Four Noble Truths (*ariyasacca*), dependent origination (*paṭiccasamuppāda*), the thirty-seven enlightenment states (*bodhipakkhiya-dhamma*), etc.; (2) the key scientific theories, such as physics, chemistry, biology, astronomy, medical science, engineering, agriculture, technology, renewable energy, etc.; Third, **discourse analysis** was used to analyze the data regarding knowledge and practices that appeared in Pali and English languages; Fourth, **narrative Analysis** was used to provide wisdom knowledge, particularly to those Buddhist

stories from various Suttas, Dhammapada, and other Buddhism-science textual-based resources; Fifth, **grounded theory analysis** was top beneficial to the theory generation at its first start by formulating a theory around a single data case. It was to create a theoretical draft of the BI Theory for further validation by FGD experts. The following table shows the types of analysis used for each objective:

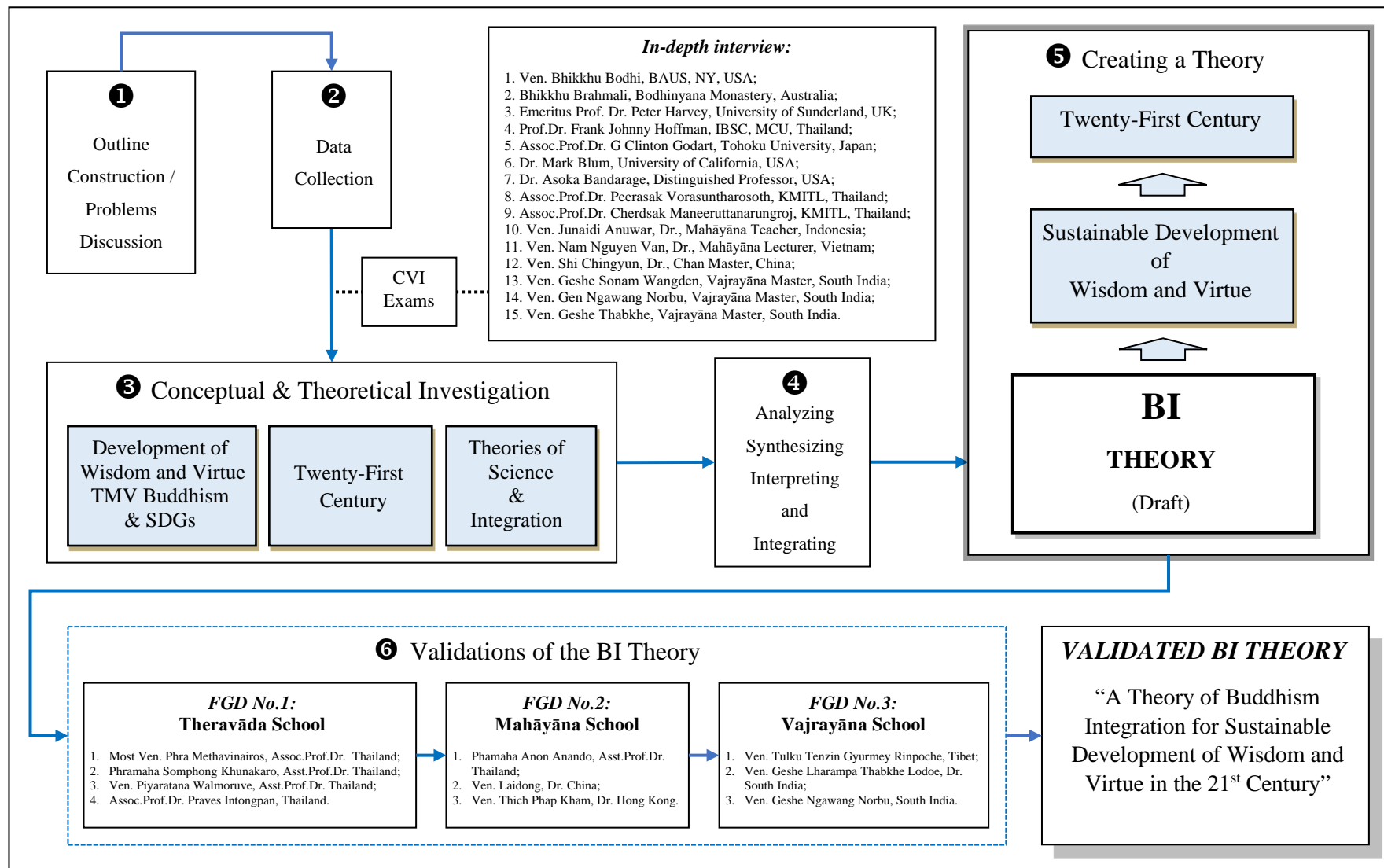
Table 3.1 The Types of Analysis Used for Each Objective

Objectives	Types of Analysis				
	• Content	• Thematic	• Discourse	• Narrative	• Grounded Theory
1. To investigate the development of wisdom and virtue in the 21 st century according to Buddhism and the UNSDGs	✓	✓	✓	✓	
2. To create a theory of BI for sustainable development of wisdom and virtue in the 21 st century	✓	✓	✓	✓	✓
3. To validate a theory of BI for sustainable development of wisdom and virtue in the 21 st century	✓	✓	✓	✓	✓

In addition, the data synthesis was carried out to bring the results of analyzed data from various areas to well-synthesized. It was done by focusing on the importance of the concept and theory of knowledge creation as well as the BI Theory for sustainable development of wisdom and virtue in the 21st century.

At this point, all of the details and information about the research methodology mentioned earlier can therefore be presented in the form of the Research Process Chart as follows:

Chart 3.2 The Research Process



Source: Assoc. Prof. Dr. Sanu Mahatthanadull et al, 2024.

3.6 Summary of the Research Process⁹

In conducting the research, the following six steps outlined a summary of the whole research process:

1) First Step: Outline Construction / Problems Discussion

The first step was outlining construction which clarified the overall outline of the work in all related dimensions corresponding to the three objectives established. Henceforth the problems discussion among the research team led by the research adviser, was made by discussing the problems encountered according to the significance of the studies. As a result, at this preliminary stage, the first outcome depicted a draft version of the research proposal in Chapter 1: Introduction, together with the research's tentative table of contents.

2) Second Step: Data Collection

A stage of data preparation for using in the research by gathering all useful data and information from various resources. After the interview forms were revised based on the feedback of the CVI experts, the data from the in-depth interviews with the fifteen key informants were gathered here. This step was mentioned in a detailed explanation in topic 3.4 "Collection of Data" of this Chapter.

3) Third Step: Conceptual & Theoretical Investigation

This step represented an investigation of key conceptual and theoretical knowledge, especially the literature reviews in Chapter 2: Concepts, Theories, and Related Research Works of three items: - (1) Wisdom and Virtue Development based on Buddhism & SDGs, (2) Twenty-First Century, and (3) Theories of Sciences and theories of Integration. This was the first attempt to investigate such key concepts and theories from Buddhism and non-Buddhist knowledge using all useful materials from the previous

⁹ See Chart 3.1: The Research Process showing an overview of the entire process of how the research has been step-by-step conducted.

step. As an outcome, the “conceptual & theoretical ideas” of the Development of Wisdom and Virtue in the 21st Century according to Buddhism and the UNSDGs, mentioned in the first objective of the study were developed.

4) Fourth Step: Analysis, Synthesis, Interpretation, and Integration

The fourth step dealt mainly with those analytical studies together with the synthesis of all data available in hands, interpretation, and integration. They were carried out carefully by using the conceptual and theoretical ideas obtained in the earlier step for the further creation of a theory.

5) Fifth Step: Creating a Theory

Then, the fifth step was an attempt to theorize “Buddhism Integration for Sustainable Development of Wisdom and Virtue in the 21st Century” from the knowledge accumulated at the beginning both from important Buddhist scriptures and important scientific resources in modern science theories including the in-depth interview information. As an outcome, a version of “Theory of Buddhism Integration for Sustainable Development of Wisdom and Virtue in the 21st Century” as mentioned in the second objective, was a critical expectation of this step. The Step completed with such a theory.

6) Sixth Step: Validation of the Proposed Theory

Finally, the last step was validating the theory proposed by the process of three FGDs from the specialists of the three Buddhist sects:

FGD Number 1: Theravāda School Validation

FGD Number 2: Mahāyāna School Validation

FGD Number 3: Vajrayāna School Validation

After validation, the BI Theory was eventually finalized as a complete version of the research project report, starting by identifying significant research findings; and compilation of bodies of knowledge and insights. Then it formulated conclusions, conducted discussions, as well as

suggested useful information in many ways. The final complete report entitled “A Theory of Buddhism Integration for Sustainable Development of Wisdom and Virtue in the 21st Century” was eventually developed and such body of knowledge was ready for its publication and further publishing as a research article and academic article in SCOPUS journals.

In other words, the research process may be presented using objectives as a determinant which results in 3 steps as follows:

Step 1: The Development of Wisdom and Virtue in the 21st Century according to Buddhism and United Nations Sustainable Development Goals (SDGs)

- 1.1 Issues for Search:**
1. Theravāda View on Roles and Functions of Wisdom and Virtue in the 21st Century
 2. Theravāda View on The Process of Wisdom and Virtue Development
 3. Theravāda Ways to Develop Wisdom and Virtue in the 21st Century According to Buddhism and SDGs
 4. Mahāyāna Ways to Develop Wisdom and Virtue in the 21st Century According to Buddhism and SDGs
 5. Vajrayāna Four-Step Practice to Develop Wisdom and Virtue in the 21st Century According to Buddhism and SDGs

1.2 Method: Documentary / Field study (In-depth interviews)

1.3 Sources of Data: Pali Canon / Commentaries / Sub-commentaries / Sub-Sub-commentaries / Special Texts / textbooks / research works / Ph.D. dissertations / Ph.D. thematic papers / journals / books / encyclopedias / dictionaries / newspapers / online sources / Key-informants

1.4 Instruments: Interview question forms / CVI Form / Personal computers / Laptop computers / Internet network coverage / Emails & electronic calendars / Online apps for team meetings and interviews (Zoom, Google Meet, Google Form) / Camera & video recordings / Audio recordings

1.5 Collection of Data: 1. Documentary Data: reading / analysis / summary
2. Field Data (in-depth interviews): face-to-face / email by communication-based approach

1.6 Data Analysis: Content analysis / Thematic analysis / Discourse analysis / Narrative analysis

Step 2: Creation of a Theory of Buddhism Integration for Sustainable Development of Wisdom and Virtue in the 21st Century

2.1 Issues for Search: 1. The Rule of Dual-Relational Integration (DRI)
2. The Rule of Holistic-Relational Integration (HRI)

2.2 Method: Documentary / Field study (In-depth interviews)

2.3 Sources of Data: Pali Canon / Commentaries / Sub-commentaries / Sub-Sub-commentaries / Special Texts / textbooks / research works / Ph.D. dissertations / Ph.D. thematic papers / journals / books / encyclopedias / dictionaries / newspapers / online sources / Key-informants.

2.4 Instruments: Interview question forms / CVI Form Personal computers / Laptop computers / Internet network coverage / Emails & electronic calendars / Online apps for team meetings and interviews (Zoom,

Google Meet, Google Form) / Camera & video recordings / Audio recordings

2.5 Collection of Data: 1. Documentary Data: reading / analysis / summary
2. Field Data (in-depth interviews): face-to-face / email by communication-based approach

2.6 Data Analysis: Content analysis / Thematic analysis / Discourse analysis / Narrative analysis

Step 3: Validation of a Theory of Buddhism Integration for Sustainable Development of Wisdom and Virtue in the 21st Century

3.1 Issues for Search: 1. Validation of BI Theory
2. Validation of the Goal of Sustainable Development of Wisdom and Virtue.

3.2 Method: Field study (Focus Group Discussions)

3.3 Sources of Data: Focus Group Discussion Specialists

3.4 Instruments: FGD question forms / Personal computers / Laptop computers / Internet network coverage / Emails & electronic calendars / Online apps for team meetings and interviews (Zoom, Google Meet, Google Form) / Camera & video recordings / Audio recordings

3.5 Collection of Data: Field Data (FGDs): onsite / Zoom online meetings by communication-based approach

3.6 Data Analysis: Content analysis / Thematic analysis / Discourse analysis / Narrative analysis / Grounded Theory Analysis

Chapter 4

Research Findings

This qualitative research analyzes data from documents and field studies relating to A Theory of Buddhism Integration for Sustainable Development of Wisdom and Virtue in the 21st Century. According to the first and second objectives, some data and information were gathered from textual collection and in-depth interviews. In particular, the third objective required a validation against the proposed theory, thus the Focus Group Discussions (FGDs) from various scholars in each Buddhist sect of Theravāda, Mahāyāna, and Vajrayāna were carried out.

In this chapter, the research team elaborates on the new knowledge based on the three research objectives. The presentation framework is presented in the following order: - 1) The Development of Wisdom and Virtue in the 21st Century According to Buddhism and the United Nations Sustainable Development Goals (SDGs), 2) Creating a Theory of Buddhism Integration for Sustainable Development of Wisdom and Virtue in the 21st Century, 3) Validating a Theory of Buddhism Integration for Sustainable Development of Wisdom and Virtue in the 21st Century, and 4) Body of Knowledge from the Research.

4.1 The Development of Wisdom and Virtue in the 21st Century According to Buddhism and the United Nations Sustainable Development Goals (SDGs)

In the world of learning, there is a saying that ‘Knowledge coupled with virtue’. That is, knowledge must go hand in hand with virtue, where is knowledge? There needs to be virtue there. In this sense, the Buddhist term that is considered to be significant in knowledge and virtue is ‘*vijjā-*

carāṇasampanṇo’, One who fully possesses knowledge (wisdom) and excellent conduct (virtue), which is one virtue, among the nine virtues of the Buddha (*buddhagūṇa*)¹. The terms wisdom and virtue always come together, and cannot be separated as Frank Johnny Hoffman stated: Moral, concentration, and wisdom go together in a Buddhist way of life² In particular, virtue is essential to lead or must control wisdom as an excellent conduct. What will happen to the world if virtue and wisdom are not developed? Of course, there will be many problems such as murder, theft, corruption, etc. that are commonly seen in today’s society. Therefore, both should be developed in parallel. It should be strictly practiced in all public and private organizations. The Buddhist wisdom and virtue therefore become SDGs of the United Nations. In this chapter, the topics of wisdom and virtue development are analyzed according to the SDGs in various sub-texts.

¹ Virtues of the Buddha (*buddhagūṇa*) or sometime it is called *navarahaguna*, *navārahaguna*, as follows:

The Blesses One is (*itipi so bhagavā*)

(1) accomplished (*araham*),

(2) fully enlightened (*sammāsambuddho*),

(3) perfect in true knowledge and conduct (*vijjācaranasampanno*),

(4) sublime (*sugato*),

(5) knower of worlds (*lokavidū*),

(6) incomparable leader of persons to be tamed (*anuttaro purisadammasārathi*),

(7) teacher of gods and humans (*satthā devamanussānaṃ*),

(8) enlightened (*buddho*),

(9) blessed (*bhagavā ti*).

Vatthūpama Suttam - M.I.37; Āhuheyya Vagga - A.III.285; The Simile of the Cloth - Bhikkhu Nānamoli and Bhikkhu Bodhi (trs.), **The Middle Length Discourses of the Buddha**, (Oxford: PTS, 2001), pp. 118-119; See for comparison in The Worthy - E. M. Hare (tr.), **The Book of the Gradual Sayings (Anguttara-Nikāya)**, Vol. III (The Books of the Fives and Sixes), (London: PTS, 1973), p. 205.

² Interview with Prof. Dr. Frank Johnny Hoffman, Lecturer, IBSC, MCU, Thailand, June 30, 2023.

The scope of study in this regard is defined in five aspects, covering the contents of the three schools of Buddhism, as follows: 1) Theravāda View on Roles and Functions of Wisdom and Virtue in the 21st Century, 2) Theravāda View on The Process of Wisdom and Virtue Development, 3) Theravāda Ways to Develop Wisdom and Virtue in the 21st Century According to Buddhism and SDGs, 4) Mahāyāna Ways to Develop Wisdom and Virtue in the 21st Century According to Buddhism and SDGs, and 5) Vajrayāna Four-Step Practice to Develop Wisdom and Virtue in the 21st Century According to Buddhism and SDGs. The details are as follows:

4.1.1 Theravāda View on Roles and Functions of Wisdom and Virtue in the 21st Century

In the highly competitive twenty-first-century world, wisdom and virtue are significant. In this sense, knowing the roles and functions of developing wisdom and virtue is very important.

1. Roles of Wisdom and Virtue

It is true to say virtue is the path of wisdom. As the analogy goes a pot is filled with water, drop by drop. In this way, the wise one accumulates knowledge little by little to fill himself with goodness. Thus, a little bit of virtue practice accumulation constantly, makes people wise with wisdom. Daily practice of virtue also contemplates the mind; a contemplated mind reaches to attain wisdom.

First, virtue according to Sīlavanta Sutta means “virtuous hermits” (*sīlavanto*),³ which plays a key role in ethical development. A virtue is an excellent trait of character. Possessing a virtue means being a certain sort of person with a certain complex mindset. A significant aspect of this mindset is the wholehearted acceptance of a distinctive range of considerations as reasons for action. The mind sets up or being mindful is very important. In the Dhammapada, it is uttered:

³ A.I.151; F. L. Woodward (tr.), **The Book of the Gradual Sayings (Anguttara-Nikāya)**, Vol. I (Ones, Twos, Threes), (London: PTS, 1979), p.135.

*Manopubbaṅgamā dhammā, manoseṭṭhā manomayā,
 manasā ce paduṭṭhena āāsati vā karoti vā,
 tato naṃ dukkham-anveti cakkam va vahato padam⁴*

Mental phenomena are preceded by mind, have mind as their leader, are made by mind.

If one acts or speaks with an evil mind,

from that sorrow follows him, as the wheel follows the foot of the ox.⁵

The above passage suggests that the four aggregates of the norm (*arūpakhandā*) have different roles from each other. The aggregate of consciousness (*viññāna-khandā*) is greater than the aggregate of feeling (*vedanā-khandā*), the aggregate of perception (*saññā-khandā*), and the aggregate of mental formation (*saṅkhāra-khandā*). That is why Buddhaghosācāriya thus said “*so atthato tāyo arūpino khandhā: vedanākkhadho saññākkhadho saṅkhārakkhandho ti - etehi manopubbaṅgamā. Etesanti manopubbaṅgamā nāma*”⁶ Those three immaterial aggregates are named as having mind as their leader. This is because “Mind is the leader of the said three immaterial aggregates”.⁷ The mind controls the three mental factors (*cetasika*): the mental factor of feeling (*vedanā-cetasika*), the mental factor of perception (*saññā-cetasika*), and the mental factor of mental formation (*saṅkhāra-cetasika*). The mind determines the direction of a person’s bodily and verbal actions. It is an internal driver that has the power to influence human behaviors for both good and evil.

⁴ Cakkhuthera Vatthu, Yamaka vagga - Dh.1.

⁵ K. R. Norman (tr.), **The Word of the Doctrine (Dhammapada)**, (Oxford: PTS, 1997), p. 1;

For an alternative translation “Mind precedes all mental states. Mind is their chief; they are all mind-wrought. If a person speaks or acts with an impure mind, suffering follows him like the wheel that follows the foot of the ox.” See Thera Narada, (tr.), **The Dhammapada**, 4th ed., (Taipei: The Corporate Body of the Buddha Educational Foundation, 1993), Verse no.1, p. 20.

⁶ DhA.I.22.

⁷ DhA.I.22.

For this reason, in the particular context of this research, the term virtue depicts a very broad meaning which includes both the higher training of morality and the higher training of concentration as in the Buddhist Threefold Training. Thus, virtue and mindset are therefore not separated in terms of practicing virtuous moral conduct with a pure mind for physical and mental purification. This is the concept of practice using the three mental factors, namely: - feelings (*vedanā*), perception (*saññā*), and mental formation (*saṅkhāra*) led by one's consciousness (*viññāṇa*) in the case of Ven. Cakkhupāla Thera's practice is mentioned above.

Second, wisdom according to Paññā Sutta means “insight” or “understand”⁸ which plays a vital role as its definition is given in the Visuddhimagga, Ven. Buddhaghosācāriya stated “understanding (*paññā*) consisting in insight knowledge associated with profitable consciousness.”⁹ This clearly shows the meaning that wisdom is an introspection knowledge that leads to prosperity, and only creates benefits, with no disadvantages. The existence of wisdom is to understand. “It is understanding (*paññā*) in the sense of act of understanding (*pajānana*).”¹⁰ Ven. Buddhaghosācāriya brilliantly breaks down the points of wisdom into four dimensions, namely: - characteristic, function, manifestation, and proximate cause as follows:

“Understanding [*paññā*] has the characteristic [*lakkhana*] of penetrating the individual essences of states. Its function [*rasa*] is to abolish the darkness of delusion, which conceals the individual essences of states. It is manifested [*paccupaṭṭhāna*] as non-delusion; its proximate cause [*padaṭṭhānāni*] is concentration.”¹¹

To fully understand wisdom, it is necessary to understand other doctrines such as the dualism of delusion and non-delusion particularly to

⁸ It.35; Peter Masefield (tr.), **The Itivuttaka**, (Oxford: PTS, 2000), p. 33.

⁹ Vism.436; Bhadantacariya Buddhaghosa, **The Path of Purification (Visuddhimagga)**, Tr. By Bhikkhu Ñāṇamoli, 4th Ed., (Kandy: Buddhist Publication Society, 2010), p. 431.

¹⁰ Vism.436; Op. cit.

¹¹ Vism.437; *ibid.*, p. 433.

concentration [*samādhi*] due to their complex interrelationship under the principle “all *Dhamma* interact in different ways”

Another key point to understand is the classification of intelligence into categories. The twelve kinds of wisdom consist of 1 single-fold section, 5 dyads, 4 triads, and 2 tetrads.

1. Firstly, as having the characteristic of penetrating the individual essences of states [*dhammasabhāvapaṭivedhalakkhaṇena*], it is of **one** kind.
2. As mundane and supramundane [*lokiyalokuttaravasena*] it is of **two** kinds.
3. Likewise as subject to cankers and free from cankers, and so on [*sāsavānāsavādivasena*],
4. As the defining of mentality and of materiality [*nāmarūpavavatthāpanavasena*],
5. As accompanied by joy or by equanimity [*somanassupekkhāsahagatavasena*],
6. As the planes of seeing and of development [*dassanabhāvanābhūmivasena*].
7. It is of **three** kinds as consisting in what is reasoned, consisting in what is learnt (heard), and consisting in development [*cintāsutabhāvanāmayavasena*].
8. Likewise as having a limited, exalted, or measureless object [*parittamahaggataappamāṇārammaṇavasena*],
9. As skill in improvement, detriment, and means [*āyāpāyaupāyakosallavasena*],
10. As interpreting the internal, and so on. [*ajjhattābhinivesādivasena*]
11. It is of **four** kinds as knowledge of the four truths, [*catubbidhā catūsu saccesu ñāṇavasena*]

12. And as the four discriminations. [*catupaṭisambhidāvasena*]¹²

From the above classification, wisdom offers profound implications. First, the wisdom of one kind, classified by its characteristic, is the awareness of the true nature; Second, the wisdom of 5 dyads is (1) *lokiya* and *lokuttara* wisdom, (2) wisdom subject to *sāsava* and *anāsava*, and so on, (3) wisdom to define *nāma* and *rūpa*, (4) wisdom accompanied by *somanasa* and *upekkhā*, and (5) wisdom as the planes of *dassana* and *bhāvanā*; Third, the wisdom of 4 triads is (1) *cintāmaya*, *sutamaya*, and *bhāvanāmaya* wisdom, (2) wisdom having objects of: *paritta*, *mahaggata*, and *appamāṇa*, (3) wisdom skilled in *āyāpāya*, *upāya*, and *kosalla*, and (4) wisdom to interpret the *ajjhattā*; Fourth, the wisdom of 2 tetrads is (1) wisdom to know *catūsu saccesu*, and (2) wisdom of *catu-paṭisambhidā*. Especially to the last kind of such wisdom “penetrating insight of language” or *nirutti-paṭisambhidā*, Mark Blum emphasized language skills as the key to knowledge “In developing wisdom, one should strive to become conversant in at least 2 languages, if possible, as this affords a broader perspective wherein one can see the limitations and prejudices embedded in the culture they grew up with.”¹³ Because language is like a weapon for learning to gain more insight.

Wisdom is an abstract human quality that reflects the multidimensional perspective of humans towards life, the world, the

¹² i. *Katividhā paññāti dhammasabhāvapaṭivedhalakkhaṇena tāva ekavidhā.*

ii. *Lokiyalokuttaravasena duvidhā.*

iii. *Tathā sāsavānāsavādivasena,*

iv. *nāmarūpavavattthāpanavasena,*

v. *somanassupekkhāsahagatavasena,*

vi. *dassanabhāvanābhūmivasena ca.*

vii. *Tividhā cintāsutabhāvanāmayavasena.*

viii. *Tathā parittamahaggataappamāṇārammaṇavasena,*

ix. *āyāpāyaupāyakosallavasena,*

x. *ajjhattābhinivesādivasena ca.*

xi. *Catubbidhā catūsu saccesu ñāṇavasena*

xii. *catupaṭisambhidāvasena cāti.*

Vism.438; Op. cit.

¹³ Interview with Dr. Mark Blum, Distinguished Chair in Japanese Studies, University of California, USA, June 30, 2023.

environment, and all things in nature to perceive nature accurately and precisely for sustainable self-development. It thus plays a crucial role in terms of seeing things as they are, which means seeing them consistently in the light of the three characteristics (*aniccam*, *dukkham*, and *anattā*). The defining mark of ignorance is not to see them in this way or to deceive oneself about their reality and range of application. G Clinton Godart suggested “It would be wise to develop insight also into the specific ways impermanence affects people in the 21st century. For example, climate change is a facet of impermanence.”¹⁴ From the dependent origination point of view, ignorance (*avijjā*) and craving (*taṇhā*) are potent causes of suffering¹⁵, knitting the net in which man is caught. The net of false hopes, unrealistic and harmful desires, delusive ideologies, and perverted values and aims.

Apart from that, its role is to overcome wrong views. The wrong view in the mind should be overcome. In this case, wrong and right views should be identified. Wrong views are known as *micchā-diṭṭhi* in Theravāda Buddhist scriptures. *Micchā-diṭṭhi*, or wrong view, having false opinions distorted to the truth. Thinking there is a fault where there is no fault and not seeing a fault where there is a fault. The right view is knowing there is a fault where there is a fault and seeing a fault where there is a fault. Thus, one should identify the correct view to develop wisdom and virtue.

Furthermore, another important role in developing wisdom and virtue is associating with good friends. The Buddha said in the Maṅgala Sutta¹⁶, that thirty-eight qualities can bring about blessings in life. The first two are ‘to avoid association with foolish people’ and ‘to associate with wise, noble people’ as follows:

¹⁴ Interview with Assoc. Prof. Dr. G Clinton Godart, Graduate School of International Cultural Studies, Tohoku University, Japan, July 13, 2023.

¹⁵ There are two main defilements which are the starting points in each cycle: - (1) Ignorance (*avijjā*) is the starting point in the past, affecting the feeling (*vedanā*) in the present; While (2) Craving (*taṇhā*) is the starting point in the present, affecting aging and death (*jarā-maraṇam*) in the future. See Vism.517; Comp.188.

¹⁶ “*paṇḍitānañca sevanā. . . etammaṅgalamuttamaṃ.*” - Khuddakapāṭhe Maṅgalasuttam, Kh.2.

Not consorting with the foolish,
 Rather with the wise consorting,
 Honouring the honourable:
 This is a supreme good omen¹⁷

The second item, ‘consorting with the wise ones’ who are virtuous and who comprehend the Dhamma can positively influence and lead us to tread the path of wisdom. A good friend is *kalyāṇamitta* in Buddhism. *Kalyāṇamitta* is a wise friend who always shows the right path for solving all phenomena. However, we must not fall prey to fake teachers or friends. We may develop trust in a wise teacher as our *kalyāṇamitta*, one who can guide us in our journey of spirituality. Still, we should be careful not to follow everything the teacher says without thinking or understanding blindly. The consequences of associating with wise and *kalyāṇamitta* are learning the right Dhamma and practicing following the Dhamma. And they teach the path to develop wisdom and virtue.

2. Function of Wisdom and Virtue

The function is the action to develop wisdom and virtue. In this case, the function of proper investigation and practice should be discussed. While the *gurus* or teacher explain their doctrine, one should regard it with the proper investigation before acceptance. Even the Buddha said to investigate his *dhamma* before acceptance. Buddhism is always a question of knowing and seeing and not of believing. The teaching of the Buddha is qualified as *ehi-passiko*, inviting you to come and see but not to come and believe. If there is no proper investigation into the acceptance of doctrine, the proper way of the right view isn’t attained. Once we are confident that such an investigation is properly done, it is time to take action.

In the Kālāma Sutta, the Buddha explains to the Kālāmas. Do not go upon what has been acquired by repeated hearing (*mā anussavena*); nor upon

¹⁷ Bhikkhu Ñānamoli (tr.), *The Minor Readings (Khuddakapāṭha)*, (Oxford: PTS, 1997), p. 2.

tradition (*mā paramparāya*); nor upon hearsay (*mā itikirāya*); nor upon by proficiency in the collections (*mā piṭakasampadānena*); nor upon logic (*mā takkahetu*); nor upon inference (*mā nayahetu*); nor upon reasoned cogitation (*mā ākāraparivitakkena*); nor upon acceptance of a view as a result of reflection (*mā diṭṭhi-nijjhānakkhantiyā*); nor upon it fits becoming (*mā bhabbarūpatāya*); nor upon respect for a recluse (*mā samaṇo no garū*).¹⁸ The Buddha explains these are the ten incorrect means of knowledge are rooted in greed, hatred, and delusion (*lobha, dosa, and moha*). These ten means of knowledge are rejected in the Kālāma Sutta in acceptance of doctrine. The Buddha was always eager to dispel doubt. To dispel doubt proper investigation is important. The wisdom that we have learned from this Sutta is “Ten investigations of information by wisdom” which is the wisdom that goes through a process of analyzing and investigating carefully before accepting each set of information leading to virtuous practices. It is a screening to not accept false information into oneself with wrong views. So, daily life needs a proper investigation to accept the doctrine. These are the functions of wisdom and virtue that people in the Twentieth century are sorely seeking.

4.1.2 Theravāda View on The Process of Wisdom and Virtue Development

In this step to illustrate two processes for developing wisdom and virtue, there are the following points should be discussed:

a) The Process of Wisdom Development Based on Three Kinds of Wisdom

According to the process of wisdom development herein, there are three kinds of wisdom focused: wisdom based on hearing, wisdom based on

¹⁸ Kesaputta (Kālāma) Suttaṃ - A. I 189; Those of Kesaputta - Bhikkhu Bodhi (tr.), **The Numerical Discourses of the Buddha: A Translation of the Aṅguttara Nikāya**. (Boston: Wisdom Publications, 2012), p. 280.

reflection, and wisdom based on meditative development or wisdom based on thought, on learning (hearing), on mental development (meditation).¹⁹

Three levels of the database are the foundation for intellectual development, namely perception (*sañña*), view (*ditṭhi*), and knowledge (*ñāna*) embodied in wisdom development and are related to the three methods the Buddha described for generating wisdom²⁰ The development of intelligence will therefore be possible in the three dimensions mentioned above. The following sequence is the process of developing wisdom based on the triad type of wisdom²¹ previously mentioned.

Process 1: *Cintāmaya-Paññā* (Reflective Wisdom): wisdom arising from one's reflection and reasoning. This is the knowledge or wisdom acquired from thought, logic, and reasoning.

In the case where *Cintāmaya-Paññā* is placed first, the examination began with an individual referred to as a 'great man' (*Mahāpurisa*), that is, with the Buddha (Or with a 'silent Buddha' - *Paccekabuddha*). Such a person has discovered and revealed the truth without relying on the instruction and teaching of others. He can apply wise reflection himself, investigating, linking, and following up on experiences in a comprehensive way, until he fathoms the truth. From *Cintāmaya – Paññā*, he moves directly to *Bhāvanāmaya-Paññā*.

Process 2: *Sutamaya-Paññā* (Learned wisdom): wisdom arising from learning or transmitting knowledge from others. This is the knowledge or wisdom acquired from books or listening to others. Buddhism considers this knowledge and learning to be of virtual importance. In the context of wisdom development, it is referred to as the instruction by others' (*Paratoghoso*; literally, the 'utterance by others').

¹⁹ Maurice Walshe (tr.), **Thus Have I Heard: The Long Discourses of the Buddha (Dīgha Nikāya)**, (London: Wisdom Publications, 1987), p. 220.

²⁰ See D.III.220; *ibid.*, p. 486.

²¹ "*Vii. Tividhā cintāsutabhāvanāmayavasena*" Vism.438.

Process 3: *Bhāvanāmaya-Paññā* (Wisdom from Spiritual development): wisdom arising from engaging in spiritual practice and cultivation. This is the knowledge or wisdom that is acquired from direct spiritual experience. Fifth-century Theravāda commentator Buddhaghosa states that this category of knowledge is produced from higher meditative absorptions.

Wisdom arises with these three processes. Reflection (*cintā*), learning (*suta*), and training (*bhāvanā*) help to generate improve and fine-tune perception, view, and direct knowledge. The learning imparted by others (*suta*), thoughts and reflection (*cintā*), and wisdom arising from practical application (*Bhāvanā*) are all forms of knowledge inherent in an individual. Thus, these three processes are very related to each other.

b) The Process of Virtue Development According to Ten Wholesome Courses of Action

Ten Wholesome Courses of Action is another sublime process to develop virtue. The Buddhist text discusses ‘ten wholesome courses of action’ (*dasa kusala-kammaṭṭhā*). These courses of action are often found under the three headings of body, speech, and mind. In the Cunda-sutta,²² ‘ten wholesome courses of action’ are outlined: ‘threefold cleansing by the body’ (*tividhaṃ kāyena soceyyaṃ*), the ‘fourfold cleansing by speech’ (*catubbidhaṃ vācāya soceyyaṃ*) and the ‘threefold cleansing by mind’ (*tividhaṃ manasā soceyyaṃ*).²³

According to the above explanation of ‘ten wholesome courses of action’ (*dasa kusala-kammaṭṭhā*), a briefing of them is as follows;

There are three sub-divisions of Right Conduct with Body

1) Abstaining from killing living creatures of all sorts, abstain from being wicked with bloody hands, not engaged in killing living creatures

²² A.V.263-268.

²³ A.V.268; F. L. Woodward, (tr.), **The Book of the Gradual Sayings (Anguttara-Nikāya)**, Vol. V (The Book of The Tens and Elevens), (London: Luzac & Company, Ltd., 1972), pp. 179-180.

in whatever method, and being compassionate towards living beings of all sorts.

2) Abstaining from stealing possessions belonging to others, whether in the village or the forest, not given to him with a deceived mind status.

3) Abstaining from misbehaving sexually with women, those who are protected by Mother, protected by Father, protected by Mother and Father, protected by Brother, protected by Sister, protected by Relations, protected by the Clan, protected by Dhamma, those having a Husband, those consented for marriage, those who are promised for marriage on a future day in whatever way (by garlanding, etc.).

There are four sub-divisions of Right Conduct with Words.

4) There is one who abstains from telling lies, in an assembly, amidst people, amidst relations, royal court, or government. When Judges asked to tell what he knows, without knowing, he would say that he doesn't know; with knowledge, he would say that he does know. Without seeing, would say that he did not see, and seeing would say that he saw. As mentioned, he would not lie knowingly, even due to self-benefit, due to the influence of others, or due to a bribe or a reward offered.

5) One would abstain from slander. Hearing from here does not go elsewhere and tell to disunite or to split here. Hearing from elsewhere would not tell here to disunite or to split there. This would unite the disunited. It would bring together the split ones. Take pleasure in uniting up groups, would speak to create unity among groups.

6) One would not talk roughly, not talk words that make others angry, speak pleasant words, words that others like. His talk paves the way to bring everybody together.

7) One would abstain from frivolous talk and gossip. Would talk that is suitable to that moment, would talk that is truth, would talk that is meaningful, would talk that is conducive to dhamma or Vinaya.

There are three sub-divisions of Correct Conduct in Mind.

8) One would abstain from being greedy. Would not think greedily about others' wealth. Would not desire the wealth belonging to others to be his.

9) One would not be angry. His mind is not defiled, and without the destructive thoughts of others, he Would think of loving-kindness to all beings.

10) One would be of the right view as follows. Would think there is merit (*vipāka*) in giving, merit in worshipping (alms-giving), merit in helping and looking after others, merit in good deeds (actions) or bad deeds (*kusala-kamma and akusala-kamma*), there is thing called present world, and there is a thing called world after death, thinks there is a specialty in Mother, thinks there is a specialty in Father, do believe in spontaneous births of beings (birth in hell, heaven, etc.), do believe in recluses and brahmins who have gained wisdom that had enabled them to gain in paths to see this world and the other worlds.

4.1.3 Theravāda Ways to Develop Wisdom and Virtue in the 21st Century According to Buddhism and SDGs

At this studying point, the research team explores the way to develop wisdom and virtue in the 21st Century according to SDGs as illustrated below.

1. The Way to Develop Wisdom in the 21st Century According to Buddhism and SDGs

As discussed earlier, three kinds of wisdom are *cintāmaya-paññā*: wisdom arising from one's reflection and reasoning; *sutamaya-paññā*: wisdom arising from learning or transmitting knowledge from others; and *bhāvanāmayā-paññā*: wisdom arising from engaging in spiritual practice and cultivation. Nowadays, developing one's three kinds of wisdom may face a serious problem with technology-over-embedded life patterns. Cherdasak Maneeruttanarungroj pointed out:

The familiarity with technological rapid responsiveness is becoming a challenge for individuals in the 21st century because people find it increasingly difficult to patiently for thinking (*cintā*), listening (*suta*), and training (*bhāvanā*). . . thus the path to developing wisdom requires distancing ourselves from these technologies to some extent.²⁴

At the global level, the UNSDGs serve as a high-level forum for joint policy formation and decision-making. What G Clinton Godart mentioned here is a key goal of wisdom under the SDG regarding climate action and environmental challenges:

Wisdom here means to find ways in which the teachings of the Buddha can help suffering people in the 21st century and focus on specific challenges of our age, such as climate change, and problems that are global nature.²⁵

There are three kinds of knowledge about wisdom development.²⁶ The fundamental ways depend on three kinds of wisdom to develop knowledge. According to levels of development, or the potency of wisdom and knowledge, they're ordered in those sequences: (1) Perception (*saññā*): knowledge derived from perceiving, remembering, and identifying the attributes of things. This knowledge is recorded in the mind. It acts as a model for comparison, raw material for thinking, and subsequent understanding.²⁷; (2) View (*ditṭhi*): reasoned understanding; truth on the level of conceptualization; knowledge mixed with cherished thoughts and opinion. Here a person concludes some kind and attaches to specific viewpoints as his or her own. This knowledge may originate from an external source, but it has

²⁴ Interview with Assoc. Prof. Dr. Cherdasak Maneeruttanarungroj, (Biochemist and Molecular Biologist) Department of Biology, School of Science, KMITL, Thailand, June 30, 2023.

²⁵ Interview with Assoc. Prof. Dr. G Clinton Godart, Graduate School of International Cultural Studies, Tohoku University, Japan, July 13, 2023.

²⁶ P.A Payutto, Bhikkhu (Somdet Phra Buddhaghosacariya), **Buddhadhamma: The Law of Nature and their Benefits to Life**, tr. by Robin Moore, 4th ed., (Bangkok: Buddhadhamma Foundation, 2019), p. 63.

²⁷ Op. cit.

passed through a screening process. It is adopted as one's own, regardless of how logical or reasonable this knowledge may be. It can even be illogical. Examples of view include eternalism (*sassata-dit̥ṭhi*; the view of an eternal soul); annihilationism (*uccheda-dit̥ṭhi*); and the view of non-causality (*ahetuka-dit̥ṭhi*).²⁸; and (3) Direct knowledge (*ñāṇa*): profound knowledge; gnosis. The term *ñāṇa* is a synonym of *paññā* (wisdom), but its definition tends to be more restricted. That is, it refers to specific functions and fruits of wisdom, for example, *kammassakatā-ñāṇa* (the insight into how beings are the owners of their intentional actions); *atītaṃsa-ñāṇa* (profound knowledge of past); *saccānulomika-ñāṇa* (knowledge in harmony with the truth); *ṭhānāṭhāna-ñāṇa* (knowledge of the possible and impossible); and *nāṇādhimutthika-ñāṇa* (knowledge of the disposition, traits, and beliefs of various beings). *Ñāṇa* refers to pure and radiant knowledge that arises spontaneously in the mind and discerns a particular quality as it really is.²⁹

On a fundamental stage, perception (*saññā*) is the raw material for all thinking and subsequent understanding. because of this, both views (*dit̥ṭhi*) and direct knowledge (*ñāṇa*) depend on perception. It is reasonably apparent how view arises from perception. The very perception or discernment of something urges one to express an opinion. Even though perceiving the capabilities of factors is useful in ordinary lifestyles, perception is selective and regularly acts to conceal or eclipse other capabilities of these objects. If human beings fail to take a look at these dynamics, they'll be deceived by using perception or allowing it to obstruct information. This is the case for plenty of people. The reasons for the wrong view to stand up include fake perceptions and an incorrect utility of perception.

The practical way is very important to develop wisdom on three kinds of wisdom. Such as; reflective wisdom (*cintāmaya-paññā*), learned wisdom (*sutamaya-paññā*), and wisdom from spiritual development (*bhāvanāmaya-paññā*). To develop these three kinds of wisdom, one should follow: First, heedlessness, as the Buddha said that heedfulness is the path to

²⁸ Op. cit.

²⁹ Ibid., p. 64.

the deathless. Heedlessness is the path to death. The heedful die not. The heedless are as if dead already.³⁰ So, heedlessness is also very important to attain knowledge and wisdom; Second, mindfulness practice, as mindfulness is very important for Wisdom development. A Mindlessness person always fails to gain knowledge. In the Dhammapada, the Buddha said;³¹ “A bhikkhu who takes delight in mindfulness and sees danger in negligence, advances like fire, burning up all fetters, great and small.”; Third, faithful friendship, cause being faithful to neighbors and the people all around living with us is very important. Co-existing with others’ opinions and own reflection can develop wisdom. Always be careful when one thinks and applies his idea; it should be good for everyone; and last, associate with wise people, because associating with wise people is very important. A wise person always applies wise ideas at every step. The person who realized Buddha’s teaching and destroyed the craving for all kinds of worldly desires no longer belongs to greed, delusion, and hatred; he is a wise man, and he is suggested to be a good friend. Associating with this type of people, wisdom must be developed.

One way of the gradual purification development is extremely important. In The Relay Chariots Sutta (Rathavinīta Sutta), the seven gradual purifications were stated: On one occasion the Blessed One was living at Rājagaha in the Bamboo Grove, the Squirrels’ Sanctuary. When it was evening, the venerable Sāriputta rose from meditation and later on had some conversation with the venerable Puṇṇa Mantāniputta about the purifications.

- 1) Purification of virtue (*sīla-visuddhi*)
- 2) Purification of mind (*citta-visuddhi*)
- 3) Purification of view (*diṭṭhi-visuddhi*),
- 4) Purification by overcoming doubt (*kaṅkhāvitarāṇa-visuddhi*),
- 5) Purification by knowledge and vision of what is the path and what is not the path (*maggāmaggañānadassana-visuddhi*),

³⁰ Dh.21.

³¹ Dh.31.

6) Purification by knowledge and vision of the way (*paṭipadāññāḍassana-visuddhi*), and

7) Purification by knowledge and vision (*ññāḍassana-visuddhi*).³²

This Sutta about the Seven Cars has had a great influence on later Buddhist works of literature, especially the *Visuddhimagga*, which Buddhaghosācāriya developed into a structure. In Chapter 14: The Aggregates (Khandha-niddesa) of the Part III Understanding (*Paññā*), he made an interesting analogy of the development of wisdom according to the meaning of the Seven Purities to the parts of a tree:

Now, the things classed as aggregates, bases, elements, faculties, truths, dependent origination, etc., are the soil of this understanding, and the [first] two purifications, namely, purification of virtue and purification of consciousness, are its roots, while the five purifications, namely, purification of view, purification by overcoming doubt, purification by knowledge and vision of what is the path and what is not the path, purification by knowledge and vision of the way, and purification by knowledge and vision, are the trunk.³³

In the end, he explains the benefits of developing understanding are of four, namely: - 1) removal of the various defilements, 2) experience of the taste of the noble fruit, 3) ability to attain the attainment of cessation, and 4) achievement of worthiness to receive gifts and so on.³⁴

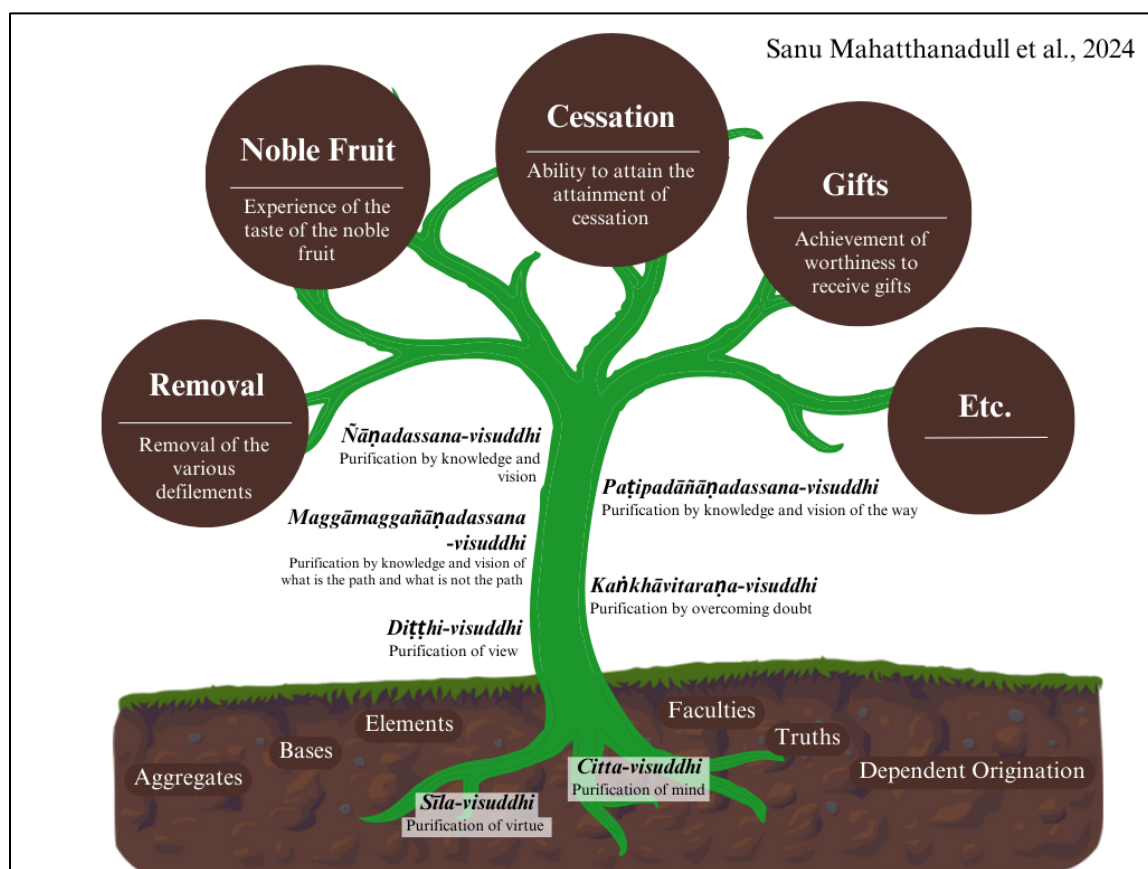
In this way, when the sequence of the development of wisdom proceeds according to the seven purifications, together with the objects of insight investigation (*vipassanābhūmi*) as soil, the development is represented in the following figure: Developing Wisdom Tree by the Seven Stages of Purity (Visuddhi):

³² Rathavinita Sutta - M.I.149; The Relay Chariots Sutta - Bhikkhu Ñānamoli and Bhikkhu Bodhi (trs.), **The Middle Length Discourses of the Buddha**, p. 243.

³³ Vism.443; Bhadantacariya Buddhaghosa, **The Path of Purification (Visuddhimagga)**, tr. By Bhikkhu Ñānamoli, 4th Ed., p. 439.

³⁴ Vism.698; *ibid.*, p. 730.

Diagram 4.1 Developing Wisdom Tree by the Seven Stages of Purity (Visuddhi)



From the figure, the tree is a living being that can grow and flourish with various supporting factors, such as nutrients in the soil and fertilizers, water, sunlight that helps in the photosynthesis of plants, etc. For trees to stand strong, they need soil as a solid element for them to hold firmly and not be swayed by the wind. Soil is the first vital factor, before other important ones. In addition, soil is rich in elements and nutrients that are necessary for the life and growth of trees. The objects of insight investigation (*vipassanābhūmi*), namely, aggregates (*khanda*), sense bases (*āyatana*), elements (*dhātu*), faculties (*indriya*), truth (*sacca*), and dependent origination (*paṭiccasamuppāda*), are also important like good soil for wisdom to grow and flourish well with sufficient nutrients for growth. On the contrary, if the tree receives bad nutrients from the soil, it is not conducive to growth and

harms growth. The yogi who practices augmenting wisdom must consider the three common characteristics of all things, choosing to use *vipassanābhūmi* as a medium.

The taproot is an organ for absorbs water and nutrients to feed other parts of the tree. Without it, the tree would quickly be cut off from food and die due to lack of food. Therefore, the taproot is compared to the purification of virtue (*sīla-visuddhi*), and the purification of mind (*citta-visuddhi*). Meanwhile, the remaining five purifications, such as purification of view (*ditṭhi-visuddhi*), etc. are like the trunk of a tree because they are the strongest part of the tree, as they must withstand the sun, wind, rain, storms, and various external dangers from animals and the environment around them. The wisdom will gradually be developed and become stronger in order during these five purification processes, until reaching the final level, which is purification by knowledge and vision (*ñāṇadassana-visuddhi*). Ultimately, when a tree is developed in the right way, it will bear fruit; and when wisdom is developed to its fullest extent, the fruit will also appear. Above all, developing wisdom has a good friend as a key factor. Cherdasak Maneeruttanarungroj viewed:

Wisdom training is like a cow walking; when the front foot moves, the hind foot follows. Therefore, developing wisdom would be very hard if we were to train solely on our own. Hence, we must have someone “walking in front of us,” such as a teacher, mentor, or spiritual friend, who leads us. So, approaching these “wise individuals” is a part of our continuous intellectual development.³⁵

Among good and bad friends, the Buddha advised to choose only good friends. A good friend who knows how to use wisdom leads to a prosperous life, not a downward path. In the Maṅgala Sutta:

Not consorting with the foolish,
Rather with the wise consorting,

³⁵ Interview with Assoc. Prof. Dr. Cherdasak Maneeruttanarungroj, (Biochemist and Molecular Biologist) Department of Biology, School of Science, KMITL, Thailand, June 30, 2023.

Honouring the honourable:

This is a supreme good omen.³⁶

To follow the Buddha's advice, those who need to develop their wisdom in the right way must seek the right path by associating with people who are good friends. The commentator has further explained the key meanings as follows:

“. . . rather with the wise (*paṇḍitānaṃ*); they pick their way (*paṇḍanti*), thus they are wise (*paṇḍita*); the intention is that they go with the gait of knowledge of benefits here and now and in the life to come. With that sort of wise men. Consorting (*sevanā*): frequenting, reverencing, them; companionship, intimacy, with them.³⁷

The wise ones pick their skillful means only with wisdom. They are wise in knowing what to do and what not to do; what is wholesome and what is unwholesome; what is beneficial and what is not beneficial. They are not only wise in knowing the benefits of this world (*diṭṭhadhammattha*) but also the next world (*samparāyikattha*) including Nibbāna (*paramattha*).³⁸ Therefore, to develop one's wisdom, one should frequent or reverence them; making companions or intimate only with the wise ones. Wisdom will further lead to virtue.

³⁶ *Asevanā ca bālānaṃ paṇḍitānañca sevanā*
pūjā ca pūjanīyānaṃ etammaṅgalamuttamaṃ

Kh.3; Bhikkhu Ñāṇamoli (tr.), **The Minor Readings (*Khuddakapāṭha*)**, p. 3.

³⁷ KhA.124-125; Bhikkhu Ñāṇamoli (tr.), **The Illustrator of Ultimate Meaning (*Paramatthajotikā*)**, Part I, (Oxford: PTS, 1997), p. 135.

³⁸ Nd¹.169; Nd².26.

The three benefits are classified according to the time of their effect: - (1) Benefits obtainable within this life (*diṭṭhadhammattha*), (2) Benefits to be obtained in the life to come (*samparāyikattha*), and (3) The highest benefit, i.e. Nibbāna (*paramattha*). The general Suttas usually mention only the first and second benefits, with the second covering the third benefit.

2. The Way to Develop Virtue According to Ten Wholesome Courses of Action

The ten wholesome courses of action are the right way to develop virtue. It is a fact of morality and ethical fact. The ten wholesome courses of action clean the body, word, and action. Hence, in developing virtue, these play an important role.

Ten wholesome courses of action are the way to develop virtue in three steps. These are as follows: **Step 1)** How to do body cleaning with ten wholesome actions? Three actions of ten wholesome actions are the way to cleanse the body. These actions concern keeping bodily pure. This purity is not with using cosmetics or highly expensive cosmetics or moisturizers. This purity explores loving-kindness to all living beings. It is telling to avoid killing living creatures of all sorts, stealing possessions belonging to others, and misbehaving sexually with women. Thus, bodily restraint is a sublime step in developing virtue; **Step 2)** The Other four out of ten wholesome actions are the way to cleanse the speech; these wholesome actions talk about abstaining from telling lies, abstaining from slander; not talking roughly, and abstaining from frivolous talk and gossip. Thus, the way of virtual development can be cultivated by being wordy and restrained; **Step 3)** The last three among ten wholesome actions are how to cleanse the mind. These are abstaining from being greedy, abstaining from being angry, and accomplishing with the right view virtues must be developed. Among the Ten, the right view with mindfulness plays a crucial role in controlling our body and mind. Basically “Virtue (*sīla*) should be developed based on right mindfulness (*sammā-sati*).³⁹

One technique Cherdak Maneeruttanarungroj proposed makes sense “It is necessary to make people truly see the negative consequences of not observing ethical principles, such as killing, stealing. . . Once they do

³⁹ Interview with Ven. Junaidi Anuwar, Dr., Mahāyāna Teacher, Thai Plum Village International Mindfulness Practice Center, Indonesia, October 7, 2023.

understand, they can expand the implications further.”⁴⁰ Therefore, it might be decided that virtue is the ethical process and a way to develop wisdom to be excellent conduct. And both of them may carry out sustainable development. “One practices meditation together with having virtue, one can gain wisdom according to the principle of *sīla*, *samādhi* and *paññā*”⁴¹ also known as wisdom and virtue.

The wisdom-virtue framework aligns well with the SDGs. First, wisdom fosters critical thinking and informed decision-making, contributing to Goal 4 (Quality Education) and Goal 12 (Responsible Consumption and Production). Then, virtue promotes values like integrity, compassion, social justice, mindfulness, and mental well-being, contributing to Goal 16 (Peace, Justice, and Strong Institutions), Goal 3 (Good Health and Well-being), and Goal 4 (Quality Education). Together, these elements advocate for a holistic approach to personal and social well-being for sustainable development.

In conclusion, there is a word said ‘Some people have good knowledge but bad behavior, some people have little knowledge but good conduct.’ If there were only two to choose from, which one would you choose? In this chapter, there has been discussed the related points; the role and function of developing wisdom and virtue, the processes of their development, and ways to develop wisdom and virtue in the 21st century according to UNSDGs. According to the discussion, it was found that people’s wisdom, according to Buddhism, can be developed for the arising of wisdom from one’s reflection and reasoning; wisdom from learning or transmitting knowledge from others; and wisdom arising from engaging in spiritual practice and cultivation. These three things lead to the development of wisdom in two ways: the fundamental way and the practical way. In addition,

⁴⁰ Interview with Assoc. Prof. Dr. Cherdsak Maneeruttanarungroj, (Biochemist and Molecular Biologist) Department of Biology, School of Science, KMITL, Thailand, June 30, 2023.

⁴¹ Interview with Assoc. Prof. Dr. Peerasak Vorasuntharosoth, Former Dean of Engineering Faculty, KMITL, Thailand, June 30, 2023.

the research also focuses on ten wholesome actions in the development of wisdom and virtue, which involves cleansing the body, speech, and mind. Based on the questions above, the preferred choice would be someone with good conduct and little knowledge. However, if a third option is available, people would most likely prefer someone with good knowledge and virtue. This research has presented the roles, duties, processes, and methods of developing wisdom and virtue in dealing with global crises in the 21st century according to the UNSDGs.

4.1.4 Mahāyāna Ways to Develop Wisdom and Virtue in the 21st Century According to Buddhism and SDGs

According to the Mahāyāna tradition, each of us has the seeds of wisdom, the wisdom of the Buddha. But that sprout was not cultivated or cared for, soil shortage, water shortage, and air shortage, so the Bodhi tree could not grow. That intellectual substance, like a jewel mixed in a stone, is not honed, so no light is emitted. Virtue also needs to be practiced and developed every day. To develop wisdom and virtue in the 21st Century, we must practice according to the dharmas taught by the Buddha. There are many practices the Buddha taught, but we should choose a few common practices that can be implemented in our daily lives. However, to develop it in a sustainable status and suitable to the current development orientation of society, the ways to develop wisdom and virtue have to follow SDGs.

a. The Way to Develop Wisdom and Virtues Based on Holistic Learning

In the Mahāyāna tradition, the development of wisdom and virtue are not separate but are integral to each other. The most important thing for intellectual development is education. In Buddhism, there are many different ways of education. Education here is understood as receiving, absorbing, and listening to good and useful teachings and these teachings contain a lot of content to help people develop wisdom. It is not enough just to hear the essentials of the Buddha's teaching, to see the essentials in the scriptures. In our daily life, we can hear useful things around us. In other words, we have to practice observing to draw valuable lessons about the Buddhadharma. While

hearing, seeing, and observing we try not to let our selfish desires get attached to our seeing, hearing, and observing. One way to ensure that we practice in the right direction with wisdom and virtue is to study the plausible scriptures of the Tipiṭaka and Commentaries. Ven. Nam Nguyen Van addressed “First, we should collect the knowledge of wisdom and virtue from Tipiṭaka, after that we should meditate *samatha* and *vipassanā* to firm virtue as well as to bring up wisdom.”⁴²

For Mahāyāna Buddhism, The Threefold Training (*trīśikṣā*) plays an important role as a method of practice for attaining the enlightenment of Bodhisattvas. This is also the most effective way to wholly develop both virtue and wisdom according to Mahāyāna Buddhism.

1) *Śīla*: or Precept is the minimal standard of Buddhist morality. The precepts clearly show us what to do and what not to do, establish a structure of a virtuous life, to achieve true holy life for the sake of liberation, enlightenment, and the ideal of service. for human life. Each precept is directly related to our life, that is all evil deeds should be avoided and all good deeds to strive for and to purify one’s mind. Precepts help practitioners self-regulate their actions, words, and thoughts, to establish inner peace. by the protective and controlling features of the precepts, making the practitioner feel secure and abide in this Dharma and precepts.⁴³ The precepts create a legal corridor to prevent unwholesome dharmas that have not yet arisen and to eradicate evil dharmas that have arisen. At the same time, precepts also promote and manipulate wholesome energy through actions, words, and thoughts.

Although Buddhist precepts and worldly laws have different purposes, they have the same meaning. It is personal improvement and social stability. Therefore, Buddhist precepts, in addition to nurturing the Saṅgha, are also the foundation for building social ethics. According to the Dictionary

⁴² Interview with Ven. Nam Nguyen Van, Dr., Mahāyāna Lecturer, Khanh Hoa Buddhist College, Vietnam, October 7, 2023.

⁴³ Bhadantacariya Buddhaghosa, **The Path of Purification (Visuddhimagga)**, tr. By Bhikkhu Ñāṇamoli, 4th Ed., p.48.

of Philosophy, “Ethics is one of the formations of social consciousness, a social institution that performs the function of regulating human behavior in all areas of social life”. So, morality is a matter of human values, good and bad, virtue and non-virtue. Based on moral principles, people adjust their behavior under social ethics. And the goal of that adjustment is to bring happiness back to people.

2) ***Samādhi***: or concentration, according to Mahāyāna Buddhism, meditation is a means of spiritual development. The word “*Samādhi*” itself in Pali also means cultivation, and development, referring to spiritual expansion or development of the mind. Meditation in Buddhism is not only aimed at helping our mind to calm down, but also towards the purification and removal of defilements in the mind, the negative influences stemming from greed, hatred, delusion, ego, arrogance, and doubt. In addition, meditation in Buddhism is also to nurture and develop good qualities such as compassion, confidence, wisdom, etc.

3) ***Prajñā***: or wisdom refers to the practice of realizing and seeing the true nature of reality. It involves observing thoughts, emotions, and feelings without attachment or aversion, for a deeper understanding of impermanence, suffering, and selflessness. Insight meditation practice helps practitioners achieve a positive mental state and gain insights. Ven. Junaidi Anuwar pointed out the importance of mindfulness in the practice of Vipassana:

Right mindfulness can develop right comprehension (*sampajañña*), which is the foundation of practice the virtue. When one develops the right mindfulness and right comprehension in a longer time, then the right concentration will appear regularly to have to power to look deeply (*vipassanā*) about the reality of all phenomena in life, the result is a deep understanding about life as it is without discrimination.⁴⁴

⁴⁴ Interview with Ven. Junaidi Anuwar, Dr., Mahāyāna Teacher, Thai Plum Village International Mindfulness Practice Center, Indonesia, October 7, 2023.

Mindful meditation practice is the most effective method to develop wisdom and virtue in modern society. Ven. Nam Nguyen Van gave systematic instructions:

First, it is building rules of behavior based on five precepts, eight precepts, ten precepts of *sāmaṇera*, the precepts of Bhikkhu and Bhikkhuni, as well as mental rules of Bodhisattva; **Second**, improving knowledge that is collected through studying as well as researching from books and Tipiṭaka and practicing tranquil meditation; **Third**, recognizing three characteristics of all things, impermanence, suffering, and non-self.⁴⁵

All of these are ways of developing wisdom and virtue through holistic learning, following the Mahāyāna approach.

b. The Way to Develop Virtue Based on the Perfections and the Four Immeasurable Minds: In Mahāyāna Buddhism, the six *Pāramitā* or six perfections are “bases for training”, because they are the most fundamental dimensions and they guide Buddhist practitioners toward the goal of enlightenment or awakening. Being generous, morally aware, tolerant, energetic, meditative, and wise is what it means for a Buddhist to be enlightened.⁴⁶ To be enlightened is to be a wholesome, holy, virtuous, and wise one. Ven. Junaidi Anuwar added a Mahāyāna view on virtue covering both morality and concentration, “Virtue is not only about precepts or about what should do or should not but developing a clarity of mind in order to avoid unwholesomeness (*akusala*) then taking proactive actions to develop wholesomeness (*kusala*).”⁴⁷ This shows the importance of a wholesome mental state during one’s virtuous practice. The six perfections imply six qualities that express how a Bodhisattva lives according to Mahāyāna Tradition. A set of six perfections became common among some genres of

⁴⁵ Interview with Ven. Nam Nguyen Van, Dr., Mahāyāna Lecturer, Khanh Hoa Buddhist College, Vietnam, October 7, 2023.

⁴⁶ Dale S. Wright, **The Six Perfections: Buddhism and the Cultivation of Character**, (Oxford: Oxford University Press, 2009), pp. 4-5.

⁴⁷ Interview with Ven. Junaidi Anuwar, Dr., Mahāyāna Teacher, Thai Plum Village International Mindfulness Practice Center, Indonesia, October 7, 2023.

mainstream Buddhist literature and developed into a standard list in many Mahāyāna sutras. The six are (1) generosity (*dāna*), (2) morality (*sīla*), (3) patience (*kṣānti*), (4) energy (*vīrya*), (5) concentration (*dhyāna*), and (6) wisdom (*prajñā*). This list was expanded to complement the ten stages (*bhūmi*)⁴⁸ traversed by a bodhisattva in the course leading to full Buddhahood. Here, the six perfections are a practice that combines self-development from the level of virtue (*sīla*), concentration (*samādhi*), and wisdom (*paññā*), with a primary focus on the development of virtue (*sīla* and *samādhi*). The first five perfections are practices related to developing virtue and concentration, while the sixth final perfection is solely about developing wisdom. This is to confirm the right practice that the previous five perfections will be carried out properly and controlled by wisdom.

Regarding concentration development, Mahāyāna follows the meditative states of the “*brahma-vihāra*”, or “living in the Brahman-heaven” in Sanskrit, as quintessential characteristics of the Buddha-nature (*buddha-dhātu*). Because when we have practiced the Four Immeasurable Minds, we will see that the benefit of loving-kindness is to help us remove anger, ill will, and hatred. A person with a large heart of compassion, a large area of love that everyone loves and wants to be friends with. Accordingly, these four immeasurable minds are the highest quintessence of the soul and at the same time the reason and foundation for all our actions. Our mind and body based on those minds will be free from three poisons and the effective way to gain the pure mind; being free from getting rebirth in the cycle of birth.⁴⁹ In short, loving-kindness, compassion, joy, and equanimity are good and noble virtues to build a perfect human being, a happy family, and a good society.

In conclusion, Mahāyāna’s wisdom-virtue practice is based on holistic learning, perfections, and the four immeasurable minds, which can significantly contribute to achieving the SDGs. First, Holistic Learning: The

⁴⁸ Three more perfections are added to make a set of ten perfections: - (7) skill-in-means (*upāya-kauśalya*), (8) resolution (*praṇidhāna*), (9) strength (*bala*), and (10) knowledge (*jñāna*).

⁴⁹ A.10.208, Brahmavihāra Sutta: The Sublime Attitudes

Threefold Training supports SDG 4 (Quality Education), SDG 13 (Climate Action), and SDG 15 (Life on Land) through sustainable practices; Second, The Perfections: A bodhisattva's virtue practices promote justice, equality, and peace, supporting SDG 5 (Gender Equality), SDG 11 (Sustainable Cities and Communities), and SDG 16 (Peace, Justice, and Strong Institutions); Third, The *Brahmavihāra*: Driving efforts to alleviate suffering, aligning with SDG 1 (No Poverty) and SDG 3 (Good Health and Well-Being). By embodying wisdom and virtue, individuals and communities can actively contribute to a more sustainable and equitable world. These are the Mahāyāna ways to develop wisdom and virtue in the 21st Century according to Buddhism and SDGs

4.1.5 Vajrayāna Four-Step Practice to Develop Wisdom and Virtue in the 21st Century According to Buddhism and SDGs

Wisdom and virtue are of utmost importance for human self-development. They are mutually supportive of human quality, “Wisdom and virtue are two concepts that complement each other. Wisdom enriches the practice of virtue by adding deeper meaning, while virtue lays the foundation for profound wisdom to develop.”⁵⁰ The twenty-first century is the era where humanity faces a crisis of psychological well-being, which one way or the other caused by immense technological development and busy lifestyle. To address such issue, Vajrayāna Buddhism presumably can provide some contribution through the concept of Stage of Creation (བསྐྱེད་རིམ) and Completion (རྫོགས་ལུ་རིམ) as which are key practice in it. In Vajrayāna Buddhism, no experiential application can be done without preliminary practice and every single practitioner recommended doing preliminary practice before any tantric implementation and Stage of Creation (བསྐྱེད་རིམ) in particular. There are four steps to develop wisdom and virtue as Vajrayāna Buddhism has arranged them starting from virtue to wisdom in the following order:

⁵⁰ Interview with Ven. Gen Ngawang Norbu, Head of Thukdam Research Center, Sera Jey Monastic University, South India, October 7, 2023.

STEP NO.1 - Preliminary Practice:

The preliminary practice is related to the development of virtue. It includes taking refuge in great beings and setting motivation (taking bodhisattva's vow). Normally, taking refuge is a fundamental practice in Buddhism and perhaps most common in every religion as well. As a Buddhist follower, Vajrayāna practitioners take refuge in three jewels (*Buddha*, *Dharma*, and *Saṅgha*). It's relatively basic compared to taking refuge in tantric tradition. The refuge⁵¹ in Vajrayāna Buddhism is complex which may lead to confusion, especially for the beginner. Yet, Master Gampopa Sönam Rinchen⁵² made it clear as follow:

ཅ་བའི་སྐྱེ་མ་རྒྱུད་པ་དང་བཅས་པ་ནམས་ལ་སྐྱབས་སུ་མཆིའོ། །མཆིད་གྲོགས་ཚོས་མཛད་དང་བཅས་པ་ནམས་ལ་སྐྱབས་སུ་མཆིའོ། །

སྣོད་ཀྱི་འཛིག་རྟེན་དང་ལ་ལྟན་སྐྱེ་མའི་ཚོགས་ལ་སྐྱབས་སུ་མཆིའོ། །བརྒྱུད་ཀྱི་སེམས་ཅན་སྣ་དང་སྣ་མོའི་ཚོགས་ལ་སྐྱབས་སུ་མཆིའོ། །

(May I) take refuge in root-guru alone with all the lineage-holder masters.

(May I) take refuge in the dharma friends who are implementing the dharma.

(May I) take refuge in the container (the world which is embodiment of) Gurus.

(May I) take refuge in the contain living-species (that are embodiment of) Deva and Dākinī.⁵³

The verse suggests that for the beginners. Vajrayāna is all about visualization until the mind has achieved the state of pure. And to the pure vision, there is neither a lower and higher realm, nor noble and ordinary person, etc. Everything is equally appropriate be the refugee and is not something made up by visualization but reality. In Vajrayāna therefore anything and everything is refuge.

⁵¹ In Vajrayāna Buddhism, there are three refuge formulations, the Outer, Inner, and Secret forms of the Three Jewels. They are: - (1) The Triple Gem (*triratna*), (2) the Three Roots, and (3) the Three Bodies of a Buddha (*trikāya*) respectively.

⁵² Master Gampopa Sönam Rinchen (1079-1153 C.E.)

⁵³ Master Gampopa Sönam Rinchen, **The Four Dharmas of Gampopa**, (Tibetan version), (Bhutan: KMT press Thimphu Bhutan, 2016), p. 1.

Since the Vajrayāna is a part of Mahāyāna Buddhism, bodhisattva's vow is key to the practice, and there are two systems to take it including Maitreyanātha and Mañjuśrī's tradition. Both systems are equally accepted by legendary masters. However, one visualizes that in front of all the remarkable refugees that have been mentioned above and chant the seven branch prayers faithfully:

ཕྱག་འཚམ་བ་དང་མཚན་ཅིང་བཤགས་བ་དང་། །རྗེས་ཡི་རང་བསྐྱེད་ཞིང་གསོལ་བ་འདེབས། །

phyag 'tshal ba dang mchod cing bshags pa dang //

rjes yi rang bskul zhing gsol ba 'debs//

དགེ་ཅུང་ཟད་བདག་གིས་ཅི་བསགས་པ། །ཐམས་ཅད་བདག་གིས་བྱང་ཚུབ་བྱིར་བཟོ་བའོ། །

dge cung zad bdag gis ci bsags pa//

*thams cad bdag gis byang chub phyir bsngo ba'o//*⁵⁴

The seven branches are: prostrate to the master, Buddhas, and bodhisattvas, confessing the negative actions, making offerings, rejoicing the virtue of others, requesting to turn the wheel of dharma, beseeching not to pass into Nirvāṇa, and dedicating the merit for all sentient beings to achieve enlightenment.

After chanting the seven branch prayers, then recite following stanza three times with pure devotion:

འཁོར་བ་ཚོག་མ་མེད་པ་ཡི། ། ('khor ba thog ma med pa yi/ /)

སྒོན་གྱི་ཐ་མ་ཇི་སྲིག་པ། ། (sngon gyi tha ma ji srig pa/ /)

དེ་སྲིད་སེམས་ཅན་པན་དོན་དུ། ། (de srid sems can phan don du/ /)

སྟོན་པ་དབག་ཡས་སྟུང་བར་བགྱི། ། (spyod pa dpag yas spyad par bgyi/ /)

འཇིག་རྟེན་མགོན་པོའི་སྟུན་ཟུ་འདིར། ། ('jig rten mgon po'i spyan snga 'dir/ /)

བྱང་ཚུབ་མཚོག་ཏུ་སེམས་བསྐྱེད་དོ། ། (byang chub mchog tu sems bskyed do/ /)⁵⁵

⁵⁴ The text has been converted to Wylie for non-Tibetan readers.

⁵⁵ The text has been converted to Wylie for non-Tibetan readers.

The Stanza means: may I apply the six-perfection for the sake of all sentient beings until the circle of Saṃsāra ended, just like the previous Buddhas and bodhisattvas such as Mañjuśrī, Avalokiteśvara, and Maitreyañātha has taken the vow.⁵⁶

After one has taken the vow, then it should be joyous oneself as “I have never got such opportunities, how fortunate I am today” and also let the all of guest ghosts and gods as well as all living beings of six-realms be joyous like “today I have done great job that promised to Buddhas and bodhisattvas as I will help all living beings until the world gets empty, so you should be happy for that too” and also visualize that they also satisfied and happy for what one has done and offer the flowers.⁵⁷

STEP NO.2 - Stage of Creation:

The stage of creation (བསྐྱེད་རིམ) or deity-yoga is directly related to the development of virtue. It is one of the two practices in Vajrayāna Buddhism. Without it, one dares not to admit that he or herself is a tantric practitioner. There are numerous *yogas* exist based on deities. One of which is implementing the stage of creation (བསྐྱེད་རིམ) based on Avalokiteśvara’s deity-yoga. It is simple yet most beneficial. Nearly everybody in the Himalayan region applies this very deity-yoga, as long as they are Buddhist. It is therefore going to explain the deity-yoga according to Avalokiteśvara’s practice.

(1) Deity Visualization: with the motivation of “I am going to apply the Avalokiteśvara’s deity-yoga to benefit entire sentient beings”. Renounce the conceptualization of perceiving oneself as an ordinary being made of five-aggregate, eighteen-element, etc... and purified as emptiness. Within that notion (the union of clearness and emptiness), visualize a moon on the lotus flower and the so-called *seed character* white (*Hrī* ཧྲི) at the center of it. Disperse the rays from the *Hrī* (ཧྲི), send to the ten directions and pleased

⁵⁶ ‘jig med chos kyi dbang po. Kun bzang bla’I zhal lung (Tibetan version), (Bhutan KMT press Phuentsholing Bhutan, 2003), p. 121.

⁵⁷ Śāntideva, **Bodhisattvacaryāvatāra: Guide to Bodhisattva’s Way of Life**, (Bhutan: KMT press Thimphu Bhutan, 2003), p.5.

buddhas and their sons out there. Again, the rays go to the different realms of *samsāra*, help the living beings in there, return to the seed character, and imbibe into it.

After that, the *Hrī* (ॐ) transforms into the deity Avalokiteśvara the embodiment of Buddhas' compassion with the appearance of one face and four arms; is sitting in the full-lotus-posture on the seat of moon and lotus flower. The two upper hands joined together at the center of the body and the lower two respectively holding crystal beads and lotus flowers. As every single gesture has significance, it is crucial to remember them clearly from the crown to the lotus seat.⁵⁸

(2) Mantra Recitation: Visualize the seed character white (*Hrī* ॐ) at the lower part of the deity and the six-syllable mantra, *Oṃ maṇi padme hūṃ* (ཨོཾ་མ་ཎི་པདྨེ་ཧཱུྃ) does the clockwise circle around it. Again, just like before, disperse the rays from the entire mantra chain, and send them to the ten directions. The rays pleased Buddhas and their sons; then the rays go to the different realms of *samsāra* and help the living beings in there. After that, it returned to the mantra chain and imbibed into them. Meanwhile, the yogi/yogini recites the six-syllable mantra alone with the visualization.

(3) Recitation Protocol: during the mantra recitation, falling asleep, speaking, eating, and drinking... are extremely prohibited until the one round of the bead. In case any of these hindrances occur, it's recommended to restart from the beginning. Among the different varieties of beads, the literature says that the one that is made of glass, or the *bodhicitta-mala* perfect for the recitation. Moreover, the *yogi* or *yogini* has to recite the mantra in these manners: neither too fast nor too slow nor too long. There are some other protocols it must adhere to, or else all the hardship that one has gone through will be wasted.

⁵⁸ Kun Mkhyen Pad Ma Dkar Po, *Spyan Rang Gzigs Kyi Sgrub Thabs*, (Bhutan: Dratshang Press Thimphu, 1990), pp. 233-235.

Some practitioners cut out the entire outside world and go to recitation retreats just to recite the mantra one hundred million times which takes approximately seven years whereas others do it for their daily practice, around one hundred times or more. The *yogi* or *yogini* uses the bead to count the mantra. Perhaps this is a reason why one sees most of the Himalayan people with beads, elder-generation in particular.

In conclusion, as long as one has recited the mantra without violating the protocol, sometimes the deity appears to him or her. With the help of *Deva*'s power, it will definitely achieve the Buddhahood within one or at least in sixth lifetime let alone the obtaining the prosperity in this life.⁵⁹

STEP NO.3 - Stage of Completion: This step “The Stage of Completion རྫོགས་ཅིང་མཉམ་པོ་” is directly related to the development of wisdom. Once the recitation is completed, visualize that all the phenomena that can be experienced with the sixth senses transformed into rays, and the rays also imbibe into oneself. The self, itself naturally becomes emptiness (the emptiness that has been studied above during the study of wisdom in Vajrayāna Buddhism). Wisdom and virtue are inseparable.

Ven. Geshe Sonam Wangden shared his Vajrayāna perspective, “Wisdom can be developed through the threefold methods of learning. To develop the wisdom is simply to observe the *sīla* thoroughly, thereby developing the concentration or *samādhi* leading to the wisdom.”⁶⁰

Wisdom from the Vajrayana perspective can be developed in three ways based on the types of wisdom as viewed by Ven. Geshe Thabkhe, “To develop wisdom, we have to study at the beginning and eventually, the classical Buddhist method in three ways, hearing, contemplation, and meditation.”⁶¹ As also agreed by Ven. Gen Ngawang Norbu:

⁵⁹ Kun mkhyen pad ma dkar po, **Sdom Gsum Rgyan**, (Taiwan: The Corporate Body of Buddha Education Foundation, 2005), pp. 121-122.

⁶⁰ Interview with Ven. Geshe Sonam Wangden (Ph.D.), Vajrayāna Master, Lharam Geshe, Sera Jey Monastic University, South India, October 7, 2023.

⁶¹ Interview with Ven. Geshe Thabkhe (Ph.D.), Vajrayāna Master, Sera Jey Monastery, South India, October 7, 2023.

In our highly globalized world, wisdom can guide practitioners in effectively embodying and preserving virtue. In the 21st century, traditional methods of gaining knowledge remain highly relevant. These methods include hearing, contemplating, and meditating.⁶²

No matter how fast the world spins, human wisdom from a Buddhist perspective remains everlasting and can be appropriately applied to the modern world without becoming obsolete. He went on to say that “Hearing involves listening to others and engaging in self-reading; Contemplating encompasses analyzing and experimenting; Meditating refers to applying and familiarizing oneself with the gained knowledge in practical usage.”⁶³ This classification of wisdom into three types is similar to the Theravāda as mentioned by Buddhaghosācāriya.⁶⁴ It is an important principle that each sect can commonly use.

Through the Stage of Completion, one should let it be as it is without even a tiny bit of conceptualized thought. If it thinks one is mindful of emptiness, it is indeed not. One should maintain that mindfulness without realizing the mindfulness.

As the great yogi Milarepa said:

སྒོམ་པ་པོ་མེད་སྒོམ་བྱ་མེད། །བཟོད་བྱའི་ས་དང་ལམ་དག་མེད། །

“There is neither practitioner nor the object that is been practiced,

Nor the path and (*boddhisattava*’s) stage that should be achieved”.⁶⁵

It has practiced that standard. This is one and only path that the *yogi* or *yogini* has to follow to achieve enlightenment. If one implements the

⁶² Interview with Ven. Gen Ngawang Norbu, Head of Thukdam Research Center, Sera Jey Monastic University, South India, October 7, 2023.

⁶³ Interview with Ven. Gen Ngawang Norbu, Head of Thukdam Research Center, Sera Jey Monastic University, South India, October 7, 2023.

⁶⁴ “*Tividhā cintāsutabhāvanāmayavasena.*”- Vism.438; Bhadantacariya Buddhaghosa, **The Path of Purification (Visuddhimagga)**, Tr. By Bhikkhu Ñāṇamoli, 4th Ed., p. 433.

⁶⁵ Milarepa, **Exploring the True Middle Way** (དུམ་མ་ཡང་དག་པར་བརྗོད་པ), (Taiwan, The Corporate Body of Buddha Education Foundation, 2005), p. 3.

creation stage (བསྐྱེད་རིམ) without the practice of the completion stage (རྫོགས་རིམ) it is useless. The practice might lead to fulfilling some desire in this life, but not to the fulfillment of attaining Buddhahood. Sometimes implementing the creation stage (བསྐྱེད་རིམ) without the practice of the completion stage (རྫོགས་རིམ) can be danger also.⁶⁶

STEP NO.4 - Merit Dedication: this final step is also related to the development of wisdom. It plays an important role in Buddhism as it seals the action and protects it from being wasted. In this case, one may share the merit as follows:

དགེ་བ་འདི་ཡིས་ལྷུང་དུ་བདག་ཀྱི་རྣམ་པར་གཟིགས་དབང་འགྲུབ་གྱུར་ནས། །
འགྲོ་བ་ཅིག་ཀྱང་མ་ལུས་པ། །དེ་ཡི་ས་ལ་འགོད་པར་ཤོག།

By the wholesome deed (that I have accomplished)

May I attain the status of Avalokiteśvara

And may (I) set all living beings

To the status of Avalokiteśvara.

Vajrayāna Buddhism focuses on cultivating compassion (virtue) and wisdom. In the context of Vajrayāna, wisdom and virtue can be aligned with the SDGs to eradicate global poverty, protect the environment, and create prosperity for all by 2030. The outcomes from practicing the Four-Step Practice path, include SDG 1 (No Poverty): Emphasizing compassion and selflessness can drive poverty alleviation efforts; SDG 3 (Good Health and Well-being) and SDG 16 (Peace, Justice, and Strong Institutions): Mindfulness and meditation can promote mental and physical health; and create peace, justice, and strong society; SDG 13 (Climate Action): Understanding interconnectedness can inspire environmental stewardship; Last and importantly is SDG 4 (Quality Education): Under the big umbrella of the Threefold Training, Buddhism has promoted sustainable education from the first day of the establishment of *Dhamma-Vinaya* until its last day.

⁶⁶ HH the 7th Je-Khenpo of Bhutan, **Spyan Ras Gzigs Kyi Sgom Zlas**, (Thimphu Bhutan: Phama Printing and Publishers, 2009), pp. 224-228.

It can be said that “Education is the best investment, and the best investment is investing in education” Ven. Gen Ngawang Norbu agreed:

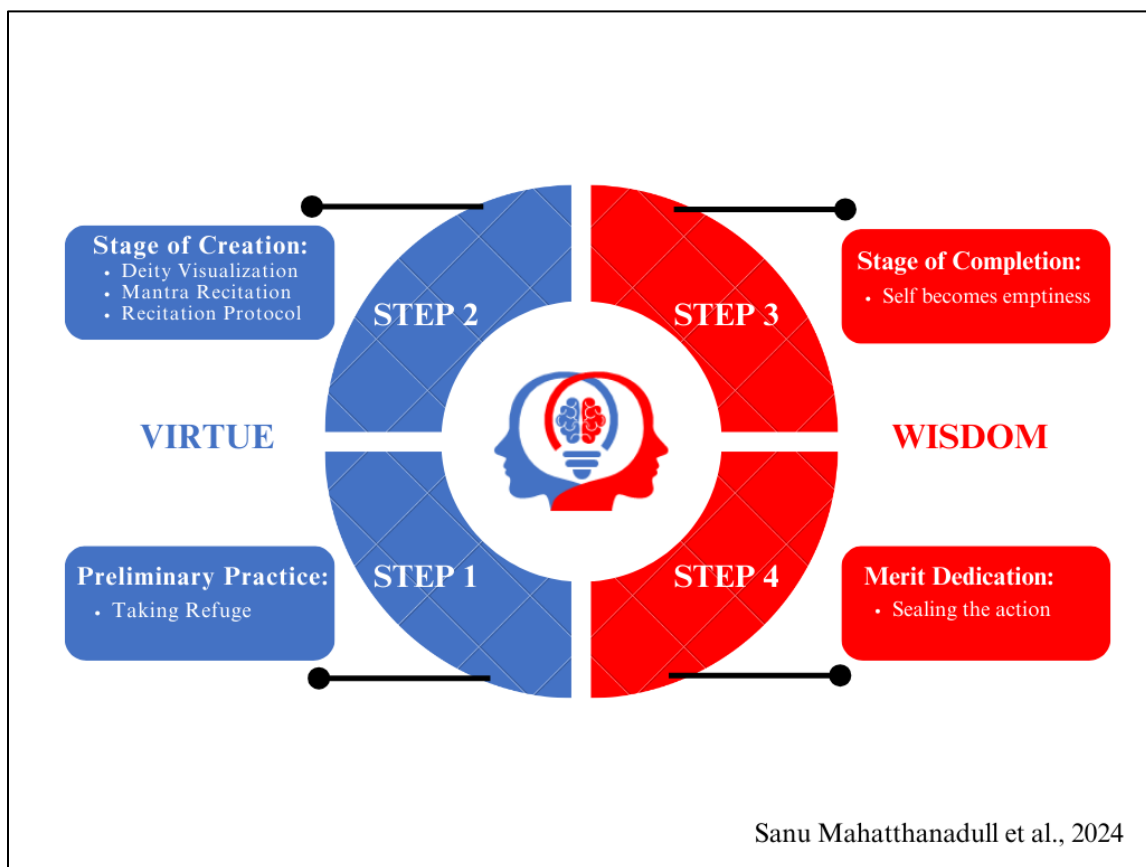
Investing in education is essential for equipping citizens with critical and creative thinking skills to address pressing issues such as the gap between rich and poor, climate change, and other looming man-made disasters. This approach can help redirect focus inward, reducing overexploitation driven by greed and sensory pleasure. To achieve sustainability, we need a sense of contentment, which can be fostered through an education that combines virtue with well-informed wisdom.⁶⁷

It is to achieve the temporary goal of gaining a high standard level of intellect and sharp wisdom to be used in any field as well as good behaviors to live happily and peacefully in society.⁶⁸ Fundamentally, Vajrayana’s focus on inner transformation can support broader societal goals, fostering a holistic approach to sustainable development. The following diagram shows the four steps of following the Vajrayāna practice to developing wisdom and virtue for living in the 21st century:

⁶⁷ Interview with Ven. Gen Ngawang Norbu, Head of Thukdam Research Center, Sera Jey Monastic University, South India, October 7, 2023.

⁶⁸ Interview with Ven. Geshe Sonam Wangden (Ph.D.), Vajrayāna Master, Lharam Geshe, Sera Jey Monastic University, South India, October 7, 2023.

Diagram 4.2 The Four Steps for Vajrayāna Practice for Wisdom-Virtue Development in the 21st Century



Practically, the entire process from preliminary practice, implementation of both the creation stage (བསྐྱེད་རིམ་), and completion stage (རྫོགས་རིམ་) and dedicating the merit can be done within ten minutes. The Tantrayāna is that easy. If one can maintain mindfulness of deity-yoga even during working hours etc. the person is practicing Vajrayāna. And it is something that people from all professions, especially the new generation, can easily follow. Ven. Geshe Thabkhe suggested, “To try to create a platform for the younger generation to join the working or researching with scientists. Let

them debate on the benefits of this very life and the next life”⁶⁹ for wisdom and virtue development.

In conclusion, from the Vajrayāna Buddhist perspective, wisdom and virtue are the key elements in life. Moreover, to achieve the goals of sustainable development these two elements are the foundation; without which, achieving the goal is impossible. When it comes to the development of virtue and wisdom in the 21st century Vajrayāna teachings provide a huge number of resources which does not require much time and are friendly to the busiest lifestyle.

4.1.6 Concluding Remarks

Virtue plays a key role in ethical development. With the twelve kinds of wisdom consisting of 1 single-fold section, 5 dyads, 4 triads, and 2 tetrads, it plays a vital role as an introspection knowledge that leads to prosperity; seeing things as they are; overcoming wrong views; and developing wisdom and virtue. The function of wisdom and virtue is to develop wisdom and virtue. The process of wisdom development deals with three levels of the database that are the foundation for intellectual development, namely perception (*sañña*), view (*ditṭhi*), and knowledge (*ñāṇa*). The fundamental ways depend on the perception-view-knowledge three processes of wisdom to develop knowledge based on three kinds of wisdom. The most important way of the gradual purification development of wisdom is the seven gradual purifications in the Relay Chariots Sutta (Rathavinīta Sutta). The ways to develop virtue in the 21st Century, Theravāda suggests three steps based on the Ten Wholesome Courses of Action. The wisdom-virtue framework aligns well with the SDGs, especially with Goals 3, 4, 12, and 16.

In Mahāyāna Buddhism, wisdom-virtue holistic learning ways of development, wisdom, and virtue are not separate but are integral to each other. The most important thing for intellectual development is education in

⁶⁹ Interview with Ven. Geshe Thabkhe (Ph.D.), Vajrayāna Master, Sera Jey Monastery, South India, October 7, 2023.

terms of precept, concentration, and wisdom. The way to develop virtue according to Mahāyāna based on the Perfections and the Four Immeasurable Minds. They can significantly contribute to achieving the SDGs, especially to the Goal 1, 3, 4, 5, 11, 13, 15, and 16. In Vajrayāna Buddhism, there are four steps to develop wisdom and virtue. They can be arranged starting from virtue to wisdom respectively. When it comes to the development of virtue and wisdom in the 21st century Vajrayāna teachings provide a huge number of resources which does not require much time and are friendly to the busiest lifestyle.

4.2 Creating a Theory of Buddhism Integration for Sustainable Development of Wisdom and Virtue in the 21st Century

According to the second objective, data and information gathering from the textual collection and in-depth interviews were carried out to create a theory of Buddhism-Integration before being validated further. The Theory of Buddhism Integration (BI) aims to sustainably develop wisdom and virtue for the universal, all citizens, all professions, all genders, all ages, and all religions, who are living in the 21st Century. The key informants provided comments supporting the strengths of this Theory as Ven. Gen Ngawang Norbu upheld “The BI Theory broadens the scope for cooperation and fosters the idea of the oneness of humanity. It profoundly impacts harmonious living and helps preserve the environment for future generations”⁷⁰ who play a key role in the future development of our world. G Clinton Godart also advocated, “The elements of the BI Theory are all very appropriate as fruitful ways to investigate a Buddhist approach to sustainable development. These are all timeless truths that pertain to all human beings on the planet.”⁷¹ Ven. Geshe Thabkhe pointed out opportunities for integrating Buddhism:

The BI Theory was made available to be practical level in general people. This is a great opportunity to integrate the Buddhist ethical

⁷⁰ Interview with Ven. Gen Ngawang Norbu, Head of Thukdam Research Center, Sera Jey Monastic University, South India, October 7, 2023.

⁷¹ Interview with Assoc. Prof. Dr. G Clinton Godart, Graduate School of International Cultural Studies, Tohoku University, Japan, July 13, 2023.

framework with modern, education, especially psychology and psychotherapy, and many disciplines.⁷²

The term “**integrate**” (v) literally means to make integrable, integrator;⁷³ to combine two things;⁷⁴ to combine two or more things to form or create something, or to make something a part of another larger thing.⁷⁵ According to the Oxford American Dictionary of Current English, the definition is of two: (a) combining parts into a whole; and (b) completing an imperfect thing by adding parts.⁷⁶ Different from the definitions in the Merriam-Webster Dictionary: (a) to form, coordinate, or blend into a functioning whole: unite; (b) to incorporate into a larger unit.⁷⁷ The term “**Integral**” is sometimes found, which etymological means making up a whole; made up of parts.⁷⁸ The term “**integration**” is used as a noun, which means the act or an instance of integrating.⁷⁹ The act or process of uniting different things.⁸⁰ It is the linking of one or more things together into a whole under a common core.”⁸¹ It is often found in the form of an adjective, such as

⁷² Interview with Ven. Geshe Thabkhe (Ph.D.), Vajrayāna Master, Sera Jey Monastery, South India, October 7, 2023.

⁷³ H. W. Fowler, **A Dictionary of Modern English Usage**, (New York: Oxford University Press Inc., 2009), p. 278.

⁷⁴ Margaret Deuter; James Greenan; Joseph Noble; Janet Phillips (Eds.), **Oxford Collocations Dictionary for Students of English**, Fifth impression, (Oxford: Oxford University Press, 2003), p.424.

⁷⁵ Stephen J. Perrault (Ed.), **Merriam-Webster’s Advanced Learner’s English Dictionary**, (India: Replika Press Pvt. Ltd., 2014), p. 859.

⁷⁶ Frank R. Abate (Ed. in Chief), **The Oxford American Dictionary of Current English**, (New York: Oxford University Press, Inc., 1999), p. 410.

⁷⁷ Frederick C. Mish (Ed. in Chief), **The Merriam Webster Dictionary**, (Springfield: Merriam-Webster, Incorporated, 2004), p. 378.

⁷⁸ T. F. Hoad (Ed.), **Oxford Concise Dictionary of English Etymology**, (New York: Oxford University Press, 2000), p. 238.

⁷⁹ Frank R. Abate (Ed. in Chief), **The Oxford American Dictionary of Current English**, p. 410.

⁸⁰ Louisa May Alcott et.al., **Merriam-Webster’s Elementary Dictionary**, (Springfield: Merriam-Webster, Incorporated, 2009), p. 359.

⁸¹ Look in Kriangsak Charoenwongsak, Prof. Dr., **Integrative Thinking**, (Bangkok: Success Media Co., Ltd., 2011.), (Thai Version), pp. 2-3.

“integrated method. . . to create a complete whole”⁸² or Integrative approach,⁸³ and so on.

In Buddhism, the English term “integration” is found to have three possible implications rooted in Pāli. The **first** implication is “*ekatta*”, synonymous with “being one”, “oneness”, “unity”, and “identity”.⁸⁴ “*Ekodi*” is synonymous with “woven into one”, and “unified”.⁸⁵ “*Ekodibhāva*”, is synonymous with “unification”.⁸⁶ The **second** implication, “*upacaya*” [*upa* + *ci*, *caya* & *ācaya*], is synonymous with “heaping up”, “gathering”, “accumulation”, and “heap”⁸⁷ which is opposite to the term “*uccheda*” which means disintegration, breaking up, and perishing.⁸⁸ The **Third** implication, “*pūraṇākāra*” is derived from *pūraṇam* + *kara* + *a*, the neuter gender (*napuṃsakaliṅga*) denoting “full”, “fullness”, “repair”, and “restoration”.⁸⁹ The root “*pūr*”, the term “*pūrati*” (v.) is used for present tense, 3rd person, the singular form⁹⁰ meaning “to get full”, or “be fulfilled”⁹¹ or “fill”.⁹²

⁸² Phra Dhammakosacariya (Prayoon Dhammacitto), Prof. Dr., **Integrative Method: Buddhism & Modern Sciences**, (Bangkok: Mahachulalongkornrajavidyalaya University, 2553 BE.), (Thai Version), p. 50.

⁸³ Denis Noble, “Neo-Darwinism, the Modern Synthesis and selfish genes: are they of use in physiology?”, **J Physiol**, 589.5 (2011): 1007-1015.

⁸⁴ Margaret Cone, **A Dictionary of Pāli Part I (a-kh)**, 3 Vols Set, (Oxford: PTS, 2001), p. 533.

⁸⁵ “Integrated” - *ibid.*, p. 541.

⁸⁶ *Op. cit.*

⁸⁷ With reference to body and form “integration” - T.W. Rhys Davids and William Stede (eds.), **The Pali Text Society’s Pali-English Dictionary**, (Delhi: Motilal Banarsidass Publishers Private Limited, 5th Ed. 2018), p. 140.

⁸⁸ *ibid.*, p. 127.

⁸⁹ Major P. Longsomboon, **Pāli-Thai Dictionary**, (Bangkok: Athorn Printing, 1997), (Thai Version), p. 507; Look in Phra Thammakittiwong (Thongdee Suratejo), **Dictionary for Buddhist Studies, Analytical Terms** (Bangkok: Liang Chiang, 2007), (Thai Version), p. 790; and in Royal Institute, **Thai Words Derived from Pāli and Sanskrit**, (Bangkok: Union Ultraviolet Co., Ltd., 2010), (Thai Version), p. 82.

⁹⁰ A.K. Warder, **Introduction to Pali**, Third Ed., (Oxford: PTS, 2001), p. 377.

⁹¹ Maung Tin, **The Student’s Pāli-English Dictionary**, (Rangoon: British Burma Press, 1920), p. 153.

⁹² James W. Gair; W.S. Karunatilake, **A New Course in Reading Pāli: Entering the Word of the Buddha**, Reprint, (Delhi: Motilal Banarsidass Publishers Private Limited, 2005), pp. 81, 193.

“*Pūraṇa*” (adj. n.) means “filling”.⁹³ “*Pūraṇe*” means “to fill up”.⁹⁴ “*Pūraṇo*” (adj.) means “filling”, or “completing”.⁹⁵ “*Kara*” means “to do”⁹⁶ “to make”,⁹⁷ “producing”, “causing”, “forming”, “making”, or “doing”⁹⁸ The root *kar*, to do + *ṇa* = *kāra* means a doer⁹⁹ “work”, or “the doer”¹⁰⁰ acting as a subject.

To summarize, integration (*pūraṇākāra*) refers to (a) the act, work, or process of unification (*ekodibhāva*), uniting, coordinating, incorporating, blending, combining, or linking two or more different things or parts to create, form, or produce a complete whole under a common core. (b) A doer of integration is called the integrator, repairer, or restorer who completes an imperfect thing by doing, making, or adding something into a part of another functioning larger thing or unit causing oneness and fullness with a new unique identity (*ekatta*). In other words, integration connotes (c) the replenishment of deficiency where integral parts are woven into one (*ekodi*). Albert Einstein supported, “Science without religion is lame, religion without science is blind”¹⁰¹ According to the BI Theory that the researchers

⁹³ *Pūraṇa* (adj. n.) [*pūreti*], *Pūraṇa* Kassapa for instance, T.W. Rhys Davids and William Stede (eds.), **The Pali Text Society’s Pali-English Dictionary**, p. 471.

⁹⁴ Luang Thepdrunanusit (Thawee Thammathat), *Dhātuppādīpikā*, 5th Ed., (Bangkok: Mahamakut Buddhist University Printing House, 1985), (Thai Version), p. 173.

⁹⁵ Robert Caesar Childers, **A Dictionary of the Pali Language**, (London: Trubner & Co., 1875), p. 393.

⁹⁶ Nārada Thera, **An Elementary Pāli Course**, Second Ed., (Colombo: The Associated Newspapers of Ceylon Limited, 1953), p. 40; “The root is the ultimate element of a verb” - Vito Perniola, **Pali Grammar**, (Oxford: PTS, 1997), p. 70.

⁹⁷ Charles Duroiselle, **A Practical Grammar of the Pāli Language**, Third Ed., (Rangoon: The British Burma Press, 1997), p. 92.

⁹⁸ T.W. Rhys Davids and William Stede (eds.), **The Pali Text Society’s Pali-English Dictionary**, p. 195.

⁹⁹ Charles Duroiselle, **A Practical Grammar of the Pāli Language**, p. 141; “Present formations of the root *kar* ‘to do’ are multifarious. We have in indicative and imperative. The stem *karo* - abstracted out of *karoti*” - Wilhelm Geiger, **A Pāli Grammar**, Tr. by Batakrishna Ghosh, Revised and ed. by K.R. Norman, (Oxford: PTS, 2005), p. 144.

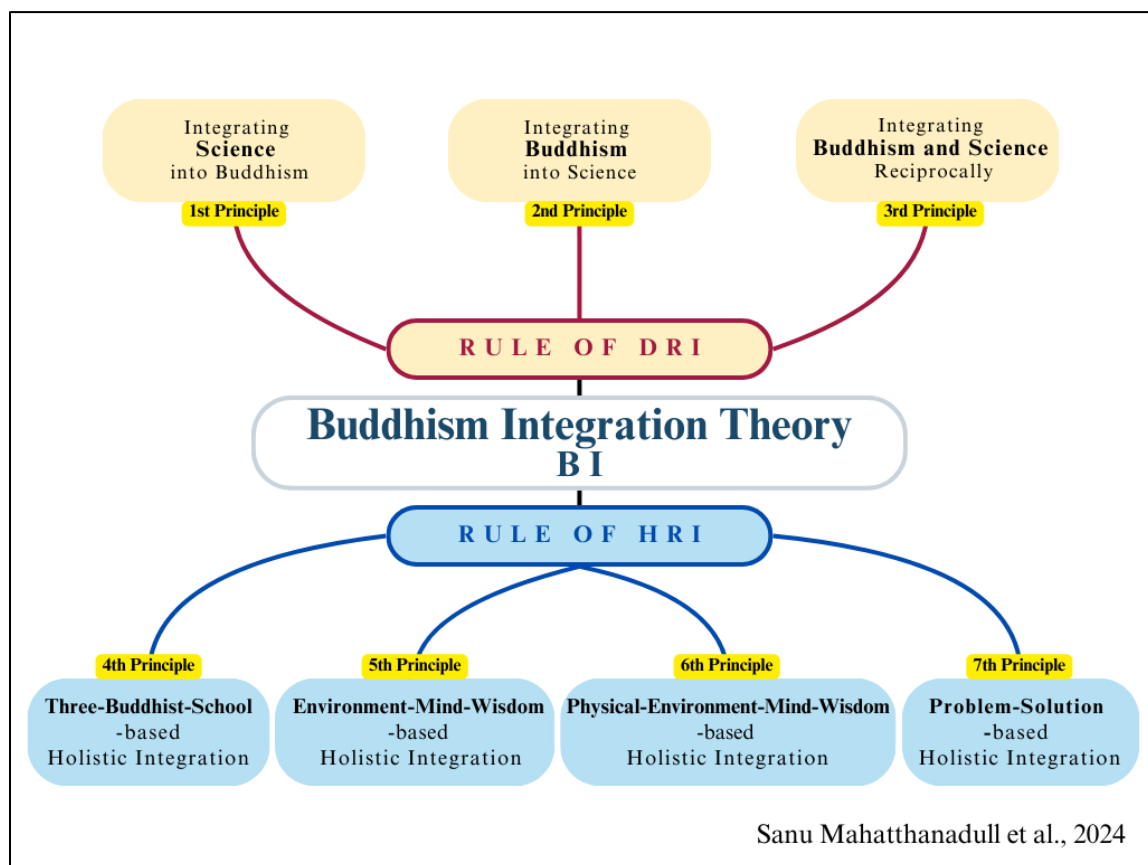
¹⁰⁰ Royal Institute, **Thai Words Derived from Pāli and Sanskrit**, p. 125.

¹⁰¹ Albert Einstein, “Religion and Science”, **New York Times Magazine**, (9 November, 1930): 1-4; Albert Einstein, “Science and Religion”, **Lynchburg College**

will further discuss, the replenishment of deficiency where integral parts of Buddhism, modern sciences, and various multidisciplinary studies will be woven into one (*ekodi*).

The presentation is divided into 2 key rules as follows: - 1) The Rule of Dual-Relational Integration (DRI), and 2) The Rule of Holistic-Relational Integration (HRI). Each rule is made up of three and four principles respectively from the first to the seventh principle. These seven principles explain seven different phenomena of dual and multidimensional integration. See the following diagram for the Buddhism Integration Theory (BI) and its Rules of DRI and HRI:

Diagram 4.3 Buddhism Integration Theory (BI) and its Rules of DRI and HRI



4.2.1 The Rule of Dual-Relational Integration (DRI)

The Rule of Dual-Relational Integration (DRI) in the context of religion and science refers to the effort to bridge and harmonize the content, information, and knowledge between these two distinct domains. Buddhism, as a religion, is seen in distinction to science.¹⁰² We need to study how to connect theory with practice.¹⁰³ To bridge and harmonize science's theories with Buddhist teachings and practices as Ken Wilber pointed out, "The essence of the premodern worldview is the Great Nest of Being, and the essence of modernity is the differentiation of the value spheres of art, morals, and science."¹⁰⁴ Buddhist religion and science have historically been seen as separate ways of understanding the world (*loka-dassana*) and life (*jīvitadassana*), often with differing beliefs (*saddhā*), values, and approaches (*magga*). The Dual-Relational Integration Rule seeks to find common ground and foster a constructive dialogue between these two seemingly contrasting areas. Mark Blum repeats "Usually the word 'integration' is used to refer to one thing merging into another. Here, Buddhism is integrating into either science, or the modern world"¹⁰⁵ This Rule recognizes that both Buddhism and science offer unique wisdom and virtue to human understanding and the nature of reality, and that they can complement each other rather than being in direct conflict in a non-peace atmosphere. The Rule of Dual-Relational Integration encourages open and respectful ideas and beliefs between Buddhist and scientific views, acknowledging the different ways in which they approach questions about existence, the world, the environment, the

¹⁰² See Alexander Soucy, "Women and Vietnamese Buddhist Practice in the Shadow of Secularism" in **Buddhism in the Global Eye**, eds. by John S. Harding, Victor Sōgen Hori, and Alexander Soucy, (London: Bloomsbury Publishing Plc., 2020): 56-68.

¹⁰³ Zhien Zhang, "Research on the Strategy of Integration of Information Technology and Inorganic Chemistry in Senior High School", **BCP Social Sciences & Humanities**, Vol. 20 (2022): 450-454.

¹⁰⁴ Ken Wilber, **Integral Psychology: Consciousness, Spirit, Psychology, Therapy**, (Boston & London: Shambhala, 2000), p. 66.

¹⁰⁵ Interview with Dr. Mark Blum, Distinguished Chair in Japanese Studies, University of California, USA, June 30, 2023.

universe, and so on. Such an idea is consistent with the view of Bhikkhu Bodhi:

Attempts to assimilate Buddhism into science; and science into Buddhism; are misleading and fallacious. Indeed, Buddhism does not face as grave a threat from modern science as the so-called Abrahamic religions have to face (when their tenets are taken literally), but Buddhism and science remain two distinct domains of human experience.

Bhikkhu Brahmali agreed “Buddhism and science should be compatible because they are different ways of looking for truth.”¹⁰⁶ Buddhism and science thus are different same things, that is, the same in aim to discover nature but different in view and methodology. The Rule of DRI thus involves identifying areas of overlap (Points of Parity-POP) and common themes (Points of Difference-POD) between Buddhist beliefs and scientific findings. This could involve exploring questions related to the origin of human beings and the universe, universal consciousness, ethical considerations, including Sustainable Development Goals (SDGs), and more.

Regarding wisdom and virtue insights in Buddhism, Buddhism intellectually provides wisdom (*paññā*) and virtue (*guna-dhamma*) frameworks that can inform scientific research and its applications. The interesting view of Bhikkhu Bodhi shared on the traditional wisdom and virtue of Buddhism is as follows:

We need a wider conception of wisdom and virtue than that offered by traditional Buddhism. Conditions today are far different from those that prevailed during the Buddha’s time some 2,500 years ago. Today there is a shared recognition of the interwoven, interconnected unity of humankind as well as the need to address in common major challenges facing all of us as a collective whole.¹⁰⁷

¹⁰⁶ Interview with Bhikkhu Brahmali, Bodhinyana Monastery, Australia, June 30, 2023.

¹⁰⁷ Interview with Ven. Bhikkhu Bodhi, President of the Buddhist Association of the United States (BAUS), NY, USA, September 9, 2023.

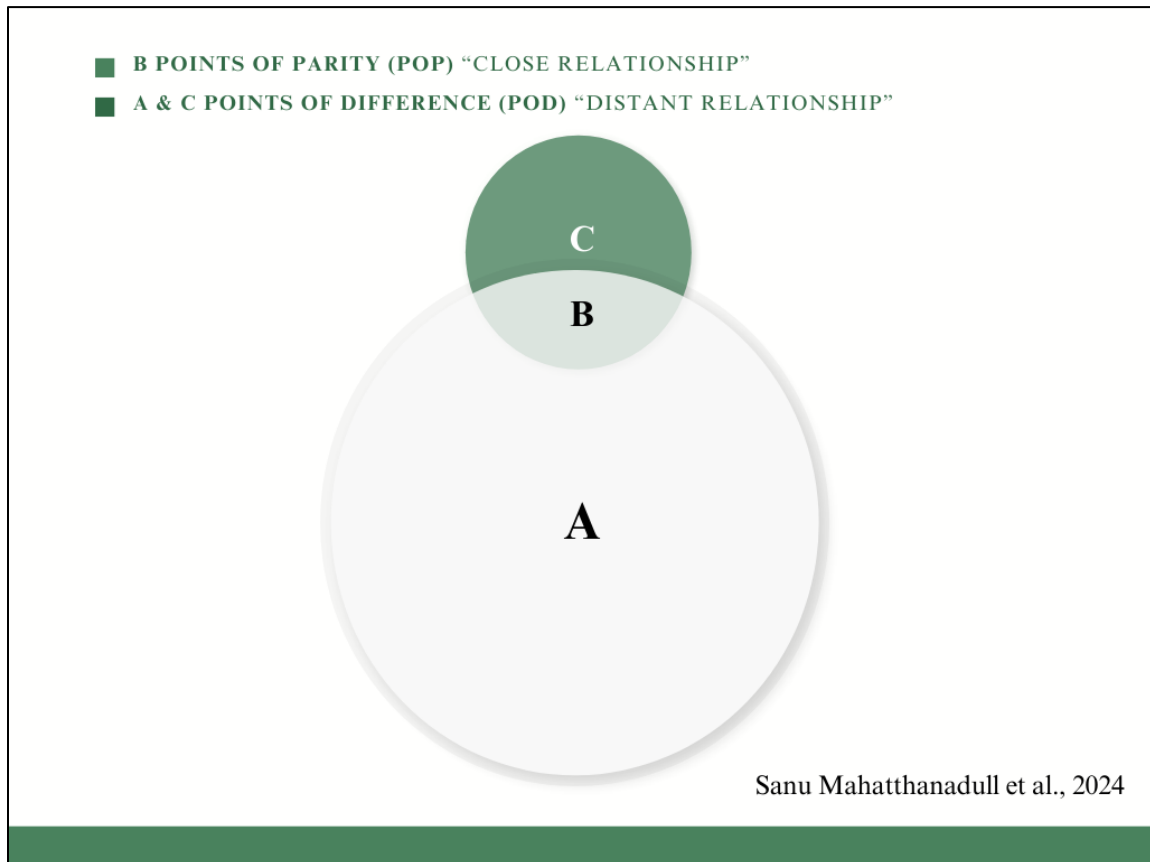
The above view supports integrating these insights which can help guide the responsible and ethical use of scientific knowledge. Besides, some Buddhist narratives or symbols can be interpreted metaphorically to align with scientific discoveries, allowing for a more harmonious coexistence of spiritual and empirical understanding. The DRI Rule thus encourages discussions about fundamental questions of existence, purpose, and meaning that both religion and science seek to address, even though they use different methodologies.

At this point, it's important to note that the Rule of DRI does not imply a wholesale merging of Buddhist and scientific viewpoints. Instead, it seeks to foster a proper, humbled, and thoughtful dialogue that acknowledges the strengths and limitations of both domains. This Rule allows individuals to draw from both Buddhist wisdom and scientific intelligence to develop a more holistic understanding of the world and their life in it.

Before the researchers discuss different possible integrations, it is necessary to understand the rule of the relationship between two integrated domains. First, Points of Parity (POP) depict the common characteristics that two domains have. They are the aspects that make them comparable or alike. They are the basic things they share, making them similar in some ways. Then, Points of Difference (POD) depict the distinct characteristics that set two domains apart from each other. They are the features that make each domain stand out or be different from the other. Between POP and POD, only POP where relational integration can be claimed to be a "CLOSE RELATIONSHIP" of things that were integrated at that moment. That is to say, they are closely related to each other in one way or another. Such interaction is particularly useful in the case of descriptive analysis of the relations of things coherently or correlatively connected. Especially in trying to analyze those elements in the sense that all things are different and not the same thing, both qualitatively and quantitatively, semantically and literally, etc. On the contrary, POD is where relational integration may be claimed to be a "DISTANT RELATIONSHIP" of things that were also integrated at that

moment. The following diagram illustrates the Points of Parity and the Points of Difference between the two domains:

Diagram 4.4 Points of Parity & Points of Difference (DRI)



From the diagram, domain A lies firstly at the center of the diagram, while domain C overlaps domain A, resulting in area B shared by both domains. Two types of areas may be distinguished: (1) integrated area, which is area B where two domains overlap (POP), implying a close relationship between them; and (2) non-integrated areas A and C, which are the remaining areas of each domain, implying a distant relationship between them.

The Rule of DRI governs three different integration phenomena according to their principles. It refers to the process of integration where only

two major sciences exist, namely, Buddhism and science¹⁰⁸ in the following three types: - 1) First Principle: Integrating Science into Buddhism, 2) Second Principle: Integrating Buddhism into Science, and 3) Third Principle: Integrating Buddhism and Science Reciprocally.

1. First Principle: Integrating Science into Buddhism

According to the Rule of DRI, the First Principle explains integrating science into Buddhism by placing Buddhist content at the center and integrating science or modern sciences into it. The Rule starts with paying attention to the Buddhist principles and locating Buddhism as a starting point then bringing modern science to integrate to analyze and understand a common area (POP) as well as a different area (POD) between the two sciences. With a scientific methodology, when science is integrated into Buddhism, it automatically helps promote Buddhism in many ways. The Vajrayāna view confirmed this view:

Science is so influential in modern times that most people believe in science. Whatever is scientifically proven, or is related to the science, is universally accepted as standard although many are disproved or found to be incorrect after a certain time. So, in this way when Buddhism goes forward hand in hand with science, it can **promote** Buddhism automatically.¹⁰⁹

The above view is agreed by G Clinton Godart who saw that:

¹⁰⁸ **Science** refers to the two types of sciences, namely: - (1) Pure science, such as physics, chemistry, biology, astronomy, etc., and (2) Applied science, such as engineering, medicine, agriculture, technology, renewable energy, etc. These sciences yet affect other sciences such as humanities, social sciences, education, etc. See topic 1.5 Definition of the Terms Used in the Research in Chapter1.

¹⁰⁹ Interview with Ven. Geshe Sonam Wangden (Ph.D.), Vajrayāna Master, Lharam Geshe, Sera Jey Monastic University, South India, October 7, 2023.

Science is already promoting Buddhism by confirming ancient Buddhist insights, such as the doctrine of emptiness, or brain plasticity, and research into meditation's effects on the brain.¹¹⁰

An example of research that supports the idea of “Integrating Science into Buddhism” is the study of Sanu and Sarita Mahatthanadull who have proposed the four ways of Well-being promotion. One is “Practicing tranquil meditation and Mindfulness-Based Cognitive Therapy (MBCT) to promote mental well-being”.¹¹¹ Another example of psychophysiological science integrated into Buddhism is stated in the following passage:

Biofeedback plays a crucial role as a tool to help practitioners realize happiness as well as to help increase the ability to assess the relationships between meditation progress and physiological responses in meditation phenomena.¹¹²

In this way, science helps promote Buddhism by confirming ancient Buddhist insights. On the contrary, Peter Harvey argued that science did not promote Buddhism. He went on to say:

Science does not ‘promote’ Buddhism, except in the very general sense that Both Buddhism and science see the world and people as governed by impersonal laws- though the laws they focus on are not the same. That said, recent research on the brain waves of meditators, and the effects of mindfulness, do help support aspects of Buddhism.¹¹³

¹¹⁰ Interview with Assoc. Prof. Dr. G Clinton Godart, Graduate School of International Cultural Studies, Tohoku University, Japan, July 13, 2023.

¹¹¹ Sanu Mahatthanadull and Sarita Mahatthanadull, “Holistic Well-beings Promotion for Balanced Way of Life according to Buddhist Psychology”, **JIBSC**, Vol. 6 No. 1 (January-June 2020): 111-121.

¹¹² Sanu Mahatthanadull; Phramaha Nantakorn Piyabhani; Orachorn Kraichakr and Sarita Mahatthanadull, “A Conceptual Model of Bi-Dimensional Development for Happiness Access by Biofeedback Process”, **Journal of MCU Peace Studies**, Vol.8 No.2 (March-April 2020): 377-387.

¹¹³ Interview with Emeritus Prof. Dr. Peter Harvey, University of Sunderland, UK, June 30, 2023.

With some exceptions, Peter Harvey eventually agreed that science supports aspects of Buddhism. Phra Dhammakosācāriya yet viewed that science simplifies and modernizes Buddhism:

The method of studying Buddhism integrated with modern science. . . is to set Buddhism as a foundation and bring modern science to explain and support Buddhism to make it look modern, more reasonable, and easily accepted.¹¹⁴

Moreover, science helps prove various Buddhist principles. “Science supports Buddhism by using various scientific tools to prove various Buddhist principles.”¹¹⁵ The Manorathapūraṇī described the Brahmin who asked about the Dhammaguna, “*Ehipassikoti ‘ehi passā’ ti evaṃ dassetuṃ sakkāti āgamanīyapaṭipadaṃ pucchati*”¹¹⁶ The Brahmin asked about the *āgamanīyapaṭipadā* “The Dhamma that a practitioner can encourage in this way ‘Come and see’ (*ehipassiko*).” Thus, the Dhamma in Buddhism is resistant to perpetual investigations. The most important role that science plays in Buddhism, especially in the 21st-century-world context, is science helps protect Buddhism from superstitious and false doctrines (*saddhammapaṭirūpaka*). Bhikkhu Brahmali pointed out:

Science can protect Buddhism by showing us where Buddhists might be superstitious or where we might have misunderstood the Dhamma, for instance by relying too much on later tradition rather than the word of the Buddha.¹¹⁷

In summary, through this type of integration in the First Principle, science helps promote Buddhism. Integrating science into Buddhism gives science a triple role in 1) **promoting** (and modernizing) Buddhism by

¹¹⁴ Phra Dhammakosācāriya (Prayoon Dhammacitto), Prof. Dr., **Integrative Method: Buddhism & Modern Sciences**, p. 50.

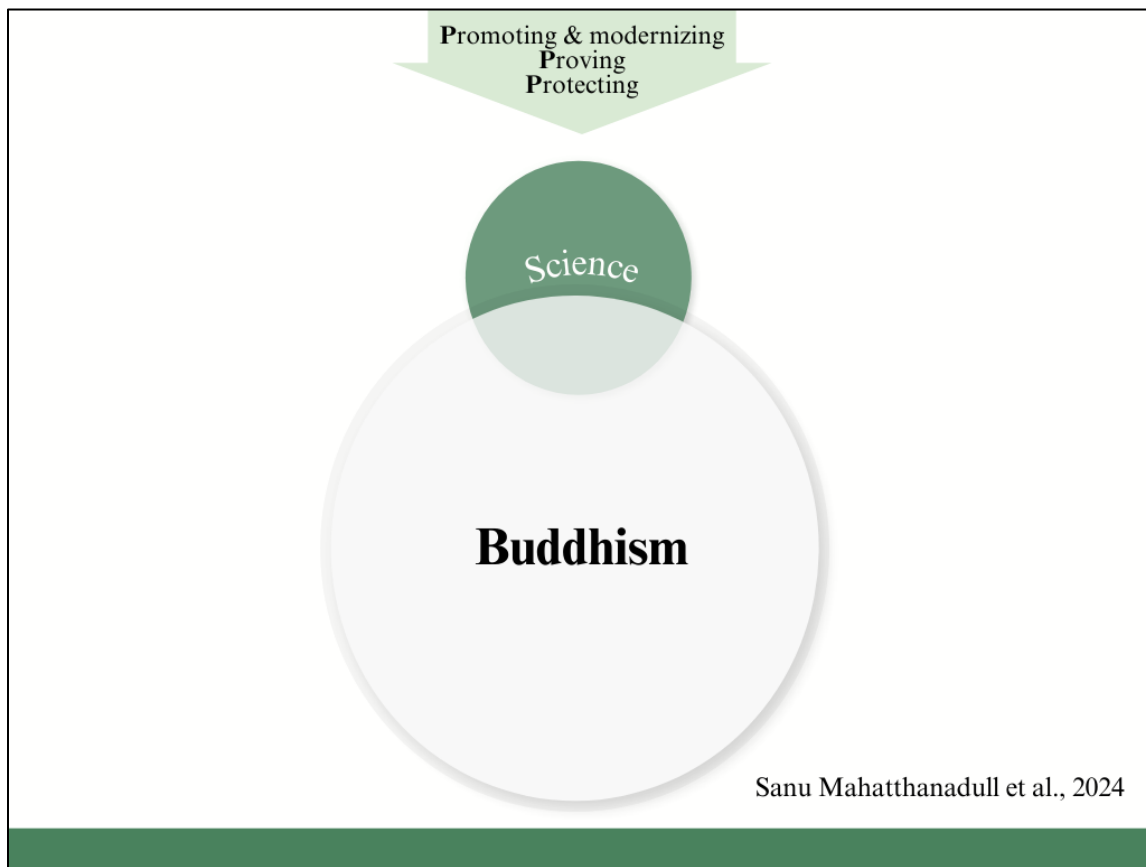
¹¹⁵ Interview with Assoc. Prof. Dr. Cherdsak Maneeruttanarungroj, (Biochemist and Molecular Biologist) Department of Biology, School of Science, KMITL, Thailand, June 30, 2023.

¹¹⁶ Manorathapūraṇī, AA.II.256.

¹¹⁷ Interview with Bhikkhu Brahmali, Bodhinyana Monastery, Australia, June 30, 2023.

confirming ancient Buddhist insights, 2) **proving** various Buddhist doctrines and principles, and 3) **protecting** Buddhism from superstitious and false doctrines. See the following diagram “Second Principle: Integrating Science into Buddhism”:

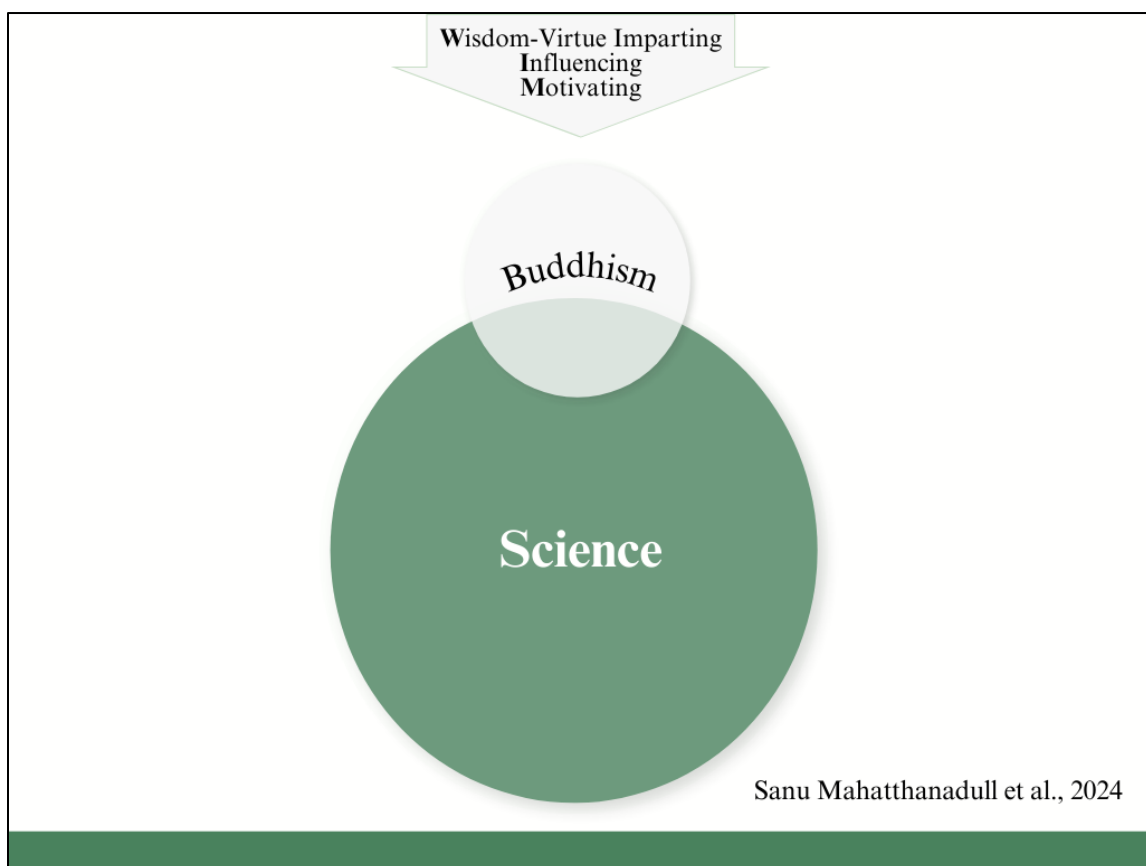
Diagram 4.5 First Principle: Integrating Science into Buddhism



2. Second Principle: Integrating Buddhism into Science

In contrast to the First Principle discussed earlier, the Second Principle under the Rule of DRI explains the integration of Buddhism into science by placing science or modern science content at the center and integrating Buddhism into it. The Second Principle starts with paying attention to the modern sciences which are to locate science as a substrate then bring Buddhist principles to integrate to analyze and understand a common area (POP) as well as a different area (POD) between the said two sciences. See the following diagram:

Diagram 4.6 Second Principle: Integrating Buddhism into Science



According to the Second Principle under the DRI Rule, Buddhism helps to fulfill and promote wisdom, virtue, and ethical perspectives to modern sciences. **First**, Wisdom-Virtue Impartation: Buddhism imparts immaculate wisdom to science, “Buddhism can promote science by suggesting shortcomings in the scientific outlook, such as science’s lack of proper understanding of the mind, including rebirth.”¹¹⁸ One of the most remarkable features of Buddhist wisdom is the principle of dependent origination, which amazingly explains all things, “Buddhism helps promote science in supporting the progress of science by clearly explaining dependent

¹¹⁸ Interview with Bhikkhu Brahmali, Bodhinyana Monastery, Australia, June 30, 2023.

origination of things.”¹¹⁹. Buddhism also imparts impeccable virtue to science as Asoka Bandarage said, “Buddhism has an ethical orientation lacking in Western science guided by capitalism and domination.”¹²⁰ By informing science with new questions, and by inserting values such as compassion in the pursuit of science and technology.¹²¹ As exemplified in animal biotechnology, ethical issues relating to experimentation on animals and the production of transgenic animals should be a basic concern for scientists. Sanu Mahatthanadull and Dusanee Thanaboripat suggested, “When experimentation with animals cannot be avoided, they must be treated with as much kindness [*mettā*] and compassion [*karuṇā*] as possible to minimize ‘conditional ethical blindness’.”¹²² **Second**, Influence on Science: Buddhism influences science in many areas like psychology, consciousness studies, ethics, etc.

“Not only does Buddhist religion promote science in the form of principles and thinking, but also influences science from any perspective. We can harness the force of religion to further propel scientific progress in leaps and bounds.”¹²³

This means that the force of Buddhism influences sciences by creating a dialogue with them, which undoubtedly helps drive science to progress by leaps and bounds. Hugh Nicholson argues that the most important contribution that Buddhism can make to the dialogue with the sciences of the mind is its emphasis on the transformative effect that an understanding of the

¹¹⁹ Interview with Assoc. Prof. Dr. Peerasak Vorasuntharoso, Former Dean of Engineering Faculty, KMITL, Thailand, June 30, 2023.

¹²⁰ Interview with Dr. Asoka Bandarage, Adjunct Professor, California Institute for Integral Studies, USA, June 30, 2023.

¹²¹ Interview with Assoc. Prof. Dr. G Clinton Godart, Graduate School of International Cultural Studies, Tohoku University, Japan, July 13, 2023.

¹²² Sanu Mahatthanadull and Dusanee Thanaboripat, “Animal Biotechnology and Ethical Issues”, **Current Applied Science and Technology**, Vol. 21 No. 2 (April-June 2021): 405-415.

¹²³ Interview with Assoc. Prof. Dr. Cherdsak Maneeruttanarungroj, (Biochemist and Molecular Biologist) Department of Biology, School of Science, KMITL, Thailand, June 30, 2023.

counterintuitive nature of the mind can have on our self-conception.”¹²⁴

Third, Motivation for Science: Buddhism motivates science with philosophical viewpoints in Tipiṭaka. “Buddhism not only helps science to discover new horizons but also creates strong motivations with a lot of mental and philosophical fields concealed in Tipiṭaka”¹²⁵ and “with the ways of teaching”¹²⁶ The Tipiṭaka is the source of *Dhamma* and *Vinaya* of the Buddha. Buddhists preserved it as a precious treasure that contains the original wisdom and virtue completely. Buddhism creates a great motivation for science to search for the teachings of the Buddha in the time-endured Tipiṭaka.

To summarize, integrating Buddhism into science based on the Second Principle results in Buddhism having three roles 1) imparting **wisdom and virtue** to science by advocating all scientific discoveries, especially whenever science lacks proper understanding, 2) **influencing** science in vast scientific areas of consciousness, matters, and ethics, and 3) **motivating** for science with philosophical viewpoints in Tipiṭaka.

The integration of Buddhism spans centuries and continents, adapting to diverse cultural contexts while preserving its core doctrines. As Buddhism spread across Asia continent, it assimilated local beliefs, culture, values, and practices, leading to the emergence of distinct traditions such as Theravāda, Mahāyāna, and Vajrayāna. The seamless connecting of Buddhism with indigenous beliefs in countries like Japan, Korea, China, Bhutan, and Tibet allowed for a harmonious coexistence of spiritual ideals, fostering a sense of interconnectedness within local communities.

Looking out into a wider perspective, Eastern wisdom from Buddhism can intelligently dispel darkness. This is because Buddhism has principles and paths to illuminate blind sentient beings with knowledge of

¹²⁴ Hugh Nicholson, **Buddhism, Cognitive Science, and the Doctrine of Selflessness A Revolution in Our Self-Conception**, (Abingdon: Routledge, 2023), p. 5.

¹²⁵ Interview with Ven. Nam Nguyen Van, Dr., Mahāyāna Lecturer, Khanh Hoa Buddhist College, Vietnam, October 7, 2023.

¹²⁶ Interview with Ven. Shi Chingyun, Dr., Chan Master, Buddhism Academic of China HeBei, China, October 7, 2023.

natural, supernatural, and transcendent facts both conventional truths (*sammati-sacca*) and the ultimate truth (*paramattha-sacca*). In addition, Buddhist philosophy can be able to answer all questions that human beings should know in terms of metaphysics, epistemology, and ethics. Especially Abhidhamma perspectives that can sustainably support human lifelong learning in life perspectives (*cīvita-dassana*) and worldviews (*loka-dassana*). Under the principles of learning in all three dimensions (*sikkhā*)¹²⁷, namely: - (1) Training in higher morality (*adhisīla-sikkhā*), (2) Training in higher thought (*adhicitta-sikkhā*), and (3) Training in higher wisdom (*adhipaññā-sikkhā*)¹²⁸, human beings need to study or learn utterly in such three dimensions, both in terms of conducting good behaviors is not violating the rules in the sense of precepts; purifying one’s mind; and augmenting one’s wisdom. Therefore, whether it is a teaching in terms of wisdom or virtue, it can be practically integrated according to the framework of the *sikkhā* mentioned above.

For instance, under the path of virtue, Buddhism’s focus on loving-kindness (*metta*), compassion (*karuṇā*), and nonviolence (*avihiṃsā*) has enabled it to play a significant role in interfaith dialogue and ethical discussions. The principle of *ahiṃsa*, or non-harming, resonates with individuals from various religious backgrounds and has been integrated into discussions on human rights, environmental sustainability, and social justice. The collaboration between Buddhists and practitioners of other faiths has led to a more harmonious coexistence and shared efforts to address global issues.

One of the most prominent ways Buddhism has integrated into science in modern society is through its emphasis on mindfulness (*sati*) and meditation (*kammaṭṭhāna*) practices. In today’s fast-paced world, the practice

¹²⁷ “*Tisso sikkhā. Adhisīla-sikkhā, adhicitta-sikkhā, adhipaññā-sikkhā*” - D.III.220; A.I.229.

¹²⁸ Maurice Walshe (tr.), **Thus Have I Heard: The Long Discourses of the Buddha (Dīgha Nikāya)**, p. 486;

“Training in higher morality, higher thought, and higher insight” - F. L. Woodward (tr.), **The Book of the Gradual Sayings (Anguttara-Nikāya)**, Vol. I (Ones, Twos, Threes), p. 208. Simply called “morality, concentration and wisdom”.

of mindfulness has gained recognition for its ability to alleviate stress, anxiety, and depression. The mindfulness-based stress reduction (MBSR) and mindfulness-based cognitive therapy (MBCT) are examples of therapies from Western intelligence that have incorporated Buddhist meditation techniques from Eastern wisdom to enhance the mental well-being of humans. The integration of these two sciences has provided individuals with tools to navigate the challenges of modern life while fostering self-awareness and emotional resilience.

As for Western adaptation and scientific integration, the integration of Buddhism into Western societies has been marked by a merging of Eastern spiritual practices with Western psychological and scientific approaches. Mindfulness-based interventions (MBIs), rooted in Buddhist meditation, have been incorporated into psychotherapy and medical settings to enhance emotional regulation, reduce symptoms of post-traumatic stress disorder (PTSD), and improve overall well-being. In this regard, Buddhist psychotherapy and counseling are based on the Four Noble Truths for their therapy, “The process of counseling in psychology and psychotherapy that is based on the Four Noble Truths”¹²⁹ The scientific validation of meditation’s positive effects on brain structure and function has facilitated its acceptance within mainstream healthcare and psychological treatment modalities.

Based on the outcome of the practice, personal transformation and societal impact should be mentioned here. Buddhism’s core teachings on impermanence, non-attachment, and selflessness have catalyzed personal transformations and influenced societal dynamics. The practice of letting go of attachments has led individuals to cultivate contentment and resilience in the face of life’s uncertainties. Moreover, the Buddhist principle of interconnectedness or Dependent Origination (DO) also known as *paṭiccasamuppāda* has fueled movements advocating for social equality,

¹²⁹ Sanu Mahatthanadull, “ Life Coaching: A View from Buddhist Psychotherapy and Counseling”, **Journal of International Buddhist Studies**, Vol. 11 No.1 (June 2020): 01-24.

environmental preservation, and ethical consumerism, demonstrating the potential for Buddhism to inspire positive change on a global scale.

In conclusion, the integration of Buddhism's wisdom and virtue into various facets of modern science showcases its adaptability and enduring relevance. From mindfulness practices that enhance mental well-being to ethical discussions that bridge faith traditions, Buddhism's integration has promoted holistic growth and transformation. As the world continues to grapple with challenges, multidimensional principles such as compassion (*karuṇā*), mindfulness (*sati*), and interconnectedness (*paṭīccasamuppāda*) derived from Buddhism offer a guiding light towards a more harmonious and balanced future.

3. Third Principle: Integrating Buddhism and Science Reciprocally

The Third Principle under the DRI Rule explains the integration between Buddhism and science reciprocally. Since Buddhism and science are two different systems of understanding the world and life, yet there are several ways in which they can influence and complement each other, leading to a reciprocal relationship between the two. Frank Johnny Hoffman agreed that “Buddhism and science can be shown to have interconnections”¹³⁰ Let us first introduce the integration between Buddhism and science reciprocally:

First, integrating Buddhism and Pure Sciences: intriguing parallels between Buddhism and physics are Buddhism's concept of the Three Characteristics (*tilakkhaṇa*) about impermanence (*aniccatā*) and physics' understanding of change (*dukkhatā*) and evolution to acknowledge that everything is in a state of flux or soullessness (*anattatā*).¹³¹ Bhikkhu Brahmali suggested “The law of impermanence includes the characteristics of suffering and non-self within it¹³² based on the fact that all conditioned things are

¹³⁰ Interview with Prof. Dr. Frank Johnny Hoffman, Lecturer, IBSC, MCU, Thailand, June 30, 2023.

¹³¹ S.IV.1; Dh.277-9.

¹³² Interview with Bhikkhu Brahmali, Bodhinyana Monastery, Australia, June 30, 2023.

subject to impermanence (*sabbe saṅkhārā aniccā*). Nothing in this world and universe lasts forever. No living thing in this world and universe lasts forever. Moreover, all conditioned things are subject to suffering (*sabbe saṅkhārā dukkhā*). Above all, all things are subjected to non-self (*sabbe dhammā anattā*)¹³³ or soullessness. Another common point is Buddhism's notion of dependent origination (*paṭiccasamuppāda*) which reflects a view of interconnectedness similar to the way physics describes interrelated systems in nature. Besides, quantum mechanics and Buddhist teachings both discover the role of the observer, though in different ways. Quantum mechanics explains that observation affects the state of particles. The arduous task of physics, which is to confront the mysteries of nature, may confuse scientists or eventually lead them to a dead end. Michael Strickland argued:

Relativistic Quantum Field Theory (RQF) explains the basic degrees of freedom in quantum field theory (QFT) are operator-valued functions of space and time and, since space and time are continuous, we are dealing with an infinite number of degrees of freedom, so we will need to (re-) learn how to deal with systems with a large number of degrees of freedom (many-body theory). Once we are done, we will be able to properly define QFTs that can be used in a variety of different contexts, for example, high energy theory, condensed matter, cosmology, quantum gravity, etc.¹³⁴

With the wisdom eye (*paññācakkhu*), Buddhism views those “quantum phenomena” by emphasizing the mind and the matter's role in shaping co-experience under the conventional time frame with a set of detailed and complex knowledge, such as aggregates (*khandha*), sense bases (*āyatana*), elements (*dhātu*), energy (*indriya* or *bala*), form and norm (*rūpanāma*), space and time (*kāla-ākāsa*), the three characteristics (*tilakkhaṇa*), dependent origination (*paṭiccasamuppāda*), the four ultimate truths (*paramattha-dhamma*), etc. The reason is, “To see nature as it truly is, one

¹³³ Among the Three Characters, *anattatā* is the only character that exist in both conditioned things (*saṅkhata*) and unconditioned things (*asaṅkhata, viśaṅkhāra*).

¹³⁴ Michael Strickland, **Relativistic Quantum Field Theory, Vol. 2: Path Integral Formalism**, (San Rafael: Morgan & Claypool Publishers, 2019), p. xi.

must view only with the Buddhist wisdom eye.” Some proponents suggest parallels between certain aspects of and principles in quantum physics. Concepts like emptiness, interconnectedness, and the nature of reality have been compared to quantum phenomena. John S. Harding commented:

The term “empty” connects to the Buddhist notion of emptiness (*śūnyatā*) by pointing to a deeper level of profound integration (rather than a mere absence) to explain the common misperception of assuming the existence of an actual reified referent rather than what closer scrutiny reveals—a lack of truly stable, separate and dualistic states of East and West.¹³⁵

Then, an integration between Buddhism and chemistry involves exploring how Buddhist principles can provide insight into or resonate with chemical processes in the sense that everything is interconnected and dependent on other factors. They may be seen in the way chemical reactions depend on various factors such as temperature, pressure, and concentration under the Buddhist principle of DO. The Buddhist concept of impermanence (*aniccatā*), suffering (*dukkhatā*), and no-self (*anattatā*) also aligns with the dynamic nature of chemical reactions which are subject to change and cannot be controlled constantly. Just as Buddhism views all phenomena as transient, chemistry shows that substances are constantly undergoing transformations and changes.

It is interesting to note that the observer in Buddhism is nothing but the mind (*citta*) and mental factors (*cetasika*), which are two of the four ultimate truths (*paramattha-dhamma*)¹³⁶ like all living beings, while science defines the scientist as the observer. Buddhism encourages the yogi to use his mind and mental factors (mindfulness, etc.) as a tool to observe the natural

¹³⁵ John S. Harding, “Mapping Buddhism beyond East and West” in **Buddhism in the Global Eye**, eds. by John S. Harding, Victor Sōgen Hori, and Alexander Soucy: 26-41.

¹³⁶ The Ultimate Truth (*paramattha-dhamma*) consists of four elements, namely: - (1) Consciousness (*citta*), (2) Mental factors (*cetasika*), (3) Matter or corporeality (*rūpa*), and (4) Enlightenment (*nibbāna*). - Comp.81.

phenomena that he is observing, because the observer is also a part of nature, while science separates the observer from whatever is being observed. Of course, this different perspective on the “observer” leads to completely different research findings. And this is why Buddhism offers holistic research findings including final emancipation or Nibbāna.

Next, when Buddhism and biology are integrated, they offer a holistic view of the life of sentient beings among the thirty-one possible planes of the form of life¹³⁷ emphasizing both the physical and mental dimensions of existence. Buddhist Biology, as a result of the integration, gives a holistic perspective on life and nature with the broadest scope that starts from the sub-elements of life, life’s unit, to the family, society, nation, international, world, galaxy, intergalactic, universe, inter-universe, to all entities encompassing with infinite universes. It also covers the relationship between them and their ecological environment as Sanu Mahatthanadull stated:

Buddhist Biology explains the relationships within the body. The human body has been evolving creatively to viable existence and protect itself. It is associated with mind and contains the features as Systematic relationship between itself and the external factors contributing to living and developing human life. For instance, when humans live in an environment in the ecosystem, they rely on temperature, sunlight, humidity, water, minerals, nutrients, and air. This Systematic dependency covers from internal human body systems to external interdependence in the ecosystem, from fundamental constituents of life forms at a microscopic level to the world and universe at a macroscopic level.¹³⁸

¹³⁷ Four planes of existence (*bhūmi*) consist of (1) Four unhappy planes (*apāya-bhūmi*); (2) Seven sensuous blissful planes (*kāmasugati-bhūmi*); (3) Sixteen form planes (*rūpāvacara-bhūmi*); and (4) formless planes (*arūpāvacara-bhūmi*). In total, there are 31 planes. - Comp.137.

¹³⁸ Sanu Mahatthanadull, “Buddhist Biology: Systematic Relationship of Life and Environment, and the Creation of Supportive Factors for Development of Life based on the Seven Suitable (*Sappāya*)”, International Conference on Social Science and Management (ICSSAM), **Conference Proceedings**, Osaka, Japan (May 10-12, 2016): 283-296.

One way to discover the secrets of life and nature is through integrated Buddhist biology. Looking at life through these special glasses opens up a world of life from the cellular level to the environmental level, an integrated view was given by the Biologist:

Through biology, we learn that cells divide to create leaf cells, and when they age, they stop dividing, leading to the leaf's death and eventual fall. From a Buddhist perspective, we see the process of arising, existence, and cessation is the inherent nature of all things under the law of *tilakkhana*.¹³⁹

Buddhist Biology thus fosters a deeper appreciation for the complexity of living systems and the interconnected nature of all life. However, Dee Denver gave a precaution regarding the integration process:

Effective communication and rationalization of the parallels and complementarities of biology and Buddhism to science-guided and other Western minds require the space to fully describe and unpack many unfamiliar concepts and ideas.¹⁴⁰

Therefore, the integration between the two different disciplines should be carried on with the utmost precaution. Ven. Geshe Thabkhe argued that there is a possibility of undermining each other too if the two sciences aren't applied properly.¹⁴¹ Therefore, integrators should pay good attention and be very careful with this precaution.

According to the Third Principle, the Rule of DRI between Buddhism and astronomy can challenge the mutual study of the cosmos and astronomical discoveries. It offers a way to reflect on the profound nature of the cosmos while considering the philosophical implications of our place

¹³⁹ Interview with Assoc. Prof. Dr. Cherdsak Maneeruttanarungroj, (Biochemist and Molecular Biologist) Department of Biology, School of Science, KMITL, Thailand, June 30, 2023.

¹⁴⁰ Dee Denver, **The Dharma in DNA: Insights at the Intersection of Biology and Buddhism**, (New York: Oxford University Press, 2022), p. 153.

¹⁴¹ Interview with Ven. Geshe Thabkhe (Ph.D.), Vajrayāna Master, Sera Jey Monastery, South India, October 7, 2023.

within it. It encourages a holistic view that appreciates both the scientific and existential dimensions of our understanding of the universe.

Second, integrating Buddhism and Applied Sciences: One of the most popular applied sciences to be integrated with Buddhism is medical science, or perhaps psychology. With the Third Principle under the DRI Rule, an integration between Buddhism with medical science pictures a holistic approach to physical and mental health healing, combining the benefits of scientific evidence with the wisdom of Buddhist practices. For example, mindfulness-based interventions, such as Mindfulness-Based Stress Reduction (MBSR) and Mindfulness-Based Cognitive Therapy (MBCT), incorporate the Buddhist mindfulness foundation into therapeutic methodology. These techniques are used to manage stress, anxiety, and chronic pain, demonstrating a direct application of Buddhist principles in medical contexts. One research confirming that “Buddhism and applied science are integrated reciprocally” is the integration between Buddhism and the homeostasis theory of physiology, which was carried out by Sanu Mahatthanadull:

From the Buddhist viewpoint, the human body systems have to depend on life-supporting factors both internal and external to cause those systems to maintain forever according to the principle of *paṭiccaṣamuppāda*. Therefore, a way of setting up the equilibrium of the human body systems by using the items of the practice suitable for those life-supporting factors according to the principle of the Middle Path. The medicine in modern science mentioned the homeostasis theory and the equilibrium theory of mainstream medicine.¹⁴²

In applied psychology, Buddhist principles are widely used to explain mental phenomena. Hugh Nicholson mentioned the Buddhist No-self doctrine roughly coheres with current thinking in the cognitive sciences.

¹⁴² Sanu Mahatthanadull, “The Buddhist Integrated Approach to the Equilibrium of the Human Body Systems”, **Commemorative Book**, The 7th International Buddhist Research Seminar, at MCU Buddhist College, Nan Province, Thailand, (18-20 February, 2016): 184-201.

Given the centrality of No-self in Buddhist thought as a whole¹⁴³ As for another applied science “renewable energy”, the crisis facing our current fossil fuel-based energy system is alarming, and we urgently need to transition to renewables in all economic and societal activities.¹⁴⁴ This is a critical turning point that will truly bring humanity back to nature by the Buddhist way of moderation. It is the point where science and Buddhism meet.

At this point where the Third Principle of DRI is dominating the integration, it is worth watching the exchange of ideas between Buddhism and science can contribute to cross-cultural understanding and collaboration. Scientific research conducted within Buddhist communities or with the involvement of Buddhist scholars can lead to more holistic and culturally sensitive approaches to various scientific disciplines. It’s important to note that while there are points of convergence and mutual benefit between Buddhism and science, they are fundamentally different in their means, ends, tools, and underlying hypotheses. Yet the reciprocal relationship between the two involves respectful dialogue, critical examination, and a willingness to learn from each other’s insights while recognizing their distinct domains.

The Rule of DRI, where the Third Principle is explained about integrating Buddhism and Science reciprocally, starts with paying attention to both Buddhist principles and modern sciences simultaneously. Then the process of integration takes place with the permission of the common area where the two sciences are overlapped. When Buddhism and science are integrated reciprocally, A state of mutual dependence arises. “Science and Buddhism are naturally compatible in many different ways. They promote each other because of their stress on critical thinking”¹⁴⁵ Peter Harvey pointed out, “Both are in a general sense empirical, and majority-Buddhism countries

¹⁴³ Hugh Nicholson, **Buddhism, Cognitive Science, and the Doctrine of Selflessness A Revolution in Our Self-Conception**, p. 112.

¹⁴⁴ Lisa Mastny; Kelly Trumbull (eds.), **Renewable Energy Data in Perspective: Drawn from the Renewables 2022 Global Status Report**, (Paris: REN21 Secretariat, 2022), p. 5.

¹⁴⁵ Interview with Dr. Mark Blum, Distinguished Chair in Japanese Studies, University of California, USA, June 30, 2023.

can teach the sciences.”¹⁴⁶ With this empirical commonality, learning to discover the truth of nature shares a common goal. Asoka Bandarage stated, “They both help understand the laws of Nature”¹⁴⁷ Ven. Junaidi Anuwar has mentioned about mutual support between the two disciplines:

They both support each other in many ways, they can go hand in hand. Science has developed many new ways to offer concrete proof about Buddha’s teachings. The Buddha’s teachings also provide many clues about many phenomenological deep insights that many scientists never had in their minds.¹⁴⁸

One of the clearest views is that Buddhism is a view that clearly shows the intangible things that are invisible to the human’s naked eye, but only seeable with the eye of wisdom from inner knowledge, as confirmed by Ven. Gen Ngawang Norbu, “Both promote each other. Science helps Buddhism gain a deeper understanding of external or physical phenomena, while Buddhism ensures that inner knowledge becomes accessible to science.”¹⁴⁹ Spiritual knowledge can help one understand all things both inside and outside oneself.

To summarize, according to the Third Principle of the DRI, both Buddhism and science reciprocally help promote and support each other in the sense that modernizing and simplifying the Buddhist principles, doctrines, and teachings by modern sciences; and in the same way that Buddhism can promote wisdom, virtuous, and ethical perspectives to modern sciences. With the Third Principle, Modern sciences play a role in **Simplifying** Buddhism's profound principles and knowledge to be easy to understand by using scientific technical terms universally recognized to describe religious

¹⁴⁶ Interview with Emeritus Prof. Dr. Peter Harvey, University of Sunderland, UK, June 30, 2023.

¹⁴⁷ Interview with Dr. Asoka Bandarage, Adjunct Professor, California Institute for Integral Studies, USA, June 30, 2023.

¹⁴⁸ Interview with Ven. Junaidi Anuwar, Dr., Mahāyāna Teacher, Thai Plum Village International Mindfulness Practice Center, Indonesia, October 7, 2023.

¹⁴⁹ Interview with Ven. Gen Ngawang Norbu, Head of Thukdam Research Center, Sera Jey Monastic University, South India, October 7, 2023.

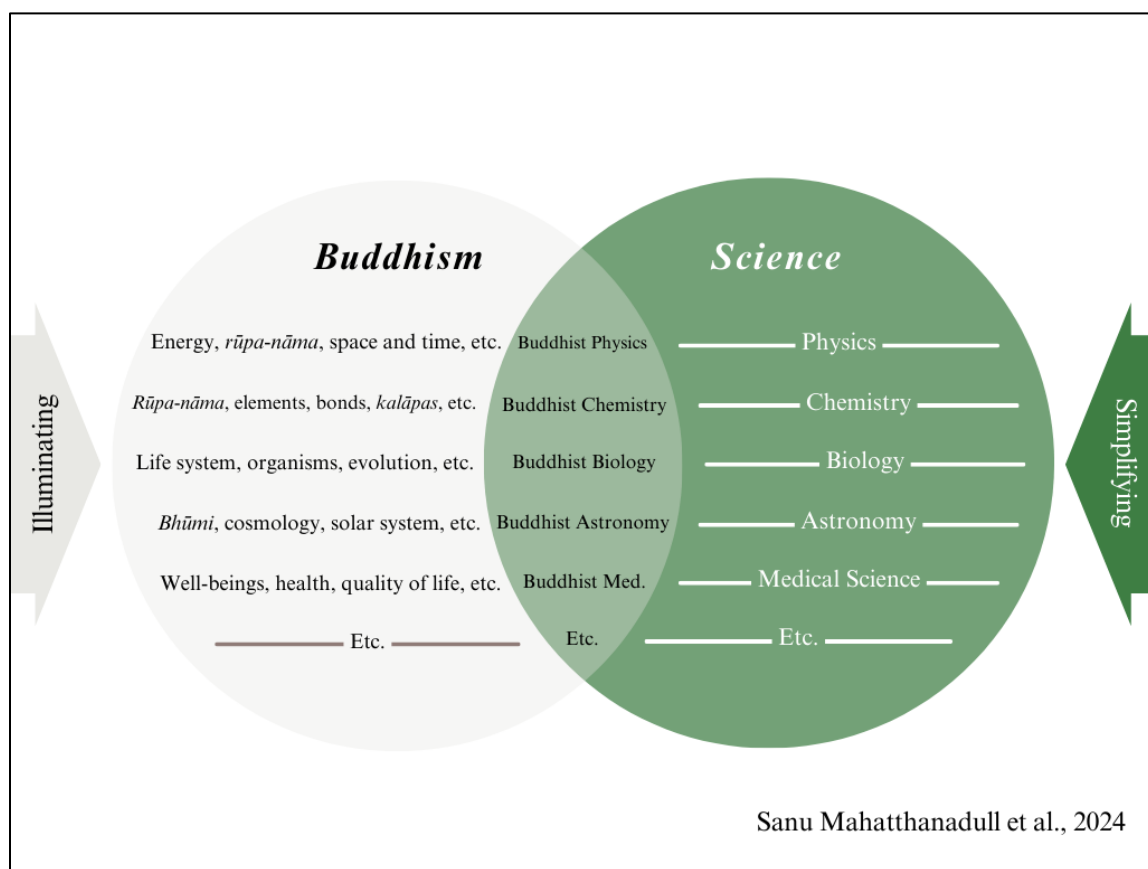
phenomena alongside the perspective of modern sciences. Buddhism plays a crucial role in terms of **Illuminating** modern sciences alongside the spiritual doctrines and phenomenological deep insights of Buddhism as the analogy of the Buddha's clear sermon:

The Blessed One has made the Dhamma clear in many ways, as though he were turning upright what had been overthrown, revealing what was hidden, showing the way to one who was lost, or holding up a lamp in the dark for those with eyesight to see forms¹⁵⁰

Buddhism and science thus resonate reciprocally “A mystery religion can be simplified by rational science; Science is illuminated by wisdom and virtue.” Besides, Buddhism can give comfort to the modern sciences in the sense that they feel safe and secure living under the laws, theories, and experiments of modern sciences is a key role. This is simply because the line between scientific breakthrough and ethical correctness is often blurred, despite the necessity to achieve experimental results. Although the scientific process has brought great benefits to mankind, it sometimes falls into a dilemma. The researchers will discuss this issue further in the next rule entitled: - The Rule of Holistic-Relational Integration (HRI). For this reason, many necessary actions carried out under modern sciences are unavoidable, such as experimentation on living animals, human rights violations, animal and human ethics, etc. These are precarious in terms of religious consequences, and Buddhism can greatly contribute to this context. As a result, a win-win situation can be achieved eventually. See the following diagram:

¹⁵⁰ M.II.391; Bhikkhu Ñānamoli and Bhikkhu Bodhi (trs.), **The Middle Length Discourses of the Buddha**, pp. 496-497.

Diagram 4.7 Third Principle: Integrating Buddhism and Science Reciprocally



To explain this, the scientific contents of modern science or religious doctrines can be explained by finding common grounds where they share the greatest similarities. An interesting fact is that both Buddhism and science share the same goal to find the essence of nature, but differ in their belief foundations, terminology and language used to communicate, and methods. Although they may not be the same thing, due to the use of language and technical terms in different disciplines, the closely related contents can be interpreted and understood well through the perspectives of each discipline. It is so true to say “Buddhism and science share a common goal of exploring the essence of nature to the best of one’s capability”. While physics explores energy, matter, space time, etc. Buddhism offers the metaphysics of aggregates (*khandha*), sense bases (*āyatana*), elements (*dhātu*), energy

(*indriya* or *bala*), form and norm (*rūpa-nāma*), space and time (*kāla-ākāsa*), etc. Such integration results in a complete integrated knowledge set, also known as a Buddhist integrated breakthrough in Buddhist Physics. Dee Denver supported Buddhism-biology integration where the genetic conversation continued and connected back to the Buddhist paradigm of the five *skandhas* and their relationship to *suññatā*, emptiness.¹⁵¹ Other Buddhist integrated breakthroughs, such as Buddhist chemistry, Buddhist astronomy, Buddhist medical science, and so on follow a similar pattern above. Even cinematic science shares POP with Buddhism perfectly. Victor Fan mentioned that the cinematographic technicity-consciousness along with any ontological investigation into it are *papañcas* (perceptual-conceptual proliferations).¹⁵² By analyzing the cinematographic technicity-consciousness as a karma-image, we can become mindful of how karmic impulses affect, and are affected by, the formational process from one *kṣaṇa* to another.¹⁵³

In addition to the Third Principle of the DRI Rule mentioned above, when Buddhism and modern sciences meet, a mutual integration between them can occur, such as: - (1) Buddhism and psychology: Buddhism places a strong focus on understanding the consciousness (*citta*) and the nature of reality. This aligns with the growing interest in neuroscience and psychology. Buddhist meditation practices that explore consciousness and mental states can offer insights into the workings of the mind, which can then be studied scientifically to gain a deeper understanding of human cognition and consciousness in psychology. Particularly when meditation practice from Buddhism offers a unique opportunity to study the effects of contemplative practices on consciousness (*citta-bhāvanā*) and wisdom (*paññā-bhāvanā*). Neuroscientific research can investigate how practices like mindfulness meditation impact attention, emotional regulation, neural plasticity, cognition, and brain function. This can lead to insights into improving mental and

¹⁵¹ Dee Denver, **The Dharma in DNA: Insights at the Intersection of Biology and Buddhism**, p. 153.

¹⁵² Victor Fan, **Cinema Illuminating Reality: Media Philosophy through Buddhism**, (Minneapolis: The University of Minnesota Press, 2022), p. 24.

¹⁵³ *Ibid*, p. 25.

wisdom well-being; (2) Buddhism and Ecology: Buddhist teachings on dependent origination (*paṭiccasamuppāda*) resonate with contemporary ecological and environmental concerns. Scientific research can explore how these teachings align with ecological systems thinking and sustainable practices, fostering a greater sense of responsibility towards the environment; (3) Buddhism and Epistemology (*Ñāṇavidyā*) in philosophy: Buddhism encourages a critical and introspective inquiry into the nature of reality, much like the scientific process. By exploring questions of self, perception, and reality, Buddhism provides a philosophical framework that can inspire and challenge scientific investigations, fostering a deeper understanding of the world. All this shows us the scope of the wide integration that can occur between Buddhism and science, or even modern sciences reciprocally.

4.2.2 The Rule of Holistic-Relational Integration (HRI)

The Rule of Holistic-Relational Integration (HRI) in the context of religion and science typically refers to the effort to bridge and harmonize the process of holistic integrating databases, information, knowledge, perspectives, ideas, and methodologies from multiple different sources, among multiple relational domains. In other words, it involves merging insight from different resources that are interconnected through relationships. The goal is to create a unified view of data from these different sources, making it easier to analyze and query across the integrated information.

Buddhist and non-Buddhist scholars including scientists may engage in interdisciplinary research that incorporates both Buddhism and multi-disciplinary studies perspectives, aiming to find answers with a more comprehensive understanding of complex raised questions. Examples of knowledge outcomes from integrating some disciplines may shed some light on this issue. As in the case of integration psychology, the relational view of integration according to Steven J. Sandage and Jeannine K. Brown was built on the prior work of integrative theorists in both psychology¹⁵⁴ and

¹⁵⁴ S. L. Jones, “An integration view”, in E. L. Johnson (Ed.), **Psychology & Christianity: Five views**, (Downers Grove: InterVarsity Press, 2010): 101-128.; G. R

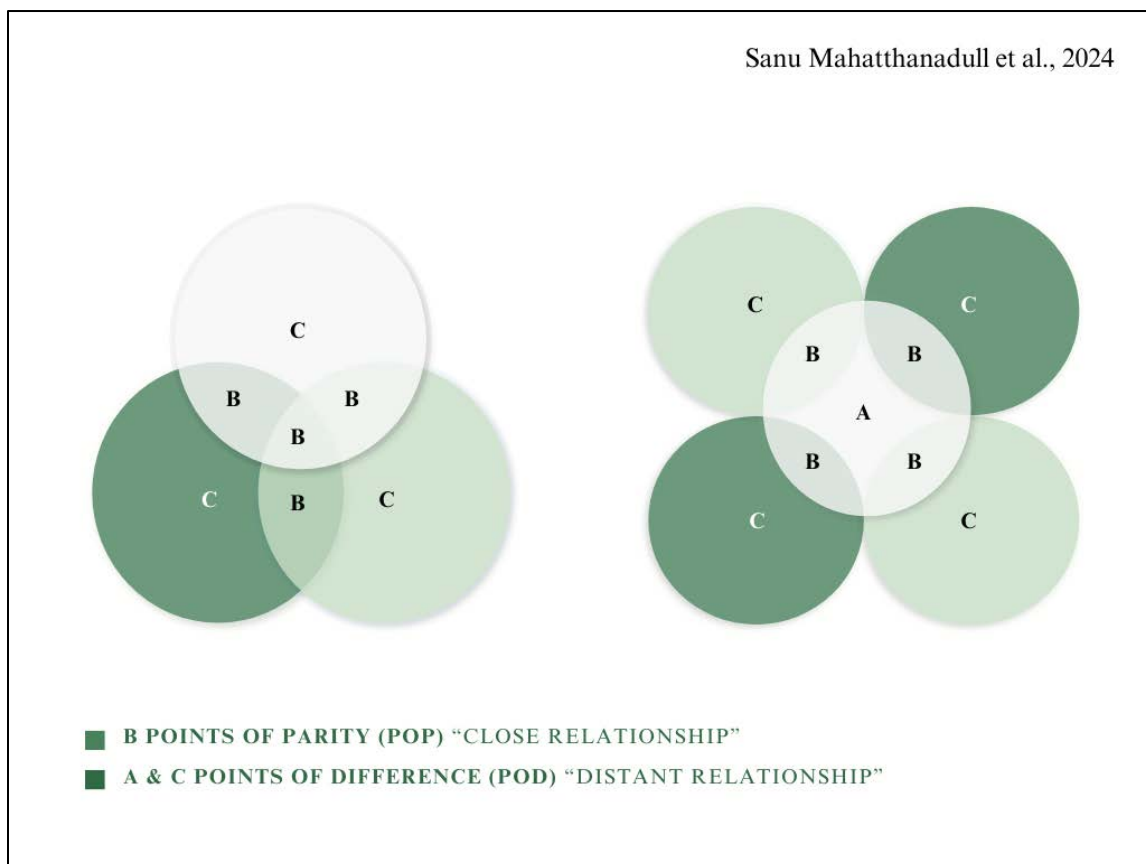
theology¹⁵⁵ Yet they shift emphasis to a consistently “relational” approach to integration, arguing that “differentiated relationality is formative for shaping collaborative integration”.¹⁵⁶ Such a message shows the connection between Points of Parity (POP) and Points of Difference (POD) as described earlier. On one hand, Points of Parity (POP) are the common characteristics that two or more things have. They are the aspects that make them comparable or alike. They are the basic things they share, making them similar in some ways. On the other hand, Points of Difference (POD) are the distinct characteristics that set two things apart from each other. They are the features that make each thing stand out or be different from the other. In short, points of parity are what things have in common, and points of difference are what make them unique or different from each other. See the following diagram for POP and POD in HRI:

Collins, “An integration view”, in E. L. Johnson & S. L. Jones (Eds.), **Psychology & Christianity: Four views**, (Downers Grove: InterVarsity Press., 2000): 102-129.; R. L. Sorenson, “The Tenth Leper”, **Journal of Psychology and Theology**, Vol. 24, (1996): 197-211.; and E. L. Worthington, “A Blueprint for Intradisciplinary Integration”, **Journal of Psychology and Theology**, Vol. 22 (1994): 79-86;

¹⁵⁵ K. A. Reynhout, “The Hermeneutics of Transdisciplinarity: A Gadamerian Model of Transversal Reasoning Transdisciplinarity” in **Science and Religion**, Vol. 2 (2007): 77-101.; A. Wolters, “No Longer Queen: The Theological Disciplines and Their Sisters”, In D. L. Jeffrey & C. S. Evans (Eds.), **The Bible and the University Grand Rapids**, (MI: Zondervan, 2007): 59-79.; J. B. Green, “Body and Soul, Mind and Brain: Critical Issues” In J. B. Green & S. L. Palmer (Eds.), In **Search of the Soul: Four Views of the Mind-Body Problem**, (Downers Grove: InterVarsity Press, 2005): 7-32.; and N. Murphy, “Theology and the Social Sciences-Discipline and Anti-Discipline”, **Zygon**, Vol. 25 (1990): 309-316.

¹⁵⁶ Steven J. Sandage and Jeannine K. Brown, **Relational Integration of Psychology and Christian Theology: Theory, Research, and Practice**, (New York: Routledge, 2018), p. 5.

Diagram 4.8 Points of Parity & Points of Difference (HRI)



According to the Rule of HRI, the increasing number of both POP and POD is an indicator of the diversity of the domains being integrated at that time, resulting in a more complex dimension of integration. From the above diagram on the right, all five circles were placed overlapped with the first circle in the middle as the center axis while the remaining four circles were superimposed on it. Based on these overlapping positions, four identical areas also known as Points of Parity (POP), namely "B" are formed depicting the common area where the five circles interact. From another point of view, the other areas in each of the five circles that are not shared, namely "A" and "C" are called Points of Difference (POD). While the above diagram on the left shows the overlap of the three circles in a different manner than the one on the right. It results in two divisions of POP: 1) POP which is the close

relationship between two domains being integrated, and 2) POP which is the closest relationship among all domains being integrated.

The Rule of HRI governs four different integration phenomena according to their principles. It refers to the process of integration where multiple sciences exist, namely, Buddhism, science, and other modern disciplines in the modern day.¹⁵⁷ It describes the four principles as follows: - 1) Fourth Principle: Three-Buddhist-School-based Holistic Integration, 2) Fifth Principle: Environment-Mind-Wisdom-based Holistic Integration, 3) Sixth Principle: Physical-Environment-Mind-Wisdom-based Holistic Integration, and 4) Seventh Principle: Problem-Solution-based Holistic Integration. The details are as follows:

1. Fourth Principle: Three-Buddhist-School-based Holistic Integration

Now let us begin our journey to the holistic-integration universe under the Rule of HRI. The Fourth Principle elaborates on the holistic integration among the three sects of Buddhism. The three siblings of the Buddhist religion play a vital role in enabling the coexistence of similar and different doctrines (*dhamma*) and discipline (*vinaya*) in harmony. The *Dhamma* and the *Vinaya* are the only teachers of the Buddhist religion as the Buddha instructed Venerable Ananda¹⁵⁸: “Ananda, for what I have taught and

¹⁵⁷ **Science** refers to the two types of sciences, namely: - (1) Pure science, such as physics, chemistry, biology, astronomy, etc., and (2) Applied science, such as engineering, medicine, agriculture, technology, renewable energy, etc.

Modern disciplines refer to the disciplines other than science available in the modern day, such as humanities, social sciences, education, etc. See topic 1.5 Definition of the Terms Used in the Research in Chapter 1.

¹⁵⁸ Ānanda - One of the principal disciples of the Buddha. He was a first cousin of the Buddha and was deeply attached to him. He came to earth from Tusita and was born on the same day as the Bodhisatta, his father being Amitodana the Sākya, brother of Siddhodana. Mahānāma and Anuruddha (q.v.) were therefore his brothers (or probably stepbrothers).

Ānanda entered the Order in the second year of the Buddha’s ministry, together with other Sākya princes, such as Bhaddiya, Anuruddha, Bhagu, Kimbila and Devadatta, and was ordained by the Buddha himself, his *upajjhāya* being Belatṭhasīsa.’ Soon after, he heard a discourse by Puṇṇa Mantāniputta and became a *Sotāpanna*.

explained to you as Dhamma and discipline will, at my passing, be your teacher”.¹⁵⁹ The doctrine and discipline that appeared in the Tipiṭaka is thus considered the Teacher of Buddhism. When this is the case, the most important thing in Buddhism Integration Theory is “accurate and plausible primary data” which means “Tipiṭakas” of TMV Buddhist sects. “The BI Theory must be investigated based on Tipiṭaka of Theravāda, Mahāyāna, and Vajrayāna sects. In addition, it needs to be rechecked before applying to social practice.”¹⁶⁰ Without the Tipiṭaka, Buddhism integration is implicitly unreliable.

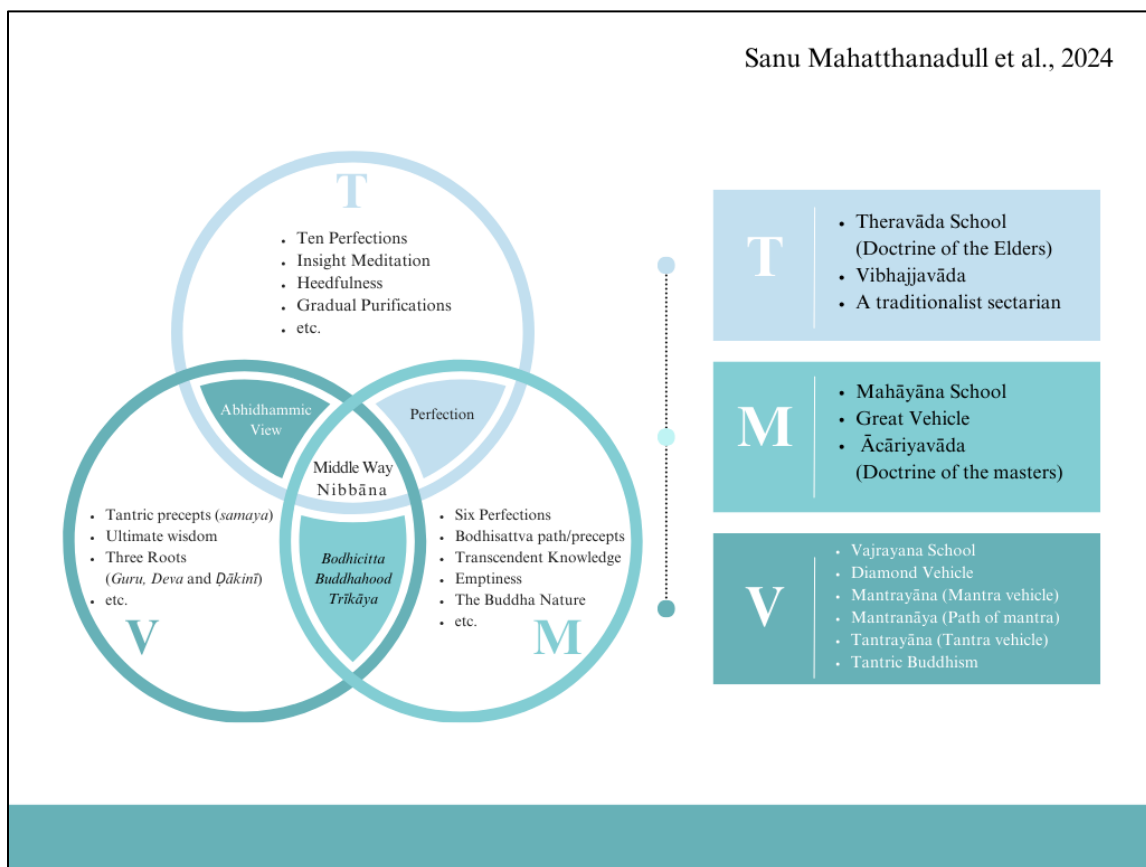
The holistic integration among the three siblings of Buddhism is as important as the largest footprint of an elephant among all animal footprints. They are the integration of key principles, traditions, or knowledge existing among the three sects of Buddhism (Theravāda, Mahāyāna, and Vajrayāna: TMV) that can be carried out under this Rule. First, the Theravāda school or “Doctrine of the Elders”, also known as “Vibhajjavāda” means the doctrine of “distinguishes” (*vibhajanto*), is the dominant form of Buddhism among those that arose after the Buddha’s death. It is a traditionalist sect that tries to preserve as much of the original teachings from the First Council as possible. Second, the Mahāyāna school or “Great Vehicle” which arose in the 4th century, also known as “Ācāriyavāda” (Doctrine of the masters), is now the largest Buddhist sect in the world. Last, Vajrayāna school or “Diamond Vehicle”, a form of Mahāyāna Buddhism, also known as Mantrayāna (mantra vehicle), Mantranāya (path of mantra), Tantrayāna (tantra vehicle), Tantric Buddhism, and Esoteric Buddhism. It is known for its swift and powerful methods for achieving awakening. The following diagram shows the Fourth Principle: Three-Buddhist-School-based Holistic Integration:

- G. P. Malalasekera, **Dictionary of Pāli Proper Names**, Vol. I, A - Dh, 2 Vols. Set., (London: John Murray, 1937), pp. 249-250.

¹⁵⁹ “yo vo ānanda mayā dhammo ca vinayo ca desito paññatto, so vo mamaccayena satthā” - D.II.154; Maurice Walshe (tr.), **Thus Have I Heard: The Long Discourses of the Buddha (Dīgha Nikāya)**, p. 270.

¹⁶⁰ Interview with Ven. Nam Nguyen Van, Dr., Mahāyāna Lecturer, Khanh Hoa Buddhist College, Vietnam, October 7, 2023.

Diagram 4.9 Fourth Principle: Three-Buddhist-School-based Holistic Integration



Under the Fourth Principle, the three Buddhist sects mutually share vital principles, such as the Noble Eightfold Path is the Middle Way, Nibbāna as the ultimate goal of life, etc., This means that all sects stand together forever in the same position and will not change because it is a strong standing point shared by all three sects in the center area of the diagram where the three mandalas overlapped. Under the HRI Rule, this shared standing point becomes POP which is the closest relationship among them. On the contrary, each sect has its distinctive characteristics, as conveyed through its unique teachings. For example, Theravāda Buddhism emphasizes the ten perfections (*dasapāramī*), insight meditation (*vipassanā*), heedfulness (*appamāda*), the seven gradual purifications (*visuddhi*), etc. However, Mahāyāna Buddhism emphasizes the six perfections, the Bodhisattva path, Bodhisattva precepts,

emptiness, Buddha nature, etc. In comparison, Vajrayāna Buddhism emphasizes Tantric precepts (*samaya*), ultimate wisdom, the Three Roots (*Guru, Deva, and Ḍākinī*), etc. Besides, there are also dualistic relationships between the two sects, such as the doctrine of perfection shared between Theravāda and Mahāyāna; the doctrines of *Bodhicitta*¹⁶¹, the *Buddhahood*, and *Trīkāya* shared between Mahāyāna and Vajrayāna; and the nature of Abhidhammic knowledge that Vajrayāna and Theravāda give equal enthusiasm. One of the central doctrines of Buddhism shared by all three sects is the Noble Eightfold Path leading to the cessation of suffering, which is Nibbāna. It consists of three different aggregates of education; aggregate of morality (*sīla-khanda*), aggregate of concentration (*samādhi-khanda*), and aggregate of wisdom (*paññā-khanda*).

2. Fifth Principle: Environment-Mind-Wisdom-based Holistic Integration¹⁶²

The Fifth Principle under the HRI Rule is “Environment-Mind-Wisdom-based Holistic Integration”. This principle stipulates the holistic integrative process with an effort to bridge the gap between spiritual Buddhist doctrines and contemporary scientific perspectives and understanding. This endeavor seeks to find common ground and insights among these multiple

¹⁶¹ “Enlightening Mind (*bodhicitta*) from Mahāyāna should be added to the BI Theory” Interview with Ven. Nam Nguyen Van, Dr., Mahāyāna Lecturer, Khanh Hoa Buddhist College, Vietnam, October 7, 2023.

¹⁶² “Environment” refers to morality or *sīla* in the context of the *tisikkha* which can be interpreted in a broad sense. In this research, it refers to phenomena that occur to both individuals and other people in a society through both channels of bodily and verbally action. *Sīla* therefore covers individual personal behavior, the existence of people, communities, societies, nations, countries, the environment, ecosystems, world, universe, galaxy, intergalactic, multiverses, infinite universes, etc.

“Mind” or *samādhi* refers to phenomena that occur to one’s mind. It covers individual positive mental quality, such as right concentration in the first, second, third and fourth absorptions (*jhānas*).

“Wisdom” or *paññā* refers to phenomena that occur to one’s wisdom. It covers individual positive intellectual ability, such as wisdom consisting in what is reasoned, consisting in what is heard, and consisting in development; wisdom to know the Four Noble truths, etc.

seemingly distinct domains, to enhance our understanding of the nature of reality, consciousness, matters, and the human experience. That is to say to develop human learning ability for the achievement of one's behavior, society, or environment (*sīla*), one's concentrated mind (*samādhi*), and one's wisdom (*paññā*). It is well known that science plays a crucial role in shaping our understanding of the natural world, driving technological advancements, and improving our quality of life in a broader sense. Its essence can be highlighted in several key aspects including critical thinking and problem-solving, education and knowledge dissemination, environmental awareness, evidence-based decision-making, global collaboration, healthcare advancements, innovation and economic growth, space exploration, technological progress, understanding the universe, etc. In essence, science provides a systematic approach to understanding the natural world, solving problems, and advancing human society. Its discoveries and innovations have far-reaching impacts that touch every aspect of our lives, from our microscopic health to our understanding of the macroscopic cosmos.

The Fifth Principle explains that the Environment-Mind-Wisdom-based Holistic Integration is an integration that allows learners to access a three-dimensional overview of nature. Buddhism is a religion based on nature and conveys principles and beliefs that can be applied to everyday life in harmony. Not only Sakyamuni Buddha, but all Buddhas teach *ovāda-patimokkha*:

Sabba-pāpassa akaraṇaṃ, kusalassa upasampadā,

*Sacitta-pariyo dapaṇaṃ, etaṃ buddhāna sāsanaṃ*¹⁶³

¹⁶³ D.II.49; Dh.183.

Not to do any evil, but cultivate the good, to purify one's mind, this the Buddhas teach"¹⁶⁴ which is the doctrine of *sikkhā*,¹⁶⁵ the Training in higher morality (*adhisīla-sikkhā*) is the training of behavior for a positive environmental impact, 2) Training in higher thought (*adhicitta-sikkhā*) is the training of mind for a good quality mind, and 3) Training in higher insight (*adhipaññā-sikkhā*) is the training of wisdom for sharp wisdom. Under the Rule of HRI, the Environment-Mind-Wisdom-based Holistic Integration plays a key role as an integral education in Buddhism with the Threefold Training as the foundation for Buddhists to cultivate to attain enlightenment and liberation from suffering. These three components are:

The Threefold Training (*Tisikkha*) in the HRI Fifth Principle

1. Training in Higher Morality (*adhisīla-sikkhā*): This is the foundation of the training and involves cultivating moral and ethical behavior. Practitioners commit to following the Five Precepts (or more precepts, such as eight precepts, ten precepts, and so on, for advanced practitioners), which are guidelines for abstaining from harmful actions such as killing, stealing, lying, sexual misconduct, and intoxication.

2. Training in Higher Mentality (*adhicitta-sikkhā*): it refers to the development of mental focus, concentration, and meditative absorption. Practitioners work to calm and stabilize their minds through meditation practices, allowing them to develop deep levels of concentration and insight. This focused attention aids in gaining insight into the nature of reality and the cessation of suffering.

3. Training in Higher Wisdom (*adhipaññā-sikkhā*): it involves the cultivation of wisdom and insight into the nature of reality, particularly the Four Noble Truths and the concept of impermanence. This aspect of training

¹⁶⁴ Maurice Walshe (tr.), **Thus Have I Heard: The Long Discourses of the Buddha (Dīgha Nikāya)**, p. 219; See K. R. Norman (tr.), **The Word of the Doctrine (Dhammapada)**, p. 28.

¹⁶⁵ D.III.220; A.I.229; Maurice Walshe (tr.), **Thus Have I Heard: The Long Discourses of the Buddha (Dīgha Nikāya)**, p. 486; F. L. Woodward (tr.), **The Book of the Gradual Sayings (Anguttara-Nikāya)**, Vol. I (Ones, Twos, Threes), p. 208.

helps practitioners understand the causes of suffering, the path to its cessation, and the nature of enlightenment.

These three aspects of training are considered interdependent and mutually reinforcing. Ethical conduct supports the development of mental discipline, and mental discipline supports the cultivation of wisdom. Together, they form a holistic approach to personal transformation and spiritual growth in Buddhism. This holistic integration is an aspect of human education that is necessary for human beings to learn to acquire an accurate and undistorted worldview and life view. It is for the equilibration of life for understanding mother nature for access to nature and to be as close as possible to nature that is to say “to understand things as they are and to understand nature as it is”. Looking through this aspect, the Rule of HRI is the education and learning total system for throughout human life, also known as Life Long Learning (LLL), in both worldly methodologies and Buddhist methodological systems in terms of “three aspects of education” (*ti-sikkhā*) and “four aspects of development” (*catasso-bhāvanā*), Bhikkhu Brahmali viewed:

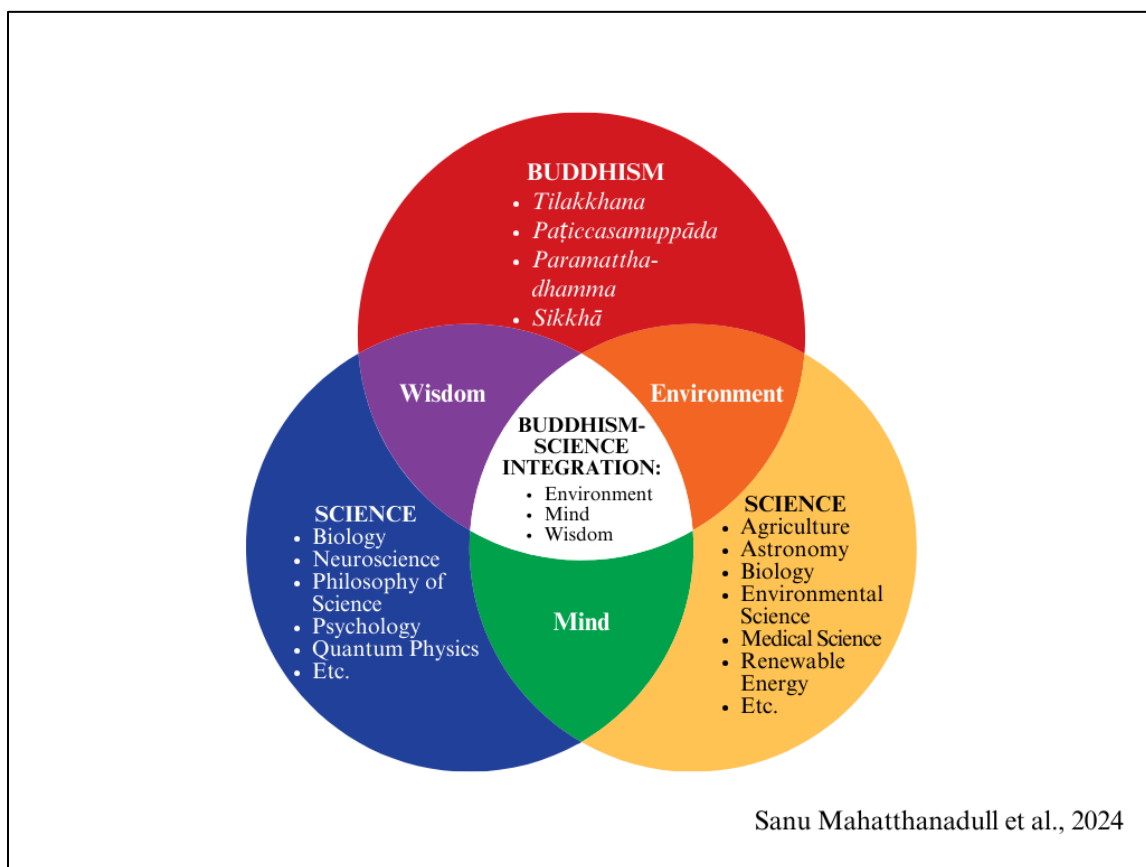
Through the education system. It is true, of course, that the education system should be secular and not promote one religion over others. Yet Buddhism can help with setting out the basic values that should be taught.¹⁶⁶

In terms of the HRI Rule, the Fifth Principle mentions that among these three domains of nature development, Buddhism has established a system of self-development that focuses mainly on two of the three abstract natural elements, namely, mental training and wisdom training, respectively. On the other hand, moral training giving a positive impact on society and the environment is the only concrete one out of the three elements. Thus, these three domains are the framework for integrating Buddhism and science under the universal laws of nature. The next diagram shows the Buddhist integration

¹⁶⁶ Interview with Bhikkhu Brahmali, Bodhinyana Monastery, Australia, June 30, 2023.

based on the Threefold Training (Environment-Mind-Wisdom) based on the Fifth Principle:

Diagram 4.10 Fifth Principle: Environment-Mind-Wisdom-based Holistic Integration



From the diagram, The Threefold Training in Buddhism (*sikkhā*) is the broadest picture of sustainable human development. It is a foundation principle that can be integrated with all the sciences existing in the world. **First**, Environment or morality (*sīla*) refers to the sciences that focus primarily on the study of the relationship among humans, society, and the environment such as agriculture, astronomy, biology, environmental science, medical science, renewable energy, etc. Among them, environmental science stands out as an interdisciplinary field that integrates pure sciences, applied sciences, and other sciences, such as physics, biology, meteorology,

mathematics, and geography. The Buddhist environmental science suggested, “The concept of Five *Niyāma*¹⁶⁷ is used as a framework for describing the phenomenon of rapid degradation of natural environment.” They are the world’s overall heat degradation (*utu-niyāma*); degradation of heredity (*bīja-niyāma*); mental degradation (*citta-niyāma*); moral or action degradation to reduce humans to be a lower human (*kamma-niyāma*); natural and environmental degradation in which people live their lives (*dhamma-niyāma*).¹⁶⁸ **Second**, Mind or concentration (*samādhi*) refers to the sciences that focus mainly on the study of humans’ minds, and mental or psychological behaviors. They are biology, neuroscience, philosophy of science, psychology, quantum physics, etc. Mark D. Forman explored the science of mind, “The five basic features of Integral Theory (quadrants, levels, lines, states, and types) and how these inform the central principles of Integral Psychotherapy.¹⁶⁹ Sanu Mahatthanadull and Sarita Mahatthanadull pointed out “The fivefold supportive behavior is key to promoting the sustainable balance of family according to Buddhist Psychology. They are Emotional, Esteem, Social Network, Tangible, and Informational support.”¹⁷⁰ **Third**, Wisdom (*paññā*) or human intelligence refers to Buddhism, natural and spiritual science to discover the secret code of all things is the three characteristics (*tilakkhana*), dependent origination (*paṭiccasamuppāda*) in terms of subtle and profound relationships of things, and the Abhidhamma’s

¹⁶⁷ The fivefold order appeared in the commentarial scriptures named *Sumaṅgalavilāsinī* and *Aṭṭhasālinī*: - 1. Caloric Order (*utu-niyāma*), 2. Germinal Order (*bīja-niyāma*), 3. Psychical Order (*citta-niyāma*), 4. Moral Order (*kamma-niyāma*), 5. Natural Phenomenal Order (*dhamma-niyāma*). DA.II.432; DhsA.272.

¹⁶⁸ Sanu Mahatthanadull, “Buddhist Response to Environmental Degradation under Conceptual Framework of the Five *Niyāma*”, **Proceedings Document**, The 1st MCU International Academic Conference (MIAC) on Buddhism and World Crisis, Graduate School, May 29, 2015, (BKK: MCU Printing): 65-78.

¹⁶⁹ Mark D. Forman, **A Guide to Integral Psychotherapy: Complexity, Integration, and Spirituality in Practice**, (Albany: State University of New York Press, 2010), p. 33.

¹⁷⁰ Sanu Mahatthanadull and Sarita Mahatthanadull, “Human Behaviors in Promoting Balance of Family according to Buddhist Psychology”, **Journal of MCU Peace Studies**, Vol.8 No.1 (January-February 2020): 21-31.

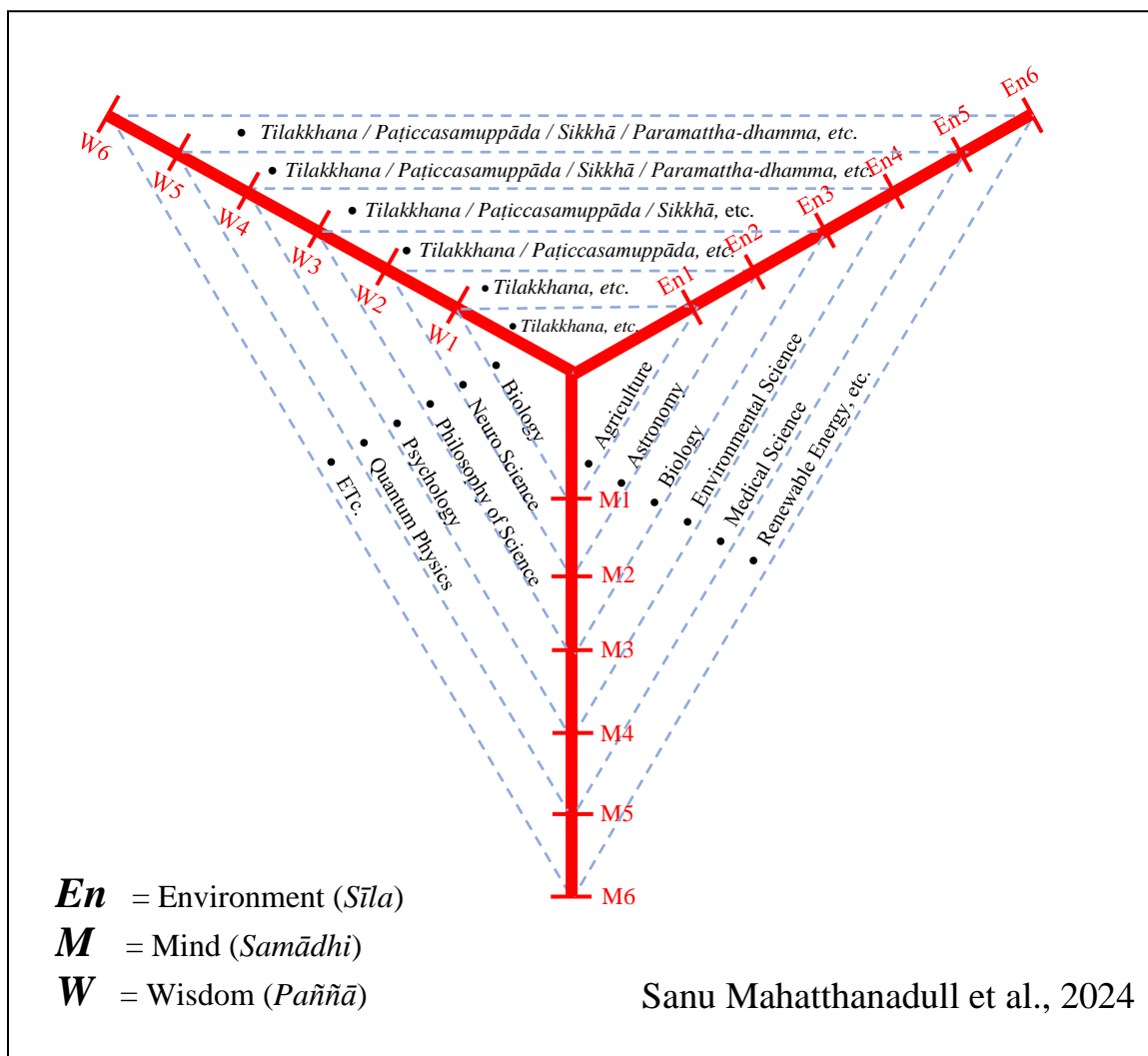
four ultimate truths (*paramattha-dhamma*) can penetrate the discovering of the world with a reductionism.

One reason why integration is so important according to the Fifth Principle of the HRI Rule is that all of the above disciplines need to be carried on in conjunction with other aspects as an integral study. Thus, the phenomenon of three common areas where each science meets, namely (1) Environment, (2) Mind, and (3) Wisdom respectively, significantly shows the dual shared aspects between sciences. These are called the Environment-Mind-Wisdom-based Integration between Buddhism and science. **First**, Environment-Mind Science refers to the sciences that elaborately research the close relationship between society, the world, the environment, and the mind. **Second**, Mind-Wisdom Science refers to the sciences that elaborately research the close relationship between mind and wisdom. Ven. Geshe Thabkhe left the Vajrayāna confirmation, “We pay more attention to mental health and integrate our understanding of mind [*citta*] and mental factors [*cetasika*] and many options of meditation to other disciplines.”¹⁷¹ **Third**, Wisdom-Environment Science refers to the sciences that elaborately research the close relationship between intelligence, wisdom, society, the world, and the environment.

Looking through the HRI using the basic knowledge of each discipline as a foundation, the following diagram named “Knowledge-based Holistic Integration Triangular Pyramid” displays such things:

¹⁷¹ Interview with Ven. Geshe Thabkhe (Ph.D.), Vajrayāna Master, Sera Jey Monastery, South India, October 7, 2023.

Diagram 4.11 Knowledge-based Holistic Integration Triangular Pyramid



From the diagram, the abbreviations **En**, **M**, and **W** represent the Threefold Training, namely (1) morality (*sīla*) or environment,¹⁷² (2) concentration (*samādhi*) or mind, and (3) wisdom (*paññā*) respectively. The

¹⁷² Environment refers to morality or *sīla* in the context of the *tisikkha*. It covers individual personal behavior, the existence of people, communities, societies, nations, countries, the environment, ecosystems, world, universe, galaxy, intergalactic, multiverses, infinite universes, etc.

numbers on each axis from 1 to 6 represent the number of each branch of the discipline, i.e., the various branches of science, including important Buddhist principles such as the principle of the three characteristics. **First**, various sciences that study nature in close relation to the environment and the human mind, such as agriculture, astronomy, biology, environmental science, medical science, renewable energy, etc. **Second**, various sciences that study nature in close relation to the human mind and intelligence, such as biology, neuroscience, philosophy of science, psychology, quantum physics, etc. **Last**, as the center of wisdom and virtue, Buddhism brings out the essential codes of all things to explain all phenomena that occur consistently and perfectly. These principles include *tilakkhana*, *paṭiccasamuppāda*, *sikkhā*, *paramatthadhamma* is *citta*, *cetasika*, *rūpa* and *Nibbāna*, etc. Just as Venerable Sāriputta said:

Friends, just as the footprint of any living being that walks can be placed within an elephant's footprint, and so the elephant's footprint is declared the chief of them because of its great size; so too, all wholesome states can be included in the Four Noble Truths¹⁷³

In the same vein, amidst the different multidisciplinary educational systems, the key Buddhist principles according to the Fifth Principle for the holistic integration purpose are declared the chief of all. Just as the footprint of any living being that walks can be placed within an elephant's footprint, and so the elephant's footprint is declared the chief of them because of its great size; so too, all non-Buddhist disciplines can also be included in the Buddhist *tilakkhana*, *paṭiccasamuppāda*, *sikkhā*, *citta*, *cetasika*, *rūpa* and *Nibbāna*.

The Knowledge-based Holistic Integration Triangular Pyramid allows various bodies of knowledge to be integrated to find the true nature from a modern, concrete scientific perspective and a profound Buddhist

¹⁷³ Mahāhatthipadopama Sutta - M.I.184; The Greater Discourse on the Simile of the Elephant's Footprint - Bhikkhu Ñānamoli and Bhikkhu Bodhi (trs.), **The Middle Length Discourses of the Buddha**, p. 278.

perspective through the wisdom eye. The holistic body of knowledge that humans gain from viewing nature in various aspects, both vertical and horizontal, combined with philosophical and religious concepts, allows humans to see nature and the environment with non-bias.¹⁷⁴ This holistic and integrated perspective using knowledge as a basis creates the wisdom to carefully consider the true nature of reality. Buddhism calls this “knowledge and vision as they really are” (*yathābhūta-ñāṇa-tassana*).¹⁷⁵ In other words, *yathābhūta-ñāṇa-tassana* is a set of correct knowledge free from all twelfth possible types of distortion (*vipallāsa*)¹⁷⁶ to reach oneness with nature harmoniously.

¹⁷⁴ *Agati* refers to wrong course of behavior; prejudice; bias. It comprises of four kinds, namely: - (1) Bias caused by love or desire (*chandāgati*), (2) Bias caused by hatred or enmity (*dosāgati*), (3) Bias caused by delusion or stupidity (*mohāgati*), and (4) Bias caused by fear (*bhayāgati*). D.III.182, 228; A.II.18.

¹⁷⁵ “*Yāvakīvaṅca me bhikkhave imesu catūsu ariyasaccesu evantiparivaṭṭam dvādasākāraṃ yathābhūtam ñānadassanam na suvisuddham ahoṣi. . .*”, Sacca Saṃyuttam, Dhammacakkappavattana Vaggo Duttiyo - S.V.422;

“So long, bhikkhus, as my knowledge and vision of these Four Noble Truths as they really are in their three phases and twelve aspects was not thoroughly purified in this way. . .” Bhikkhu Bodhi (tr.), **The Connected Discourses of the Buddha A New Translation of the Saṃyutta Nikāya**, Vol. II. 2 Vols. set. (Oxford: PTS, 2000), p. 1845.

¹⁷⁶ *Vipallāsa* refers to knowledge that distorts from natural reality. There are three levels of distortion: - (1) distortion of perception (*saññā-vipallāsa*), (2) distortion of thought (*citta-vipallāsa*), and (3) distortion of views (*diṭṭhi-vipallāsa*). Distortion is in four aspects: - (1) to regard what is impermanent as permanent (*niccā*), (2) to regard what is painful as pleasant (*sukha*), (3) to regard what is non-self as self (*attā*), and (4) to regard what is foul as beautiful (*sobhana*). A.II.52.

3. Sixth Principle: Physical-Environment-Mind-Wisdom-based Holistic Integration¹⁷⁷

Under the HRI Rule, the Sixth Principle elaborates on the type of integration that allows learners to access a four-dimensional overview of nature named “Physical-Environment-Mind-Wisdom-based Holistic Integration”. Apart from the abovementioned Fifth Principle exposing the Buddhist threefold holistic educational view, Buddhism suggests a wider fourfold holistic view. In the Anguttara-Nikāya, it is said “*Bhavissanti bhikkhave bhikkhū anāgatamaddhānaṃ abhāvitakāyā abhāvitasīlā abhāvitacittā abhāvitapaññā. . .*”¹⁷⁸ translated as “Monks, there will be, in the long road of the future, monks who have not made body become, not made virtue become, not made mind become, not made insight become. . .”¹⁷⁹ From the passage, the four *bhāvanā* were expounded in different forms as the person’s four qualifications in terms of human self-development in four areas. They are:

¹⁷⁷ “Physical” refers to physical body or *kāya* in the context of the four *bhāvitas*. It shows an enhancing of the capacity of the body or the aggregate (*rūpa-khanda*) and the six sense-bases (*saḷāyatana*) to effectively interact, communicate and understand the internal and external world. It also covers the completeness of the four essential factors of life: food, clothing, shelter, and medicine including the readiness of the physical infrastructure.

“Environment” refers to morality or *sīla* covering individual personal behavior, the existence of people, communities, societies, nations, countries, the environment, ecosystems, world, universe, galaxy, intergalactic, multiverses, infinite universes, etc.

“Mind” refers to phenomena that occur to one’s mind. It covers individual positive mental quality, such as right concentration in the first, second, third and fourth absorptions (*jhānas*).

“Wisdom” refers to phenomena that occur to one’s wisdom. It covers individual positive intellectual ability, such as wisdom consisting in what is reasoned, consisting in what is heard, and consisting in development; wisdom to know the Four Noble truths, etc.

¹⁷⁸ A.III.106.

¹⁷⁹ E.M. Hare (tr.), **The Book of the Gradual Sayings (AnguttaraNikāya)**, Vol. III (The Books of the Fives and Sixes), p. 84.

The Four Qualifications of Person (*Bhāvitas*) in the HRI Sixth Principle

1. Those who have made physical body become (*bhāvita-kāyā*),
2. Those who have made virtue become (*bhāvita-sīlā*),
3. Those who have made mind become (*bhāvita-cittā*),
4. Those who have made wisdom become (*bhāvita-paññā*).

These four qualities are the conditions of success that come from a person's long-term practice of the Middle Way (*majjhimā-paṭipadā*), which consists of many key factors. These images of success are divided into four dimensions, starting from the grossest dimension of the visible part of the human body to the subtlest dimension of the abstract part of human intellect.

Among these four domains of nature development, if the ratios of all the domains are given as one hundred percent and each domain is given twenty-five percent weight, that is, the physical domain is given twenty-five percent, the environmental domain is given twenty-five, the mental domain is given twenty-five, and the wisdom domain is given twenty-five percent. It is found that Buddhism has set up a system of self-development that focuses on the absolute proportion between the body and the mind equally. While the physical and environmental development domains are closely related to nature in the tangible aspect, they are given fifty percent weight, the mental and wisdom development domains are closely related to nature in the intangible aspect, and they are also given fifty percent weight. These four domains are the framework for integrating Buddhism with modern sciences in an equilibrium approach. In *Cūḷaniddesa*, the elaboration of the qualities of the Blessed One was mentioned:

*Kathaṃ bhagavā bhāvitatto. Bhagavā bhāvitakāyo bhāvitasīlo
Bhāvitacitto bhāvitapañño bhāvitasatipaṭṭhāno bhāvitasammappadhāno
bhāvaitiddhipādo bhāvitindriyo bhāvitabalo bhāvitabojjhaṅgo
bhāvitamaggo. . .*¹⁸⁰

¹⁸⁰ Mettagūmaṇavakapañhāniddeso, Nd².14.

The above passage mentions that the Buddha has the following eleven qualities trained:

1. Who has made physical body trained (*bhāvitakāyo*),
2. Who has made morality trained (*bhāvitasīlo*),
3. Who has made mind trained (*bhāvitacitto*),
4. Who has made wisdom trained (*bhāvitapañño*),
5. Who has made mindfulness trained (*bhāvitasatipaṭṭhāno*),
6. Who has made the right effort trained (*bhāvitasammappadhāno*),
7. Who has made the bases of power trained (*bhāvitaiddhipādo*),
8. Who has made the faculties trained (*bhāvitindriyo*),
9. Who has made the strength trained (*bhāvitabalo*),
10. Who has made the factors of enlightenment trained (*bhāvitabojjhaṅgo*),
11. Who has made the path trained (*bhāvitamaggo*).

To reach the oneness with nature that Buddhism calls the “Noble Individual”, a person must go through the said four processes of self-development. In addition, he must also go through the seven categories of the thirty-seven factors conducive to the attainment of the Dhamma called “*bodhipakkhiyadhamma*”.¹⁸¹ That is, a person who has fully developed the highest virtues in Buddhism consists of forty-one qualities, they are: - developed physical body, developed morality, developed mind, developed wisdom, developed four foundations of mindfulness, developed four great efforts, developed four qualities for success, developed five faculties, developed five powers, developed seven enlightenment factors, and developed eightfold paths.

¹⁸¹ *Bodhipakkhiya-dhamma* refers to virtues partaking of enlightenment. There are seven categories, thirty-seven factors: the four *satipaṭṭhāna*, the four *sammappadhāna*, the four *iddhipāda*, the five *indriya*, the five *bala*, the seven *bojjhaṅga*, and the eightfold *magga*. - Vism.681.

At this point, it is obvious that a person who has fully developed the fourfold *bhāvita* is closely related to the thirty-seven enlightenment states. In the *Visuddhimagga* (The Path of Purification), Buddhaghosācāriya says them as the thirty-seven enlightenment states (*bodhipakkhiya-dhamma*):

These thirty-seven states indeed, namely: four applications of mindfulness, four right efforts, four bases of supernormal power, five faculties, five strengths, seven enlightenment factors, eightfold *Ariya-Path*, are known as enlightenment accessories.¹⁸²

On a larger scale, the fourfold *bhāvita* plus *bodhipakkhiya-dhamma* are the key indicators of sustainable personal development goals in Buddhism. The person who is completely qualified for all those qualities is the Worthy One (*arahanta*).¹⁸³ This Fourfold *Bhāvanā* is a criterion to measure the life balance in four different dimensions¹⁸⁴ which cover the physical body (*kāya*), behaviors exposed to the society or environment (*sīla*), mind (*citta*), and wisdom (*paññā*) respectively. In some integrating views, they can be understood through holistic well-being as Sanu Mahatthanadull indicated in the Pyramid of the Four Dimensions of Holistic Well-beings¹⁸⁵ as the human beings' four aspects of efficiency or achievement from three aspects of education.

¹⁸² Vism.678; Pe Maung Tin, **The Path of Purity Being A Translation of Buddhaghosa's Visuddhimagga**, Part III of Understanding, 3 Vols. Set., (London: The Oxford University Press, 1931), p. 832.

¹⁸³ Phra Brahmaganabhorn (P.A. Payutto), **Dictionary of Buddhism**, (Thai Version), 19th ed., (Bangkok: S.R. Printing Mass Product Ltd., 2010), p. 71.

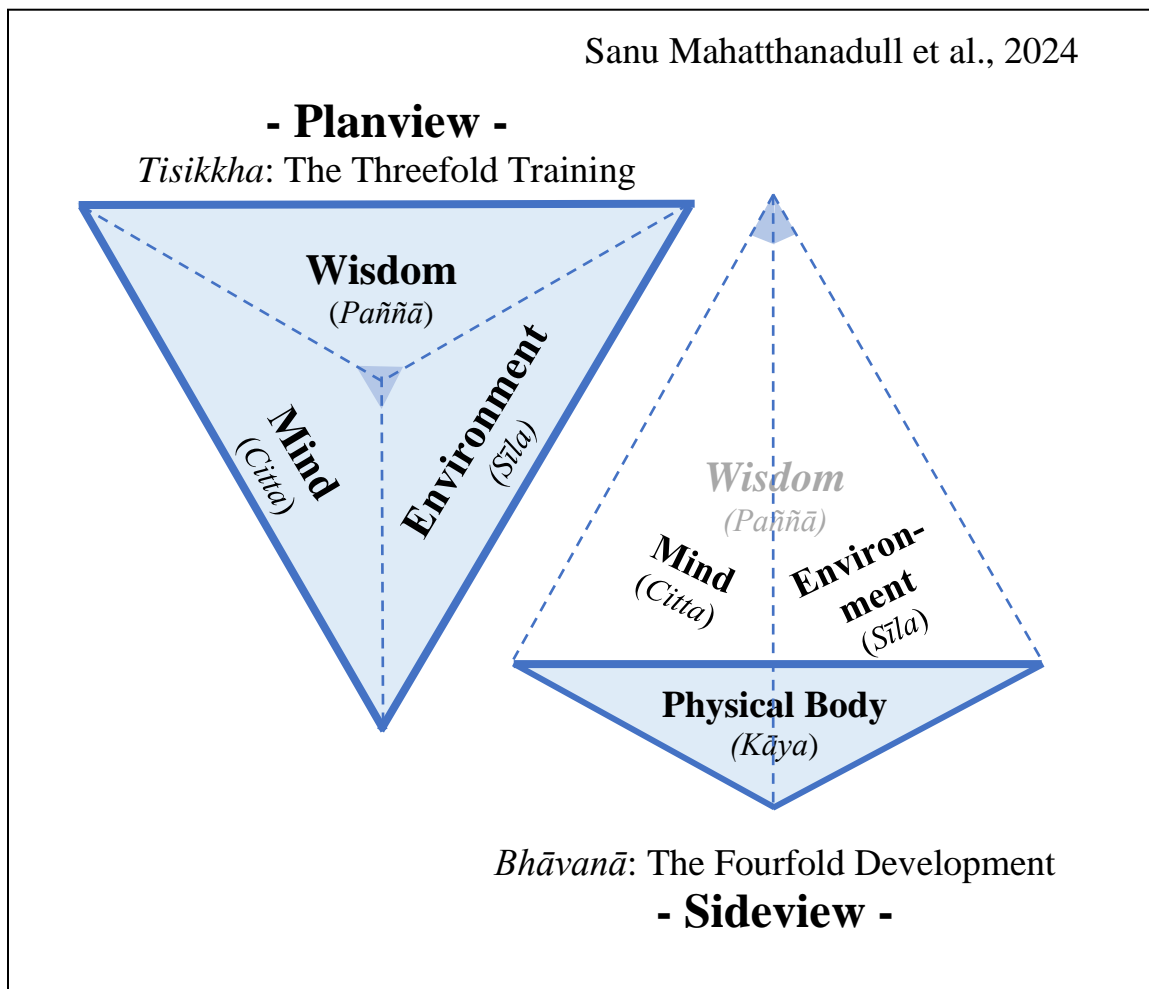
¹⁸⁴ See Phra Dhammoli (Thong Yu Ñāṇavisuddho), "An Analytical Study of the Way of Life, Behavior, Health, and the Holistic Health Care of Monks in the Tipitaka", **Doctor of Philosophy Dissertation**, (Graduate School: Mahachulalongkornrajavidyalaya University, 2551 B.E.), p. Abstract A.

¹⁸⁵ See Sanu Mahatthanadull and Sarita Mahatthanadull, "Holistic Well-beings Promotion for Balanced Way of Life according to Buddhist Psychology", **A Research Report Funded by National Research Council of Thailand (NRCT) Fiscal Year 2016**, (Buddhist Research Institute: Mahachulalongkornrajavidyalaya University, 2016), p. 67

From this point, the Sixth Principle of the HRI Rule dominates the integration where the three aspects of education (*ti-sikkhā*) and the four aspects of development (*catasso-bhāvanā*) are integrated as “the different same thing. Viewing from the eye of learning depicts the 3 aspects: (1) behavioral, (2) mental, and (3) intellectual. Looking through the eye of development represents the four aspects. The behavior (*sīla*) from *ti-sikkhā* is then expanded to the “physical side” as the first aspect of the physical body development (*kāya-bhāvanā*) in *catasso-bhāvanā* that is, of course, different from the development of morality (*sīla-bhāvanā*). Physical body development (*kāya-bhāvanā*) in this context means enhancing the capacity of the body or the aggregate (*rūpa-khandā*) and the six sense-bases (*saḷāyatana*) to effectively communicate and understand the internal and external world. Let us further understand this point again later. The second aspect “behavioral development” (*sīla-bhāvanā*) directly refers to the promotion of the capabilities of human behaviors both in terms of the intention to refrain, avoid, and control one’s evil behaviors that may cause harm to oneself and others. Including selective intentions to act only on good and constructive behaviors for oneself, society, and the community.

The following triangle pyramid shows the correlation between the three aspects of education (*ti-sikkhā*) and the four aspects of development (*catasso-bhāvanā*). It is a geometric solid with a polygonal base and triangular faces that converge to a single point called the apex. The base is a triangle, and the triangular faces that connect the base to the apex are also triangles. See the next diagram:

Diagram 4.12 Triangle Pyramid of Training and Development



In Buddhism, the holistic view of the entire educational process is lifelong learning. From the above diagram, the Planview on the left shows holistic learning in three dimensions, consisting of higher training of morality (*adhisīla-sikkhā*) training for oneself beneficial to individual and environmental aspects, higher training of mind (*adhicitta-sikkhā*) is a training for one's concentration (*samādhi*) beneficial to one's mind, and higher training of wisdom (*adhisīla-paññā*) is a training for one's intelligence beneficial to one's knowledge which is a top requirement from Buddhism.

Besides that, the Sideview on the right shows the four dimensions of holistic development, consisting of (1) development of the physical body

(*kāya-bhāvanā*) focusing on the development of the effective use of six sense doors (*saḷāyatana*) of the body in communicating with the world, (2) development of environment (*sīla-bhāvanā*) focusing on the development of the individual's behaviors together with peaceful and harmonious living with the society and environment, (3) development of mind (*citta-bhāvanā*) focusing on the development of the mind of individual by concentration practice, and (4) development of wisdom (*paññā-bhāvanā*) focusing on the development of wisdom of individual by augmenting one's insight. That is to say, the fourth dimension named *kāya-bhāvanā* has been added closer to *sīla-bhāvanā* to fulfill the holistic developmental process. Amongst the four factors, physical development plays a crucial role as the foundation for the development of human potential, especially the connection between the inner world and the outer world through the six sense bases, located on the floor of the pyramid, which is the foundation structure to support higher levels of development. While the remainder is the further development of human potential in terms of society, mentality, and wisdom. Thus, the four-dimensional holistic development leads to a more balanced and comprehensive approach to personal growth as Sanu Mahatthanadull discussed the Buddhist psychology:

Holistic Well-beings characterize the innate body, social morality, calm mind, and the awakening wisdom, respectively. They are the fourfold outcome of the holistic well-beings. Such outcomes are the result of the Balanced Way of life when the Maslow's Needs are fulfilled. (Physiological, Safety, Social, Esteem, and Self-actualization Needs).¹⁸⁶

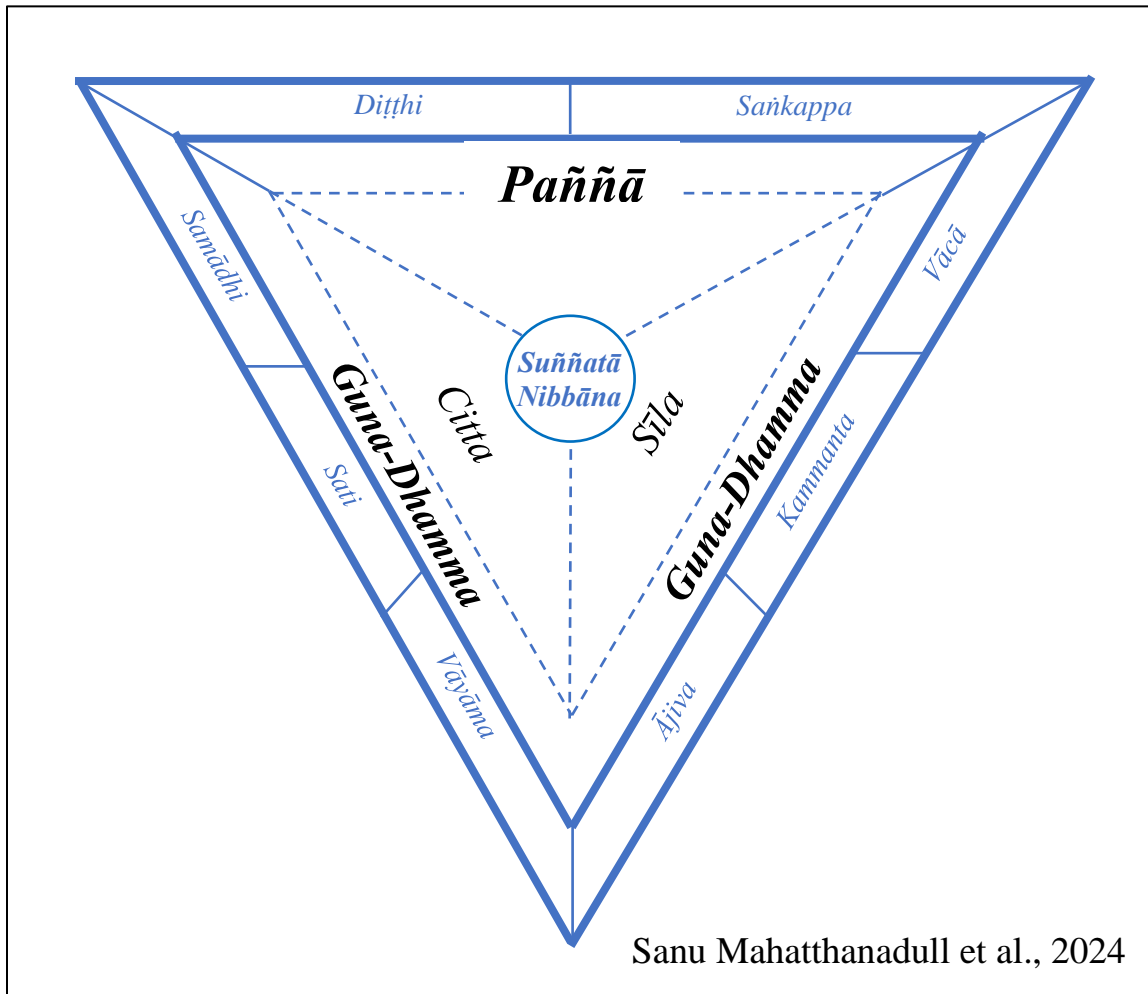
From the Buddhist Psychology viewpoint, holistic well-being depicts the broadest picture of both psychological and physical state of balance of life in terms of holistic health. The psycho-physical living organism called the "human beings" who are equally equipped with both psycho and physical parts can develop themselves to the state of well-being

¹⁸⁶ Sanu Mahatthanadull and Sarita Mahatthanadull, "Holistic Well-beings Promotion for Balanced Way of Life according to Buddhist Psychology", *JIBSC*: 111-121.

as a whole from mentality to corporeality well-being. That is to say, the corporeality and mentality or the five aggregates should be gradually manipulated according to the principle of the threefold training (*tisikkhā*) for achieving the fourfold development (*bhāvanā*).¹⁸⁷ In summary, the two sets of integral perspectives between the dimensions of the Threefold Learning (*sikkhā*) and the Fourfold Development (*bhāvanā*) share a common entity depending on the viewer's point of view for different applications.

¹⁸⁷ Sanu Mahatthanadull and Sarita Mahatthanadull, "Holistic Well-beings Promotion for Balanced Way of Life according to Buddhist Psychology", **A Research Report Funded by National Research Council of Thailand (NRCT) Fiscal Year 2016**, pp. 27-28.

Diagram 4.13 Pyramid of *Paññā* and *Guna-Dhamma*



The diagram shows the relationship between “Wisdom and Virtue” (*Paññā* & *Guna-dhamma*) in this Research context and the “*Tisikkha*”. That is to say, *Paññā* as in *Paññā-Guna-dhamma* is the first element in the Threefold Training. While *Guna-dhamma* (Virtue) is the second and third component in the *Tisikkha*, named *sīla* and *citta*, respectively. The Noble Eightfold Path (*Aṭṭhaṅgigamaḡga*) can then be classified into three groups according to the elements of the Threefold Path. They are:

Group of Wisdom (*Paññā*)

- (1) right view (*sammā-diṭṭhi*)
- (2) right intention (*sammā-saṅkappa*)

Group of Morality-*Sīla* (*Guṇa-Dhamma*)

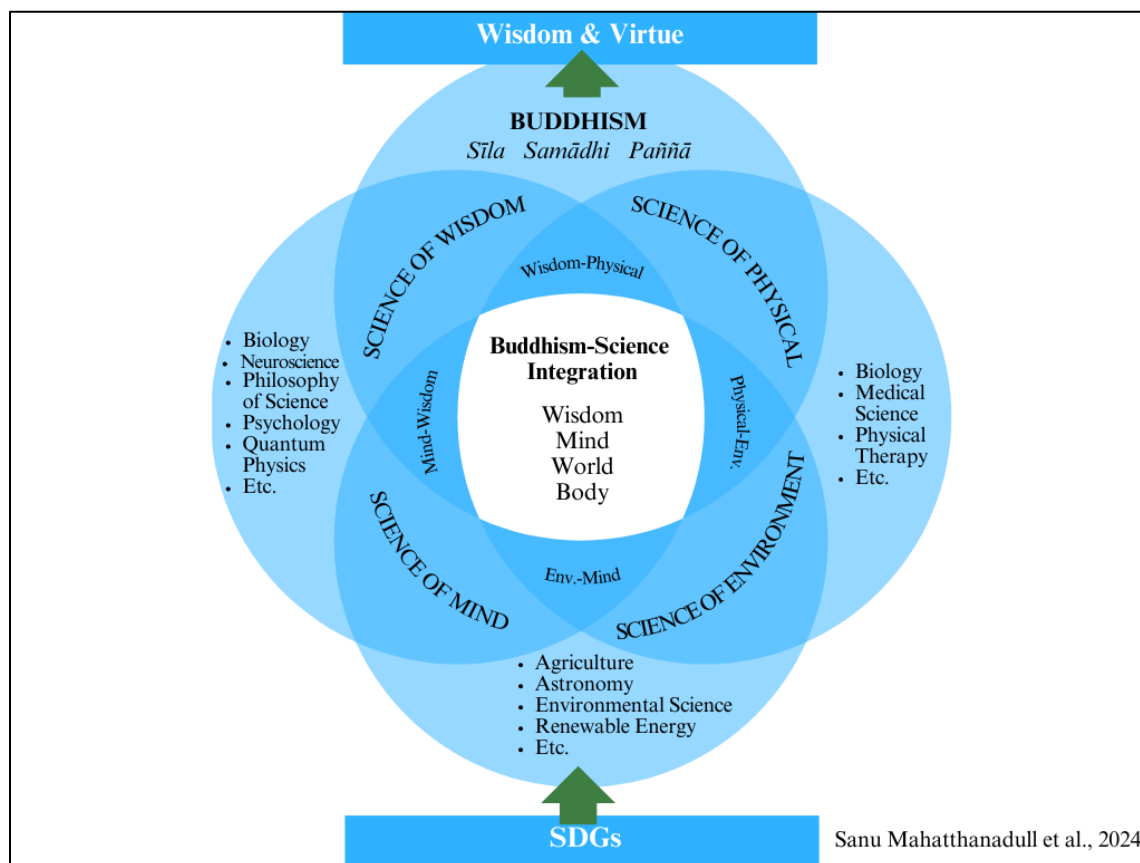
- (3) right speech (*sammā-vācā*)
- (4) right action (*sammā-kammanta*)
- (5) right livelihood (*sammā-ājīva*)

Group of Mind-*Citta/Samādhi* (*Guṇa-Dhamma*)

- (6) right effort (*sammā-vāyāma*)
- (7) right mindfulness (*sammā-sati*)
- (8) right concentration (*sammā-samādhi*)

All of the principles included in the Pyramid, namely the Noble Eightfold Path, Wisdom and Virtue, or the Threefold Training, etc., all lead to the ultimate goal in Buddhism, namely emptiness (*suññatā*) or final liberation (*Nibbāna*), under one condition that is they need to be practiced to simultaneously refining behaviors, cultivating mind and augmenting wisdom. The state of perfect attainment will appear and such a goal can therefore be achieved respectively. The HRI Rule would not exist without all of these principles mentioned above. See the following diagram for the Sixth Principle: Physical-Environment-Mind-Wisdom-based Holistic Integration:

Diagram 4.14 The Sixth Principle: Physical-Environment-Mind-Wisdom-based Holistic Integration



From the above diagram, the Physical-Environment-Mind-Wisdom-based Holistic Integration according to the Sixth Principle under the HRI Rule gives another perspective that helps to understand the true reason for integration is the Sustainable Development Goals (SDGs) in the modern era. As a base of the integration between Buddhism and science that both shared at the center POP as “Buddhism-Science Integration: Physical-Environment-Mind-Wisdom”. The two levels of POP indicate the complexity of each discipline that inevitably requires a holistic study of nature to reach the subtlest and most truthful nature. The two levels of POP are: - (1) The first level of POP is Science of Physical, Science of Environment, Science of Mind, and Science of Wisdom; (2) The second level of POP is Physical-Environment, Environment-Mind, Mind-Wisdom, and Wisdom-Physical.

First, The Science of Physical for *Bhāvitakāyo*: It refers to an exploration of the physical body or *kāya* in the context of the four *bhāvitas*. Buddhism encourages humans to enhance the ability to interact well with the external physical environment with wise manipulation of the material aggregate (*rūpa-khandā*) and the six sense-bases (*saḷāyatana*), such as the eyes to see images clearly and the ears to mindfully hear sounds, etc. to effectively interact, communicate and understand the internal and external world. It also covers the completeness of the four essential factors of life: food, clothing, shelter, and medicine including the readiness of the physical infrastructure. Sciences, such as biology, medical science, physical therapy, etc. also shared the focusing point as the “science of physical”.

Second, The Science of Environment for *Bhāvitasīlo*: It refers to an exploration of morality or *sīla* covering individual personal behavior, the existence of people, communities, societies, nations, countries, the environment, ecosystems, world, universe, galaxy, intergalactic, multiverses, infinite universes, etc. According to Buddhism, it is important to be careful of one’s negative behaviors expressed towards people in society, community, the world, and the environment. Anything that a person does, even a small thing, whether it is positive or negative, will always impact other people, nature, and the environment.

Meanwhile, Agriculture involves growing crops and raising livestock to produce food, fiber, and other goods. Efforts to make agriculture more sustainable focus on practices like crop rotation, organic farming, and reducing water and chemical use to minimize environmental impacts while still meeting food needs. Astronomy helps us understand our universe and the fundamental laws that govern its structure and behavior. It covers a broad range of topics, from the study of the solar system and exoplanets to the exploration of distant galaxies and the cosmic background radiation left over from the Big Bang. Environmental science studies how natural and human-made systems interact and affect each other. It seeks to understand the environment’s processes and the impact of human activities on ecosystems. Renewable energy discovers sources that are naturally replenished and can be

used repeatedly without depleting them. They are solar energy, wind energy, hydropower, biomass, geothermal energy, etc. Therefore, all knowledge regarding the environment can be studied from this domain.

Third, The Science of Mind for *Bhāvitacitto*: It is to purify one's mind to be high and of quality, to have a mind that does not degenerate and cause suffering both to oneself and others. "Science of Mind" refers to an exploration of phenomena that occur to one's mind or *citta* covering individual positive mental quality, such as the right concentration in the first, second, third, and fourth absorptions (*jhānas*). In this mysterious dimension of consciousness, biologists discover living things, their vital processes, and their evolution, in the sense that all living organisms are made up of cells that process hereditary information encoded in genes, which can be transmitted to future generations. Biology helps to understand how biological systems underpin mental processes and how changes in these systems can affect behavior and mental health. Moreover, POP may pave the way for science to participate in co-explaining mental phenomena through the lens of neuroscience discovering the functions of the human nervous system.¹⁸⁸ Brain science yet working closely with neuroscience to discover how brain circuits underlie human thought and behavior. The two paths between Buddhism and science converge in a close relationship to ultimately lead to wisdom and virtue. And all these attempts are to understand more about the science of life and the world hidden in the natural code.

Philosophy of science explores the foundations, methods, and implications of science aiming to clarify what science is, how it works, and

¹⁸⁸ "Neuroscience is a multidisciplinary science that combines physiology, anatomy, molecular biology, developmental biology, cytology, psychology, physics, computer science, chemistry, medicine, statistics, and mathematical modeling to understand the fundamental and emergent properties of neurons, glia and neural circuits" -

Frank J. Jr. Ayd, **Lexicon of Psychiatry, Neurology and the Neurosciences**, (Lippincott: Williams & Wilkins, 2000), p. 688; Robert G. Shulman, "**Neuroscience: A Multidisciplinary, Multilevel Field**" in *Brain Imaging: What it Can (and Cannot) Tell Us About Consciousness*, (London: Oxford University Press, 2013), p. 59; Hiroto Ogawa; Kotaro Oka, **Methods in Neuroethological Research**, (Tokyo: Springer, 2013), p. v.

its role in our understanding of the world. Psychology seeks to understand mental processes both individually and in groups, such as perception, cognition, emotion, and motivation, as well as how these processes influence behavior. Quantum physics, embraces the bond relationship between matter and energy at the most fundamental level. Quantum physicists will do everything they can to find the key to uncover this secret of the properties and behaviors of building blocks of nature. These include microscopic objects, such as electrons and photons. Therefore, all knowledge regarding the humans' mind and behavior can be studied from this domain.

Finally, The Science of Wisdom for *Bhāvitapañño*: In Buddhism, it is important to augment wisdom for oneself. When wisdom arises, one can treat oneself and the environment wisely and promptly solve problems leading oneself and society to happiness and peace. These things show that Buddhism does not teach to focus on changing individual behavior to be behavior that is desirable for members of society alone, but also focuses on the peace of society, community, world, and the environment when individuals study and develop their lives in all aspects. “Science of Wisdom” refers to an exploration of phenomena that occur to one’s wisdom. It covers individual positive intellectual ability, such as wisdom consisting in what is reasoned, consisting in what is heard, and consisting in development; wisdom to know the Four Noble truths, etc. Ven. Junaidi Anuwar emphasized “The most important part to understand all is the law of meditation (*kammatthāna*) which provides a concrete way to understand deeper about all phenomena”¹⁸⁹ At this highest intelligence level, Buddhism plays a crucial role in explaining various phenomena in its broadest perspective of metaphysical, epistemological, and ethical questions for the optimal level of wisdom and virtue according to the Sixth Principle under the Rule of HRI.

¹⁸⁹ Interview with Ven. Junaidi Anuwar, Dr., Mahāyāna Teacher, Thai Plum Village International Mindfulness Practice Center, Indonesia, October 7, 2023.

4. Seventh Principle: Problem-Solution-based Holistic Integration¹⁹⁰

Under the Rule of HRI, the seventh principle “Problem-Solution-based Holistic Integration”, also known as “Ariyasacca-Based Learning” (ABL)¹⁹¹ in Buddhism, is a systematic problem-solving process in the twenty-first century, starting by addressing the problem as the starting point, then finding a way to solve such a problem. It somehow shares similarity with a learning method called “Problem-Based Learning” (PBL) in modern education requiring formulating sound or practical solutions to some real-world issues through doing self-directed research for information.¹⁹² It is an approach that uses problems to encourage students to acquire knowledge of a discipline or subject.¹⁹³ It emphasizes organizing the module content, focusing on case studies or scenarios”¹⁹⁴ PBL is a learner-centered teaching and learning approach that challenges students to do a self-directed search of

¹⁹⁰ The Seventh Principle explains the integration of Buddhism and modern sciences. The term modern sciences here represents the broadest picture of integration. It refers to all the disciplines that appear in this research. They are pure science, applied science, and modern disciplines. For more understanding, please see topic 1.5 Definition of the Terms Used in the Research in Chapter 1.

¹⁹¹ Some examples of recent studies include: -Sunthorn Sutchā and Angkana Tungkasamit, “The Study of Logical Thinking Ability using Ariyasacca based Learning with Card Games in the Subject S16101 Social Studies of Grade 6 Students at Chumchonyodkaengsongkro School, Kalasin Province”, **Journal for Developing the Social and Community**, Vol. 11 No. 1. (2024): 447-460; Witoon Panvong, “Learning Management on Social Studies by Using Problem-Based Learning (PBL) According to Ariyasacca to Develop the Achievement of the 3rd Secondary School Students”, **Master of Education Thesis in Teaching Social Studies**, (Graduate School: Mahachulalongkornrajavidyalaya University, 2022), (Thai Version), p. 59.

¹⁹² JR Savery, “Overview of Problem-based Learning: Definitions and Distinctions”, **Interdisciplinary Journal of Problem-Based Learning**, vol. 181 (2006): 9-20.

¹⁹³ AM Lapuz; M Fulgencio, “Improving the Critical Thinking Skills of Secondary School Students Using Problem-based Learning”, **International Journal of Academic Multidisciplinary Research**, vol. 4 No. 1 (2020): 1-7.

¹⁹⁴ Ranald Macdonald & Maggi Savin-Baden, “A Briefing on Assessment in Problem-based Learning”, LTSN Generic Centre Assessment Series No. 13, (Heslington York: LTSN, 2004), p. 13.

sources, and then apply their acquired knowledge to formulate possible solutions to a real-world problem.¹⁹⁵ Aubrey Golightly & Motlhale J Sebatana concluded, “PBL contributes to students’ and learners’ abilities to apply their understanding to real-world situations and where they will be able to solve 21st-century problems.”¹⁹⁶ However, ABL implies a much more complex meaning than PBL in the term “Noble Truth” or *ariya-sacca*, because it particularly refers to both the whole mass of suffering as the problem and the spiritual emancipation of all humanity.

The question may arise at this point, what is the purpose of integration? The answer lies in the relationship between the goals of HRI and the problems encountered. The serious global issues that exist today in the twenty-first century reflect the need to integrate the existing knowledge in all dimensions to find the best solutions. Within the framework of the SDG goals for sustainable development recovery, they address physical, mental, social, economic, and environmental dimensions, such as poverty, hunger, healthcare, education, gender equality, and so on until peace, justice, and partnership. For sustainable solutions, existing disciplines must be integrated to seek clear and sustainable results. The following table shows the relationship between the Four Buddhist Sustainable Development Goals (BSDGs) and Seventeen Sustainable Development Goals (SDGs):

¹⁹⁵ AGD Corrêa; VF Martins, “**Methodology Applied Problem-based Learning in Teaching HCI: A Case Study in Usability Evaluation of an Online Course**”, in D Fonseca & E Redondo (eds.), *Handbook of research on applied e-learning in engineering and architecture education*, (IGI Global Publishers of Timely Knowledge: Hershey, 2016): 159-177.

¹⁹⁶ Aubrey Golightly & Motlhale J Sebatana, “**Problem-Based Learning: A 21st-Century Teaching and Learning Strategy**” in *Problem-based Learning and Pedagogies of Play*, Eds. by Marietjie Havenga, Jako Olivier & Byron J Bunt, (Cape Town: AOSIS Publishing, 2023): 1-16.

Table 4.1 Relationship between BSDGs and SDGs

SDGs	Keywords	BSDGs			
		1	2	3	4
		Physical	Environment	Mind	Wisdom
1	No poverty	✓			
2	Zero hunger	✓			
3	Good health and well-being	✓	✓	✓	✓
4	Quality education	✓	✓	✓	✓
5	Gender equality	✓	✓	✓	
6	Clean water and sanitation	✓	✓		
7	Affordable and clean energy	✓	✓		
8	Decent work and economic growth	✓	✓		
9	Industry, innovation, and infrastructure	✓	✓		
10	Reduced inequalities	✓			
11	Sustainable cities and communities		✓		
12	Responsible consumption and production	✓			
13	Climate action		✓		
14	Life below water		✓		
15	Life on land		✓		
16	Peace, justice, and strong institutions	✓	✓	✓	✓
17	Partnerships		✓		

From the table, the Buddhist Sustainable Development Goals (BSDGs) are in four dimensions, starting from the physical, environmental, mental, and wisdom dimensions respectively. Each goal has its characteristics. For example, **BSDG1**: Physical Goal aims at achieving physical results of individuals in society, such as SDG1: No poverty, SDG2: Zero hunger, SDG3: Good health and well-being, SDG4: Quality education, SDG5: Gender equality, SDG6: Clean water and sanitation, SDG7: Affordable and clean energy, SDG8: Decent work and economic growth, SDG9: Industry, innovation, and infrastructure, SDG10: Reduced inequalities, SDG12: Responsible consumption and production, and SDG16: Peace, justice, and strong institutions. **BSDG2**: Environment Goal aims at

achieving social results in the society including the environmental aspect, such as SDG3: Good health and well-being, SDG4: Quality education, SDG5: Gender equality, SDG6: Clean water and sanitation, SDG7: Affordable and clean energy, SDG8: Decent work and economic growth, SDG9: Industry, innovation, and infrastructure, SDG11: Sustainable cities and communities, SDG13: Climate action, SDG14: Life below water, SDG15: Life on land, SDG16: Peace, justice, and strong institutions, and SDG17: Partnerships. **BSDG3:** Mind Goal aims at achieving mental results for individuals in society, such as SDG3: Good health and well-being, SDG4: Quality education, SDG5: Gender equality, and SDG16: Peace, justice, and strong institutions. **BSDG4:** Wisdom Goal aims at achieving intellectual results for individuals in society, such as SDG3: Good health and well-being, SDG4: Quality education, and SDG16: Peace, justice, and strong institutions.

Among all seventeen SDGs, **the Nine** SDGs that focus on one-goal BSDG are SDG1: No poverty, SDG2: Zero hunger, SDG10: Reduced inequalities, SDG12: Responsible consumption and production, which focuses on BSDG1: Physical Goal. SDG11: Sustainable cities and communities, SDG13: Climate action, SDG14: Life below water, SDG15: Life on land, and SDG17: Partnerships focus on BSDG2: Environment Goal. **The Four** SDGs that focus on two BSDGs (BSDG1: Physical Goal and BSDG2: Environment Goal) are SDG6: Clean water and sanitation, SDG7: Affordable and clean energy, SDG8: Decent work and economic growth, and SDG9: Industry, innovation, and infrastructure. **The Only** SDG that focuses on three-goal BSDGs (BSDG1: Physical Goal, BSDG2: Environment Goal, plus BSDG3: Mind Goal) is SDG5: Gender equality. There are only **three** SDGs that focus on all-goal BSDGs (BSDG1: Physical Goal, BSDG2: Environment Goal, BSDG3: Mind Goal, and BSDG4: Wisdom Goal). They are SDG3: Good health and well-being, SDG4: Quality education, and SDG16: Peace, justice, and strong institutions. In all these matters, Bhikkhu Bodhi summarized the sustainable goals of developing wisdom and virtue into 6 main categories:

1) to facilitate a rapid and full transition away from an economy powered by fossil fuels to one that relies on clean sources of renewable energy

2) to promote a shared distribution of wealth both within each nation and between nations. Perfect equality will never be possible, but the stark differences in wealth should be reduced.

3) to tackle the problem of persistent hunger faced by about 800 million people around the world.

4) to ensure that women enjoy equal rights with men in participating in all aspects of social, economic, and political life, especially including access to education.

5) abolition of nuclear weapons.

6) strengthening the United Nations so that it is a more effective agency in resolving conflicts and promoting peace. In particular, eliminating the right to veto enjoyed by the permanent members of the Security Council, which is a major impediment to resolving conflict (e.g., note how Russia used the veto to reject action against its war on Ukraine, and how the U.S. uses it to block action against Israel when it attacks Palestinians).¹⁹⁷

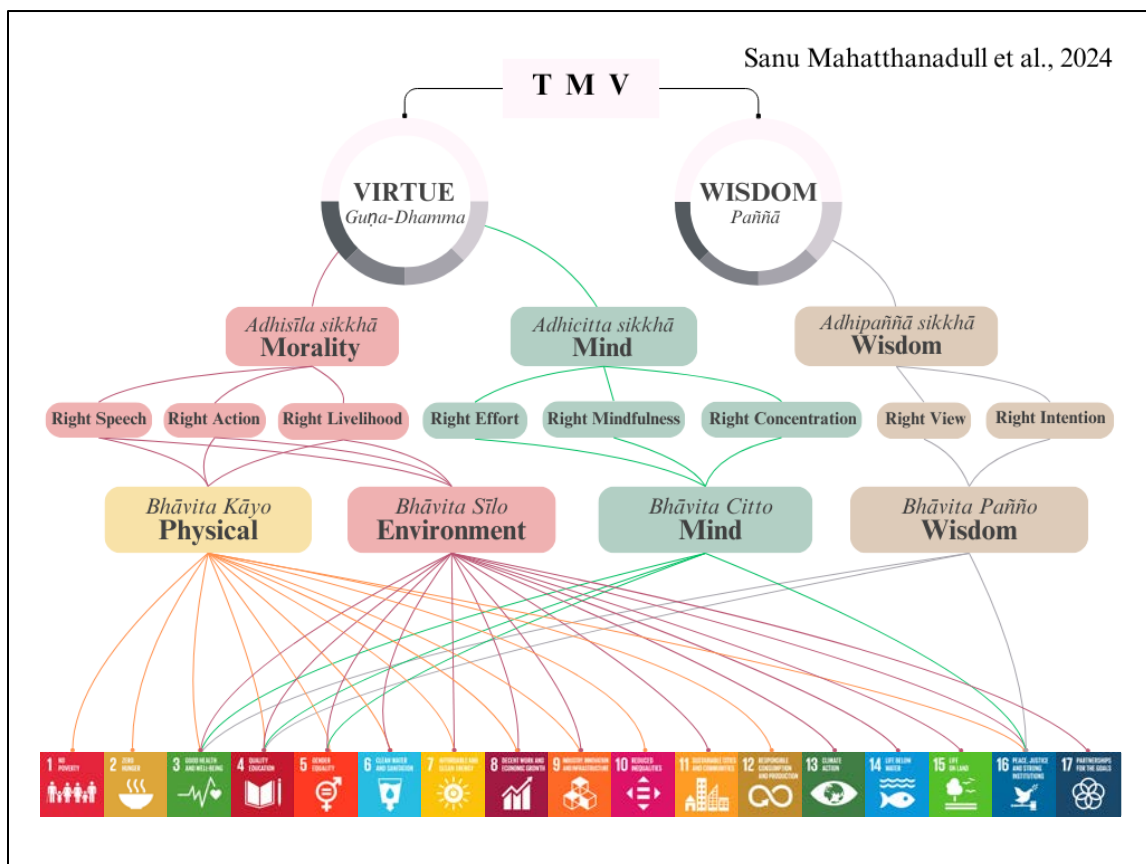
Bhikkhu Brahmali views that they should improve learning in schools about values, happiness, contentment, wisdom, and anything else that supports personal growth. Personal spiritual growth will feed back to promote better societies.¹⁹⁸

The next diagram demonstrates the Holistic Integration between BSDGs and SDGs:

¹⁹⁷ Interview with Ven. Bhikkhu Bodhi, President of the Buddhist Association of the United States (BAUS), NY, USA, September 9, 2023.

¹⁹⁸ Interview with Bhikkhu Brahmali, Bodhinyana Monastery, Australia, June 30, 2023.

Diagram 4.15 Holistic Integration between BSDGs and SDGs



From the diagram, among the HRI process, the seventh principle addresses that the 17 SDGs are the foundations of holistic integration because they are existing problems in the global society of the twenty-first century that need to be solved carefully and appropriately according to each contextual problem. “The HRI is to integrate Buddhism’s rich tradition of insight into the human mind, metaphysics, and ethics to enrich sustainable development goals”¹⁹⁹ The 17 SDGs are related to the four dimensions of the BSDGs: physical, environmental, mental, and wisdom goals, respectively. The four-dimensional BSDGs are the Noble Eightfold Path “Applicable to both ‘self’

¹⁹⁹ Interview with Assoc. Prof. Dr. G Clinton Godart, Graduate School of International Cultural Studies, Tohoku University, Japan, July 13, 2023.

and ‘society’²⁰⁰ which is the Middle Way as stated by the Buddha in the Dhammacakkappavattana Sutta:

*Katamā ca sā bhikkhave majjhimā paṭipadā Tathāgatena abhisambuddhā. . . Ayameva ariyo aṭṭhaṅgiko maggo. seyyathidaṃ. sammādiṭṭhi sammāsaṅkappo sammāvācā sammākammanto sammāājīvo sammāvāyāmo sammāsati sammāsamādhi*²⁰¹

And what, bhikkhus, is that middle way awakened to by the Tathagata. . . It is this Noble Eightfold Path; that is, right view, right intention, right speech, right action, right livelihood, right effort, right mindfulness, right concentration.²⁰²

This Buddhist Middle Way (*majjhimā-paṭipadā*), an important cog in the HRI process, gives a sense of self-development according to the *Tisikkha* principle, which can be reduced to wisdom (*paññā*) and virtue (*guṇadhamma*), which are the core principles of the three sects: Theravāda, Mahāyāna, and Vajrayāna (TMV). Wisdom and virtue in this context are therefore of utmost importance as the greatest principles of Buddhism, especially in the context of the teachings that belong to every Buddhas who have ever arisen in the infinite universe. With the four BSDGs, all kinds of problems can be most smartly and tangibly resolved under the HRI Rule.

According to the seventh principle, the HRI employs integral measurement between Buddhist and scientific measurements, all combined named “Buddhist Sustainable Development Goals Key Performance Indicators” or BSDG-KPIs through an integration process. Bhikkhu Bodhi has supported the above idea:

While the Buddha’s teaching, the Dhamma itself, is not burdened with many of the traditional features of religion, in its historical and institutional manifestation Buddhism is certainly a religion. It is directed

²⁰⁰ Interview with Dr. Asoka Bandarage, Adjunct Professor, California Institute for Integral Studies, USA, June 30, 2023.

²⁰¹ Dhammacakkappavattana Sutta S.V.421.

²⁰² Bhikkhu Bodhi (tr.), **The Connected Discourses of the Buddha A New Translation of the Saṃyutta Nikāya**, Vol. II., p. 1844.

toward a goal that transcends the empirical world (namely, Nibbāna), it upholds the belief in human survival of death (in the form of rebirth), it recognizes an objective moral law that cannot be empirically observed (the law of *kamma*), and it affirms the existence of realms of being invisible to our eyes and scientific instruments (the heavens and hells, etc.) . . . In line with this, Buddhism upholds the validity of ethical principles and ties them to metaphysical beliefs (our ethical actions lead to rebirth in other realms). Buddhism also revolves around an order of religious renunciants and encourages acts of veneration and worship that are said to create merit.²⁰³

From the above view, the law of action, the law of existence, ethical principles and metaphysical beliefs, worshiping of religious renunciants, merit, and a goal that transcends the empirical world, are something that scientific goals cannot achieved without Buddhist integration.

As same as Cherdsak Maneeruttanarungroj, a scientist agreed:

Buddhist religion goes far beyond science in many aspects. It delves into the nature of suffering and its cessation, which cannot be measured by any scientific tool. Even concepts like rebirth or the state of Nibbāna are far beyond the reach of scientific investigation.²⁰⁴

To achieve the goal, one must have an assertive mind by following through the path of wisdom and virtue continuously.²⁰⁵ The goals of wisdom and virtue development in this Theory may reasonably be divided into two levels for this very life of every individual who practices Buddhism can be achieved:

²⁰³ Interview with Ven. Bhikkhu Bodhi, President of the Buddhist Association of the United States (BAUS), NY, USA, September 9, 2023.

²⁰⁴ Interview with Assoc. Prof. Dr. Cherdsak Maneeruttanarungroj, (Biochemist and Molecular Biologist) Department of Biology, School of Science, KMITL, Thailand, June 30, 2023.

²⁰⁵ Interview with Assoc. Prof. Dr. Peerasak Vorasuntharosoth, Former Dean of Engineering Faculty, KMITL, Thailand, June 30, 2023.

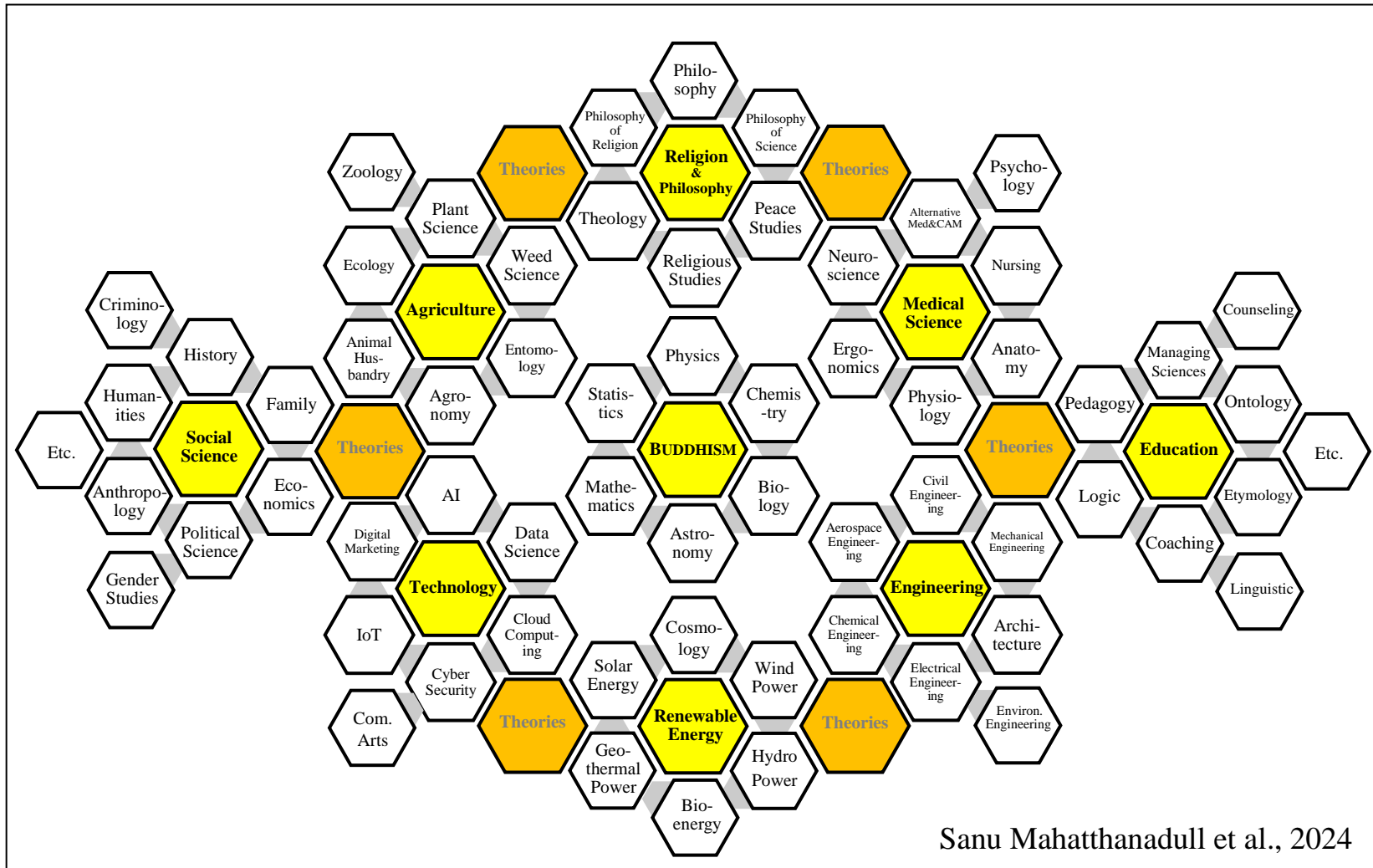
Temporary Goal: to gain a high standard level of intellect and sharp wisdom to be used in any field as well as good behaviors to live happily and peacefully in society.

The Actual Goal: is to gain Nirvana or liberation from the Cyclic Existence individually and to help all other sentient beings to liberate and obtain Buddhahood.²⁰⁶

However, to understand Problem-Solution-based Holistic Integration and achieve its most effective results, it is essential to first understand the scope of the problems in the twenty-first-century world. The next diagram illustrates Buddhism and Modern Sciences in the 21st Century Era:

²⁰⁶ Interview with Ven. Geshe Sonam Wangden (Ph.D.), Vajrayāna Master, Lharam Geshe, Sera Jey Monastic University, South India, October 7, 2023.

Diagram 4.16 Buddhism and Modern Sciences in the 21st Century Era



From the above diagram, the seventh principle suggests that Buddhism is situated among all disciplines, from pure science, applied science, and multiple modern disciplines. In the broadest picture of integration, some multi-disciplines can also be integrated simultaneously with Buddhism, such as “Studies in Buddhist art, architecture, and archaeology form an integral part of the studies of Buddhism”.²⁰⁷ This demonstrates the importance of multidisciplinary studies:

Many times, the theoretical works are derived from various sciences, namely: - psychology, social sciences, theology, biblical studies, and religious studies. Yet they are also influenced by other disciplines, including philosophy.²⁰⁸

This quote supports the fact that “The deeper we delve into nature, the more we realize how much knowledge waiting for us to be discovered”. To end this infinite exploration, only with Buddhist integration can most intellectually seek the truth from nature. Frank Johnny Hoffman supported:

Buddhism is an interdisciplinary phenomenon that can be addressed from many perspectives. They are philosophy, religion, natural sciences, social sciences, art history, and anthropology. No one discipline exhausts the richness of Buddhism.²⁰⁹

The above comment is consistent with what Ken Wilber guided, “The strength of the traditional Great Chain was that it was admirably all-level, stretching from matter to body to mind to soul to spirit.”²¹⁰ Despite the Diagram, no theory is mentioned in Buddhism but only principles and

²⁰⁷ Raluwe Padmasiri Thera and Wimal Hewamanage (eds.), **Buddhism and Modernity: Collected Papers: Asanga Tilakaratne Vol. IV**, (Malabe: Sarasavi Publishers (Pvt) Ltd, 2020), pp. 338, 340.

²⁰⁸ Steven J. Sandage and Jeannine K. Brown, **Relational Integration of Psychology and Christian Theology: Theory, Research, and Practice**, pp. 113-114.

²⁰⁹ Interview with Prof. Dr. Frank Johnny Hoffman, Lecturer, IBSC, MCU, Thailand, June 30, 2023.

²¹⁰ Ken Wilber, **Integral Psychology: Consciousness, Spirit, Psychology, Therapy**, p. 69.

concepts are available throughout various Buddhist scriptures. Each modern science surrounding Buddhism has its own newer theories to endlessly overthrow the existing theories. However, science can be classified into two types based on its nature: pure science and applied science, surrounded by other modern sciences in their group, making a network. Anne M. Blackburn argues:

In the last several decades, the term network has become central within the analytical repertoire of many disciplines in the social sciences and the humanities, including sociology, anthropology, history, political science, and religious studies.²¹¹

Although Buddhism's position is not far from the scope of religious studies, it is interconnected with other disciplinary networks in the form of interdisciplinary studies. Among the 9 clusters, pure sciences closely encompass Buddhism at the heart of education, while applied sciences are dispersed among the other disciplines of modern science in their clusters, as follows:

Cluster 1 Pure Sciences: Physics, Chemistry, Biology, Astronomy, Mathematics, and Statistics.

Cluster 2 Religion and Philosophy: Peace Studies, Philosophy, Philosophy of Religion, Philosophy of Science, Religious Studies, and Theology.

Cluster 3 Medical Science: Alternative Medicine, Anatomy, Complementary and Alternative Medicine (CAM), Ergonomics, Neuroscience, Nursing, Physiology, and Psychology.

Cluster 4 Education: Coaching, Counseling, Etymology, Linguistics, Logic, Managing Sciences, Ontology, and Pedagogy.

Cluster 5 Engineering: Aerospace Engineering, Architecture, Chemical Engineering, Civil Engineering, Electrical Engineering, Environmental Engineering, and Mechanical Engineering.

²¹¹ Anne M. Blackburn, “**Linked Spaces and Divergent Temporalities in the Pāli World**”, in *Routledge Handbook of Theravāda Buddhism*, Eds. by Stephen C. Berkwitz and Ashley Thompson, (Abingdon: Routledge, 2022): 58-69.

Cluster 6 Renewable energy: Bioenergy, Cosmology, Geothermal Power, Hydropower, Solar Energy, and Wind Power.

Cluster 7 Technology: Artificial Intelligence (AI), Cloud Computing, Communication Arts, Cyber Security, Data Science, Digital Marketing, and Internet of Things (IoT).

Cluster 8 Social Sciences: Anthropology, Criminology, Economics, Family, Gender Studies, History, Humanities, and Political Sciences.

Cluster 9 Agriculture: Agronomy, Animal Husbandry, Ecology, Entomology, Plant Science, Weed Science, and Zoology.

The disciplines in each cluster are also connected. The following table shows the names of each discipline in alphabetical order:

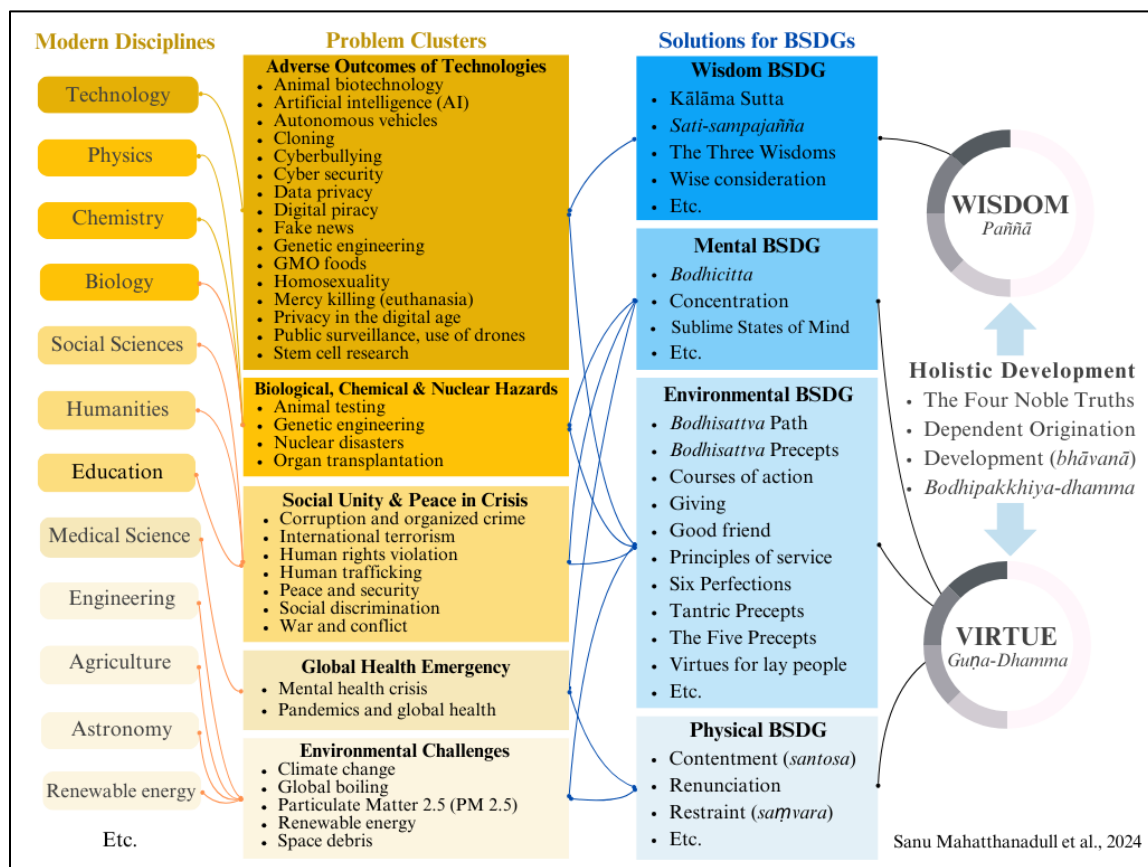
Table 4.2 List of Sciences and Disciplines of Modern Science in the 21st Century Era

A-D	D-M	N-Z
Aerospace Engineering	Digital Marketing	Neuroscience
Agriculture	Education	Nursing
Agronomy	Economics	Ontology
Alternative Medicine	Ecology	Peace Studies
Anatomy	Electrical Engineering	Pedagogy
Animal Husbandry	Engineering	Philosophy
Anthropology	Entomology	Philosophy of Religion
AI	Environmental Engineering	Philosophy of Science
Architecture	Ergonomics	Physics
Astronomy	Etymology	Physiology
Bioenergy	Family	Plant Science
Biology	Gender Studies	Political Sciences
CAM	Geothermal Power	Psychology
Chemical Engineering	History	Religion and Philosophy
Chemistry	Humanities	Religious Studies
Civil Engineering	Hydropower	Renewable energy
Cloud Computing	Technology	Social Sciences
Coaching	IoT	Solar Energy

A-D	D-M	N-Z
Communication Arts	Linguistic	Statistics
Cosmology	Logic	Theology
Counseling	Mathematics	Weed Science
Criminology	Managing Sciences	Wind Power
Cyber Security	Mechanical Engineering	Zoology
Data Science	Medical Science	Etc.

Although various disciplines of modern science are invaluable in discovering endlessly new scientific breakthroughs and innovations for humanity, some problems may inevitably arise when moral and ethical awareness is not emphasized in their search for knowledge. That is why the HRI is essential to achieving problem-solving outcomes by applying proper Buddhist principles in a targeted and effective manner. The following diagram illustrates Problem-Solution-based Holistic Integration in the Seventh Principle of HRI:

Diagram 4.17 Problem-Solution-based Holistic Integration in the Seventh Principle of the HRI Rule²¹²



The interwoven problematic issues faced in the Twenty-first-century world are completely different from those in the past. One problem can be linked to another and further interrelated to all. The above five problem clusters are: - (1) Environmental Challenges, which includes issues related to and directly affecting the environment, such as climate change, global boiling, particulate matter 2.5 (PM 2.5), renewable energy, and space debris, etc.; (2) Global Health Emergency, which includes global health-related issues giving impacts on health, such as mental health crisis, and pandemics and global health, etc.; (3) Social unity & Peace in Crisis, which includes corruption and

²¹² The grouping of modern sciences and problem sets focuses on pure sciences, applied sciences, and some modern disciplines, such as social sciences, humanities, and education, etc. to provide a holistic integration with problem-solution basement.

organized crime, international terrorism, human rights violation, human trafficking, peace and security, social discrimination, and war and conflict, etc.; (4) Biological, Chemical & Nuclear Hazards, which includes animal testing, genetic engineering, nuclear disasters, organ transplantation, etc.; and (5) Adverse Outcomes of Technologies, which is probably the largest group, which includes technology-related issues, such as animal biotechnology, artificial intelligence (AI), autonomous vehicles, cloning, cyberbullying, cyber security, data privacy, digital piracy, fake news, genetic engineering, genetically modified organism foods (GMO), homosexuality, mercy killing (euthanasia), privacy in the digital age, public surveillance, use of drones, stem cell research, etc. These problems result from contextual conditions that change according to factors, such as human belief, culture, tradition, custom, society, environment, technology, morality, and ethics. Therefore, when time changes, new problems will also undoubtedly emerge endlessly. Every problem starts from its roots which can be traced to science and various disciplines in modern science available in the contemporary world. Some problems can be rooted in several disciplines with common objectives in their fields of study.

As discussed earlier, among countless modern disciplines available today, some disciplinary explanations may be essential to each problem cluster in one way or another. For instance, the first problem cluster under “**Environmental Challenges**” requires explanations from engineering, agriculture, astronomy, and renewable energy. The heart of the study is the multidisciplinary approach. That is to say each discipline in this Diagram also consists of many subdisciplines under its clusters out of the Nine Discipline Clusters previously discussed. These clusters of multidiscipline should be studied together to get the optimum results. For example, engineering has subdisciplines in its cluster such as aerospace engineering, architecture, chemical engineering, civil engineering, electrical engineering, environmental engineering, and mechanical engineering. The disciplines, such as agriculture, astronomy, renewable energy, etc. in the first problem cluster including all remaining disciplines mentioned in the Diagram must

also be carried on in a multidisciplinary manner under their discipline clusters. The problem cluster named “**Global Health Emergency**” requires explanations from medical science (together with the disciplines in its discipline cluster). The problem cluster “**Social Unity & Peace in Crisis**” requires explanations from social science, humanities, and education (including the disciplines in their discipline cluster). The problem cluster under “**Biological, Chemical & Nuclear Hazards**” requires explanations from pure sciences like physics, chemistry, and biology (together with the disciplines in their discipline cluster). The last cluster of problems “**Adverse Outcomes of Technologies**” requires explanations from technology (and the disciplines in its discipline cluster). Often, problems manifest themselves in multiple dimensions. The challenge lies in the self-ability to view problems as they are and the skill to integrate Buddha-dhamma to solve them with wisdom eyes. Asoka Bandarage views: “By bringing consciousness change together in psycho-social transformation, to move to an ecological paradigm away from the techno-market paradigm that is destroying humans’ life.”²¹³ Please note here that there are still many modern disciplines and problems that have not been mentioned here. We need to analyze them together to find ways to deal with the problems under those challenged disciplines of modern sciences.

In the relationship between the interwoven problems and the development of wisdom and virtue, Bhikkhu Bodhi expressed his enlightened view as follows:

Climate change and other forms of environmental destruction. Vast differences in wealth between the tiny privileged elite, extremely rich and powerful, and everyone else. Large population groups face extreme poverty, hunger, and illness. Dangerous weapons of mass destruction, etc.

We need not only the ethical and meditative culture of traditional Buddhism, though those are necessary, but a deep understanding of the wide range and underlying causes of these problems along with a

²¹³ Interview with Dr. Asoka Bandarage, Adjunct Professor, California Institute for Integral Studies, USA, June 30, 2023.

compassionate response to them, leading to a shared determination to pursue feasible solutions.

We might say that the understanding of these problems is “wisdom” and the commitment to taking action to resolve them is “virtue.”²¹⁴

To solve the complex problems of the 21st century sustainably, wisdom and virtue must be embraced together. Ven. Geshe Sonam Wangden suggested:

In this chaotic modern society of the 21st century, people are suppressed by the economy and other different stressful influences. To solve such problems Buddhism can contribute too much if it is embraced in terms of developing wisdom and virtue. Buddhism has a very unique way of promoting or developing the wisdom and virtue of various steps or levels.²¹⁵

In Buddhism, under the wisdom (*paññā*) and virtue (*kuṇa-dhamma*), the following four principles are closely related to the entire process of holistic development, namely: - (1) The Four Noble Truths, (2) Dependent Origination, (3) Development (*bhāvanā*), and (4) the thirty-seven enlightenment states (*bodhipakkhiya-dhamma*). In the Problem-Solution-based Holistic Integration of HRI, understanding the true condition of the problem is essential in the process of solving problems according to the Four Noble Truths regarding problems, causes of problems, cessation of problems, and methods of solving problems. Thus, sustainable solutions are impossible if “the Four Noble Truths (*ariyasacca*) are not implemented into the Theory”²¹⁶ Asoka Bandarage also insisted, “Keeping the focus on the Four Noble Truths helpful to the BI Theory”.²¹⁷ In Dhammacakkappavattana Sutta,

²¹⁴ Interview with Ven. Bhikkhu Bodhi, President of the Buddhist Association of the United States (BAUS), NY, USA, September 9, 2023.

²¹⁵ Interview with Ven. Geshe Sonam Wangden (Ph.D.), Vajrayāna Master, Lharam Geshe, Sera Jey Monastic University, South India, October 7, 2023.

²¹⁶ Interview with Assoc. Prof. Dr. Peerasak Vorasuntharoso, Former Dean of Engineering Faculty, KMITL, Thailand, June 30, 2023.

²¹⁷ Interview with Dr. Asoka Bandarage, Adjunct Professor, California Institute for Integral Studies, USA, June 30, 2023.

the Buddha called “knowledge and vision as they really are” (*yathābhūta-ñāṇa-tassana*)²¹⁸ is the twelvefold knowledge and vision. It is the thorough realization of what is a problem, what is the cause of such a problem, what is the cessation of such a problem, and what is the method leading to the cessation of such a problem. This system of thinking based on the Four Noble Truths will help integrate the whole picture for sustainable problem-solving. In addition, we must also be aware of the process of arising (*samudayavāra*) and the process of ceasing (*nirodhavāra*) of problems according to the dependent origination (*paṭiccasamuppāda*) principle, which things proceed subject to the conditions and factors that depend on each other. Another thing is that setting the goal of problem-solving by setting clear outcomes according to the Four Developments (*bhāvanās*) or BSDGs makes the problem-solving process more effective. Lastly, the seven categories of the thirty-seven enlightenment states (*bodhipakkhiya-dhamma*) act as KPIs for this problem-solving process.

The most important point in Problem-Solution-based Holistic Integration based on the Seventh Principle of HRI is the right solution for the problem. Each set of Dhamma principles under the four frameworks of BSDGs are options that can be used to address specific problems correctly. The Four KPIs under the BSDGs framework, from bottom to top, are as follows:

The first KPI for “**Physical BSDG**” is to measure the success of physical problem solving for both problem clusters “Environmental Challenges” and “Global Health Emergency”. The main Dhamma principles used to solve problems in such problem clusters are contentment (*santosa*), renunciation, and restraint (*saṃvara*), etc.

The second KPI for “**Environmental BSDG**” is to measure the success of societal and environmental problem-solving for up to four problem clusters “Environmental Challenges”, “Social Unity & Peace in Crisis”,

²¹⁸ S.V.422; Bhikkhu Bodhi (tr.), **The Connected Discourses of the Buddha A New Translation of the Saṃyutta Nikāya**, Vol. II., p. 1845.

“Biological, Chemical & Nuclear Hazards”, and “Adverse Outcomes of Technologies”. The main Dhamma-principles used to solve problems in such problem clusters comprise the *Bodhisattva* path, *Bodhisattva* precepts, courses of action, giving, good friend, principles of service, Six Perfections, Tantric precepts, the Five precepts, and virtues for lay people, etc.

One of the Buddha-Dhammas in this framework is the wholesome course of action (*kusala-kamma*patha), which plays a vital role as a standard for judging ethical dilemmas often encountered in modern disciplines. The Buddhist principle states “Whatever actions we do towards society and the environment, whether good or bad, we are responsible for them.” The wholesome course of action is subject to the natural law of action. Bhikkhu Brahmali view, “The ‘law of action’ in Buddhism is a fundamental aspect of the Buddha’s teachings. The entire way we think about our lives and the world hinges on whether we believe in action and rebirth or not.”²¹⁹ Ven. Geshe Sonam Wangden added, “If anyone or company follows the law of action sincerely, then no mischievous and cheating for others happens and this alone can solve many problems.”²²⁰ It is true to say so since the “law of action” and “law of rebirth” are clearly said by the Buddha in *Vāsetṭha Sutta*:

kammunā vattati loko kammunā vattati pajā
*kammani bandhanā sattā rathassāñīva yāyato*²²¹

Action makes the world go round,
 Action makes this generation turn.
 Living beings are bound by action
 Like the chariot wheel by the pin.²²²

²¹⁹ Interview with Bhikkhu Brahmali, Bodhinyana Monastery, Australia, June 30, 2023.

²²⁰ Interview with Ven. Geshe Sonam Wangden (Ph.D.), Vajrayāna Master, Lharam Geshe, Sera Jey Monastic University, South India, October 7, 2023.

²²¹ M.II.197.

²²² Bhikkhu Ñānamoli and Bhikkhu Bodhi (trs.), **The Middle Length Discourses of the Buddha**, p. 807.

Therefore, all ethical issues may use the *kammapatha* as a tool to judge the correctness, along with other Buddhist principles.

The third KPI for “**Mental BSDG**” is to measure the success of mental problem solving for three problem clusters “Global Health Emergency”, “Social Unity & Peace in Crisis”, and “Biological, Chemical & Nuclear Hazards”. The main Dhamma principles used to solve problems in such problem clusters are *Bodhicitta*, concentration, sublime states of mind, etc. Ven. Nam Nguyen Van pointed out “Among such principles, *Bodhicitta* is the law of enlightenment-mind for bodhisattva which is the key here.”²²³ In the third KPI.

The last KPI for “**Wisdom BSDG**” to measure the success of wisdom problem solving for only problem cluster “Adverse Outcomes of Technologies”. The main Dhamma principles used to solve problems in such problem clusters are Kālāma Sutta, *sati-sampajañña*, The Three Wisdoms, and wise consideration, etc. Although every member of society can’t achieve all Four BSDG-KPIs, an individual can become a fruitful noble individual. Cherdasak Maneeruttanarungroj thus said, “If every life is willing to enter this straight path towards Nibbāna, then the turbulence in society will decrease, and everyone will fulfill their duties in peace.”²²⁴

According to the Seventh Principle of the HRI Rule, the problem-solution-based holistic integrational perspective explains that each problem cluster requires solutions from multiple levels of BSDGs. First, the “**Environmental Challenges**” problem cluster needs the solution from Physical and Environmental BSDGs as a KPI in achieving physical and environmental sustainability. Next, the “**Global Health Emergency**” problem cluster needs the solution from Physical and Mental BSDGs as a KPI in achieving physical and mental sustainability. Both “**Social Unity & Peace**

²²³ Interview with Ven. Nam Nguyen Van, Dr., Mahāyāna Lecturer, Khanh Hoa Buddhist College, Vietnam, October 7, 2023.

²²⁴ Interview with Assoc. Prof. Dr. Cherdasak Maneeruttanarungroj, (Biochemist and Molecular Biologist) Department of Biology, School of Science, KMITL, Thailand, June 30, 2023.

in Crisis” and **“Biological, Chemical & Nuclear Hazards”** problem clusters need the solution from Environmental and Mental BSDGs as a KPI in achieving environmental and mental sustainability. Last, the **“Adverse Outcomes of Technologies”** problem cluster needs the solution from Environmental and Wisdom BSDGs as a KPI in achieving environmental and wisdom sustainability.

4.2.3 Concluding Remarks

Under the BI Theory, the two rules are the Rule of Dual-Relational Integration (DRI) and the Rule of Holistic-Relational Integration (HRI). Each rule is made up of three and four principles from the first to the seventh principle respectively. These seven principles explain seven different phenomena of dual-dimensional and multi-dimensional integration.

1. The Rule of Dual-Relational Integration (DRI): The DRI Rule refers to the effort to bridge and harmonize the content, information, and knowledge between these two distinct domains. It governs three different integration phenomena according to their principles. The First Principle gives science a triple role in (1) promoting (and modernizing) Buddhism by confirming ancient Buddhist insights, (2) proving various Buddhist doctrines and principles, and (3) protecting Buddhism from superstitious and false doctrines; The Second Principle: Integrating Buddhism into Science results in Buddhism having three roles (1) imparting wisdom and virtue to science by advocating all scientific discoveries, especially whenever science lacks proper understanding, (2) influencing science in vast scientific areas of consciousness, matters, and ethics, and (3) motivating for science with philosophical viewpoints in Tipiṭaka; The Third Principle: Integrating Buddhism and Science Reciprocally. Modern sciences play a role in Simplifying the profound principles and knowledge of Buddhism. Buddhism plays a crucial role in Illuminating modern sciences.

2. The Rule of Holistic-Relational Integration (HRI): It refers to the effort to bridge and harmonize the process of holistic integrating databases, information, knowledge, perspectives, ideas, and methodologies

from multiple different sources, among multiple relational domains. The Rule of HRI governs four different integration phenomena according to their principles. The Fourth Principle, with a shared standing point, becomes POP which is the closest relationship among them. On the contrary, each sect has its distinctive characteristics, as conveyed through its unique teachings; The Fifth Principle allows learners to access a three-dimensional overview of nature; The Sixth Principle elaborates on the type of integration that allows learners to access a four-dimensional overview of nature; and The Seventh Principle, also known as “*Ariyasacca*-Based Learning” (ABL), employs integral measurement between Buddhist and scientific measurements, all combined named “Buddhist Sustainable Development Goals Key Performance Indicators” or BSDG-KPIs through an integration process.

4.3 Validating a Theory of Buddhism Integration for Sustainable Development of Wisdom and Virtue in the 21st Century

In the Theory validation, the consensus of the experts on the BI Theory obtained was utilized to revise, improve, and develop the theory for its further completeness. The said Focus Group Discussion experts from the three Buddhist sects are listed here respectively:

FGD Number 1: Theravāda School Validation

FGD Number 2: Mahāyāna School Validation

FGD Number 3: Vajrayāna School Validation

The specialists were invited to share their views, experiences, stories, and the insightful with rich data produced.²²⁵ However, after intense

²²⁵ Roger O’Sullivan, “**Focus Groups**”, in *The A-Z of Social Research: A Dictionary of Key Social Science Research Concepts*, Eds. by Robert L. Miller and John D. Brewer, (London: SAGE Publications Ltd., 2003), p. 120; And in David L. Morgan, “**Focus Groups**”, in *The Sage Dictionary of Social Research Methods*, Compiled and ed. by Victor Jupp, (London: SAGE Publications Ltd., 2006), p. 121; And in Amanda M. Rosen, **Effective Research Methods for Any Project**, (Chantilly: The Great Courses,

debate, experts have provided additional information on various issues that are useful for the research, as listed here. Therefore, the research finding is discussed in the following order: - 1) Validation of Buddhism Integration Theory (BI Theory), and 2) Validation of the Goal of Sustainable Development of Wisdom and Virtue. The details are as follows:

4.3.1 Validation of Buddhism Integration Theory (BI Theory)

From the validation of the draft theory previously presented by the research team, sensitivity points were found due to the limitations and difficulty of integrating Buddhism with science or modern disciplines. In addition, it is a new theory that has not been specifically researched before, which is a great challenge for this research. As the Theravāda Focus Group Discussion has pointed out

It is such a challenge of this Theory that conceptual investigation as well as empirical investigation play such a prominent part here. On one hand, a conceptual investigation started from the Pali language and later literature regarding the Buddha's teachings, etc. On the other hand, empirical data is a scientific investigation of facts of the actual world. The method of in-depth interviews aims to constitute the empirical data to create the BI Theory. The counterpart to the conceptual investigation is the empirical data coming from scientists. This is like oil and water; the methodology chosen by conceptual analysis is totally different from the methodology used by any kind of empirical science. In this Theory, they are a sort of bridge in this mechanism to connect these two to make the data valuable for an overall theory.²²⁶

From the Vajrayāna viewpoint, Buddhism is beyond just a religion as His Holiness the 14th Dalai Lama mentioned Buddhism is not just mere

2019), p. 103; And in Herman Aguinis, **Research Methodology: Best Practices for Rigorous, Credible, and Impactful Research**, (California: Sage, 2024), p. 478.

²²⁶ Focus Group Discussion (FGD): Theravāda View, August 30th, 2023, (1) Most Ven. Phra Methavinairos, Assoc. Prof. Dr., (2) Ven. Phramaha Somphong Khunakaro, Asst. Prof. Dr., (3) Ven. Piyaratana Walmoruve, Asst. Prof. Dr., and (4) Assoc. Prof. Dr. Praves Intongpan.

religion. He categories Buddhism under three different topics, (1) Buddhist Science, (2) Philosophy, and (3) Religion. Buddhism is beyond a pure religion. The term “religion” is something related to God or Creator. In Buddhism, we reject these things and this is the biggest advantage to integrate with modern sciences because both science and Buddhism do not accept God or Creator. Buddhism characterizes a universal religion in which anybody can practice the Buddha’s teachings without identifying them as Buddhist. In fact, true Buddhism resides in the hearts of people. The real practice of Buddhism is not just when people go to temple and pray there for short in their day-to-day life. There is much more practice than that. So, what we need to do is through modern scientific research and methods, we need to approach the Buddha’s teaching to knowledgeable people²²⁷ such as experts, scholars, scientists, philosophers, and academicians.

The Mahāyāna view advocated that with the perspective of great compassion (*mahākarunā*) and great loving-kindness (*mahāmettā*), Mahāyāna attempts to support all sentient beings to support each other. Theravāda views this as *brahmavihāra* focusing in all four respects with mainly focus on equanimity associated with wisdom. In some situations, we try to support individuals, society, or organizations, that mind of helping is overly motivated by compassion or loving-kindness. Wisdom should be applied to balance them. Wisdom and virtue can be balanced in this manner in such a situation. That is to use wisdom to analyze the situations when cultivating our virtues (*mahākarunā* and *mahāmettā*) is to understand the situation by our wisdom.²²⁸ These are all the natural advantages of Buddhism in using wisdom and virtue as the foundation for the further development of mankind.

²²⁷ Focus Group Discussion (FGD): Vajrayāna View, September 20th, 2023, (1) Ven. Tulku Tenzin Gyurmey Rinpoche, (2) Ven. Geshe Lharampa Thabkhe Lodoe, Dr., and (3) Ven. Geshe Ngawang Norbu.

²²⁸ Focus Group Discussion (FGD): Mahāyāna View, September 14th, 2023, (1) Ven. Phamaha Anon Anando, Asst. Prof. Dr., (2) Ven. Laidong, Dr., and (3) Ven. Thich Phap Kham, Dr.

As for the Theravāda Focus Group Discussion viewed in the modern 21st era when we mostly depend on modern science, Buddhism can be well integrated with such developed methods and techniques of modern science. Today or in the future, with this BI Theory both Buddhism and science will be even more beneficial among academicians²²⁹ and many other people. It has also been confirmed by the Mahāyāna viewpoint that Buddhism and Science benefit mankind in many different ways. They are not competing with each other but complement each other. Through science, we can disseminate Buddhism and further achieve to solve all those problems in the 21st-century world.²³⁰ Without a doubt the Vajrayāna school yet confirmed the possibility of the theory of Buddhist integration:

Buddhism integration is qualitative means. When Buddhism is integrated with modern science, the Buddhist teachings are upgraded in a modern way of explaining by using modern examples to approach people. Therefore, we do need to add those modern techniques into Buddhist teachings and explain without changing the core teaching or meaning of Buddha. This is also one way of integrating and taking knowledge and methods from modern science. Through this BI Theory, we can make the Buddha's teachings more rich, relevant, and easy to approach modern people. When it comes to integration with science in terms of impermanence, selflessness, and emptiness, this topic can be integrated well with science. Better we need to focus more on the mind and mental factors with cognitive science, neuroscience, and psychology more relevant.²³¹

²²⁹ Focus Group Discussion (FGD): Theravāda View, August 30th, 2023, (1) Most Ven. Phra Methavinairos, Assoc. Prof. Dr., (2) Ven. Phramaha Somphong Khunakaro, Asst. Prof. Dr., (3) Ven. Piyaratana Walmoruve, Asst. Prof. Dr., and (4) Assoc. Prof. Dr. Praves Intongpan.

²³⁰ Focus Group Discussion (FGD): Mahāyāna View, September 14th, 2023, (1) Ven. Phamaha Anon Anando, Asst. Prof. Dr., (2) Ven. Laidong, Dr., and (3) Ven. Thich Phap Kham, Dr.

²³¹ Focus Group Discussion (FGD): Vajrayāna View, September 20th, 2023, (1) Ven. Tulku Tenzin Gyurmey Rinpoche, (2) Ven. Geshe Lharampa Thabkhe Lodoe, Dr., and (3) Ven. Geshe Ngawang Norbu.

The viewpoint of the Vajrayāna sect showed that therefore, we need to integrate Buddhism with modern sciences and disciplines, such as the education field, business, science, or any other academic based on their context. It is possible because Buddhism has all the potential to integrate with all these fields in this modern competitive world. People today are seeking for light to solve different problems. Only Buddhism can offer an answer; only Buddhism has the best method like Buddhist psychology, mind training, and wisdom to solve all these issues. The big problem at the iceberg pyramid top, which becoming more apparent in the 21st century era, is the environmental problem caused by humans. All these exploitations came in because of greed and for that, there are many Buddha's teachings to tackle greed. This a very simple example of the integration of biology with generosity. In our body, there are millions of cells and microorganisms and if one wants to be healthy, one eats healthy food to get some nourishment for health. For those organisms in his body whose livelihood depends on him in symbiosis. Furthermore, an integration of ethics with science starts when he is not harming his body by not taking alcohol or smoking cigarettes. Here he is directly not harming his body but indirectly he is also not harming those living organisms residing in his body.²³²

As for the prior step in the integration process, the Theravāda perspective has pointed out that before starting the integration process, first, wisdom and virtue development both in Buddhism and in general view from non-Buddhism need to be clarified. Later on, Buddhist teachings to be integrated with science should be clarified. For example, taking education as an integrated topic, *tisikkha* should be criticized first in terms of its meaning, characters, etc. to ensure that it can be integrated well with a specific kind of science. Next, science should be criticized to know what it is before selecting carefully proper teachings²³³ from the Buddhist sphere. Vajrayāna sect added:

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²³³ Focus Group Discussion (FGD): Theravāda View, August 30th, 2023, (1) Most Ven. Phra Methavinairos, Assoc. Prof. Dr., (2) Ven. Phramaha Somphong

Buddhism already has an abundance of tools to enhance our inner values like peace, compassion, and loving-kindness. Buddhism Theory focuses on these tools to develop wisdom and virtue. And this is what we need to sustain those tools with scientific results for better application. The BI Theory is simplified and understandable in all respects to the general public.²³⁴ In this way, it is understandable for scientists, Buddhist scholars, and common people.

During the Focus Group Discussion, every Theravāda scholar agreed to the scientist's key informants of this work who played a key role in providing information for the Theory creation. The Theory offers a new interpretation with a high possibility of wide use due to its all-new research findings. It is a new theory that no one has done. In this work, there are still key academic gaps revealing for other researchers to continue their research²³⁵ soon. The outstanding feature of the BI Theory holds conceptual coherence resulting from precise definitions to be done in a pre-integration stage. *Sīla* for example, there are so many ways to define *sīla*. The integrated process deals with pretty exact definitions or at least characterizations of each term, then the right process is possible.²³⁶ An integrator must try as hard as possible to make the concepts fit together and be consistent with clear definitions in every pre-integration stage. The issue regarding the goal of sustainable development, of the research team will be discussed in the next section.

Khunakaro, Asst. Prof. Dr., (3) Ven. Piyaratana Walmoruve, Asst. Prof. Dr., and (4) Assoc. Prof. Dr. Praves Intongpan.

²³⁴ Focus Group Discussion (FGD): Vajrayāna View, September 20th, 2023, (1) Ven. Tulku Tenzin Gyurmey Rinpoche, (2) Ven. Geshe Lharampa Thabkhe Lodoe, Dr., and (3) Ven. Geshe Ngawang Norbu.

²³⁵ Focus Group Discussion (FGD): Theravāda View, August 30th, 2023, (1) Most Ven. Phra Methavinairos, Assoc. Prof. Dr., (2) Ven. Phramaha Somphong Khunakaro, Asst. Prof. Dr., (3) Ven. Piyaratana Walmoruve, Asst. Prof. Dr., and (4) Assoc. Prof. Dr. Praves Intongpan.

²³⁶ Focus Group Discussion (FGD): Theravāda View, August 30th, 2023, (1) Most Ven. Phra Methavinairos, Assoc. Prof. Dr., (2) Ven. Phramaha Somphong Khunakaro, Asst. Prof. Dr., (3) Ven. Piyaratana Walmoruve, Asst. Prof. Dr., and (4) Assoc. Prof. Dr. Praves Intongpan.

4.3.2 Validation of the Goal of Sustainable Development of Wisdom and Virtue

From the validation of the draft theory previously presented by the research team, key considerations were made in the FGDs. Starting with Problem-Solution-based Holistic Integration under the Rule of HRI.

Mahāyāna sect pointed out this was the time when society needed Buddhism at its most, due to consumerism and people around the world with psychological pain and mental disorders. So, they all need wisdom and virtue as a means of solution. All those Western including Eastern culture were destroyed by consumerism caused by a mind full of greed. More problems like global warming can be solved by the Mahāyāna teaching of emptiness and selflessness. This tells us that humans are also part of the environment. If they destroy the environment, they are destroying themselves. Buddhism with quantum physics explores the behavior of matter and energy at the molecular, atomic, and nuclear levels. In chaos theory, the butterfly effect says changing a tiny thing changes the whole ecosystem on the planet, as same as dependent origination in Buddhism. In the 21st century, people are blindly addicted to social media; to solve this problem, the four foundations of mindfulness may be applied.²³⁷ Therefore, when one is mindful of one's social media usage, one will not fall victim to it.

It is true as Vajrayāna view elaborated more that Vasubandhu talked about all these thought processes in his text “Abhidharmagośa” where he categorizes all these mental factors in every detail. Also, the Tibetan Buddhism or Vajrayāna teaching, categories thought into three layers which is like when we mix or stir the water, we cannot see clearly what is inside of water at first, slowly when the water steady it starts to see inside, same with our meditation, at first all those gross level of thought can't let us see our inner mind, later more our mind is subtle more we see clear. This basic teaching is

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about mental health issues, the key factor is how to deal with mental issues.²³⁸ Thus, this kind of practice can integrate with modern sciences.

As Buddhists, we have a great responsibility to solve the problems of suffering in the world and environment. Nowadays, one of the biggest problems is mental health. Even though Western psychology already exists and has become more popular still Buddhism has more potential and capabilities. Integrated Buddhist psychology is a science of mind. That's why mindfulness (*sati*) and compassion (*karuṇā*) meditation is coming out and flourishing in the world of medical, spiritual, and education systems, and even in the Business world.²³⁹ They are all trying to integrate Buddhist practice into their original remedy.

During Mahāyāna Focus Group Discussion, the term “development” was discussed with examples: In Sustainable Development, the term “development” comes with value to the society and environment. Sustainable development value comes when we solve the problems in the 21st Century. To sustainably solve modern-day conflicts, the Mahāyāna point of view shares the concept of pure land to reduce the greed and overconsumption of the environment on this earth. Zen Buddhism offers non-actions guiding people to live and strive for their lives properly. Yogacāra offers an idea of the dream, which will counteract materialism. The cultural aspect of Mahāyāna provides the diversity of culture which will provide joy and happiness to the society and environment.²⁴⁰

Vajrayāna viewpoint further stated the next term “sustainable” as there are two questions arise here, what does “sustainable” mean? And what is the purpose of sustainability? The 21st century is highly advanced in

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technology bringing together a great danger that AI will overpower man. The main purpose of the Buddha's teaching is not to seek worldly pleasure, but ultimate peace by training one's mind.²⁴¹ Despite the characters of impermanence (*anitya*), emptiness (*śūnyatā*), and no-self (*anātman*) seem to contradict the term sustainability.²⁴² Nevertheless "sustainable" in this context means to sustain the Buddha's teaching and to sustain the development of wisdom and virtue by integrating them with modern science according to the Theory.²⁴³ It is sustainability that is subject to the laws of nature. Sadly, the place where we need to sustain is exhausting by exploiting, where humans consume more than they need. Thus, a reason for such exploitation of the environment is that humans overly seek for sensual pleasure or material part. And we use most of our energy for it. In contrast to the Buddha's teaching which is opposite to that.²⁴⁴ It is to focus on inner than outer; and inner development than outer development. The key point here is sustainable as follows:

The term "sustainable" or "sustainability" is part of people's ways of life, which is relevant to our day-to-day lives. Wisdom is taking crucial in this Theory. Virtue is also valuable in Buddhism. For example, a child has accidentally fallen in muddy water and appears to be drowning. To give help pulling him out would be easy but the clothes of the one who helps get wet and muddy. And what could be worse is that he might miss an important flight, which would cause serious negative consequences. The Primary question asked here is, why do we need to help someone who is

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suffering? The basic virtue comes here because what makes us human beings is the spontaneous action of helping that child or helping someone who is in real need.²⁴⁵ This story shows basic human nature and virtues.

Wisdom is the intelligent part, how you apply it and virtue is action. So, these two have to go together. Therefore, action is driven by intelligence or wisdom. With that knowledge, you can make action more appropriate and sustain it. That is how you integrate with your day-to-day life and that practice will be relevant to the 21st century.²⁴⁶ This will not only sustain the Buddha's teaching but also the world as a whole planet as the home of all living beings. Under two umbrella terms wisdom (*prajñā*) and skillfulness (*upāya*), they summarize all Buddha's teachings as the same as wisdom (*paññā*) and virtue (*guṇa-dhamma*). Only these two make us free from *saṃsāra* or enlightenment in terms of practice and realization. If we focus on Tibetan Buddhism, all the practices of Great Perfections (*Dzogchen*) and Great Symbol (*Mahamudra*) are focused on these wisdom and skillful means.²⁴⁷

On the other hand, the Mahāyāna view offers “Emptiness is form” which means all forms are empty of self-nature, from this perspective, everything can be developed and nothing is permanent. This is very important in the sense of wisdom, through the understanding of wisdom one can develop virtue such as “Six Perfection”. This leads to an understanding of cause and effect. So, one can practice perfections, donate, and support everyone to eliminate “I” or “Self”²⁴⁸ for the eradication of selfishness.

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²⁴⁸ Focus Group Discussion (FGD): Mahāyāna View, September 14th, 2023, (1) Ven. Phamaha Anon Anando, Asst. Prof. Dr., (2) Ven. Laidong, Dr., and (3) Ven. Thich Phap Kham, Dr.

On the issue of the goal of sustainable development, the Theravāda view sheds light on it by pointing out:

With the scientific method in the experiments, the scientific results can be seen very clearly at every moment. In the Buddhism Integration Theory, the evaluation of the result from the Theory is obvious with some abstract measurements added.²⁴⁹

They are the third and the fourth KPIs in the Rule of HRI named “Mental BSDG” and “Wisdom BSDG” respectively. The Buddhist methodology significantly deals with the holistic phenomena between the material and the immaterial.²⁵⁰ Thus, it is so true to say that in the BI Theory, we do not use only scientific measurement, but instead, we use Buddhist measurement together with scientific measurement, all combined named “Buddhist Sustainable Development Goals Key Performance Indicators” or BSDG-KPIs through an integration process.

The goal of integration among sciences, modern disciplines, and Buddhism, according to Vajrayāna view, is to help or benefit general people in terms of developing their wisdom and virtue. The discovery of the Theory is beneficial not only for high-level or elite levels of people or practitioners but for general people too.²⁵¹ There are many research works carried out on these integration topics. Their results were achieved in terms of the human brain, neuroscience, cognitive science, etc. Science of mind has great achievement in terms of understanding how the mind and mental factors do in our day-to-day life. Even so, those Western sciences, especially cognitive

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²⁵⁰ In Problem-Solution-based Holistic Integration, under the HRI Rule, the evaluation of the results can be carried out using the Four KPIs under the BSDGs framework: - (1) Physical BSDG, (2) Environmental BSDG, (3) Mental BSDG, and (4) Wisdom BSDG.

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science are still shallow at the moment in ways of distinguishing different mental factors that happen in our thought process. Also, they do not have an exact answer to those processes till now compared to the very detailed presentation done by the Buddha. This is the reason to support that this Theory is original.²⁵² Therefore, the goal of the BI Theory is truly for the sustainable development of wisdom and virtue for the benefit of human beings, animals, plants, society, the world, and the environment through a holistic perspective.

4.3.3 Concluding Remarks

The validation of the BI Theory was successfully carried out on the “Theory” and its “goal”. The consensus of the scholars reflects that the Theory offers a new interpretation with a high possibility of wide use due to its all-new research findings. The goal of the BI Theory sustainably truly is to develop wisdom and virtue for the benefit of human beings, animals, plants, society, the world, and the environment through a holistic perspective.

4.4 New Body of Knowledge from the Research

Modern science and various disciplines have developed knowledge and breakthroughs that are beneficial to humanity. Many important theories were presented through the scientific lens that can see through nature with scientific perception, except for the spiritual nature. With the wisdom-virtue eye of Buddhism, the BI Theory makes the integration possible to access nature through a whole new dimension of learning under the fact that the “Buddhist lens can turn upright what is overthrown, reveal what is hidden, show the way to one who is lost, or hold up a lamp in the dark for those with eyesight to see forms”.

The BI Theory presented in this research is a new theory that searches for the reality of all nature for the great benefit of mankind under the two Rules of Dual Relational Integration (DRI) and Holistic Relational Integration (HRI). Both rules govern the seven essential Principles that

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address different forms of integration among the three-sect Buddhism, pure and applied science, and all modern sciences existing in the twenty-first-century world today, which are the contemporary sciences essential for the way of life of modern lifestyles.

Under the BI Theory, Buddhism illuminates the wisdom and virtue framework that can inform scientific research and applications in all dimensions, just as modern science offers scientific processes to simplify subtle Buddhist knowledge and practice. The patterns, types, processes, and methods of integrating Buddhism and modern science under this theory are clearly and appropriately reflected. Wisdom and virtue are the main principles of the three sects of Buddhism. They are scattered and appear in other forms in the seven principles, such as the three characteristics (*tilakkhaṇa*), the dependent origination (*paṭiccasamuppāda*), the ultimate truths (*paramattha-dhamma*), the threefold training (*tisikkha*), the four developments (*bhāvanā*), the Four Noble Truths (*ariyasacca*), the thirty-seven enlightenment states (*bodhipakkhiya-dhamma*), etc. Especially the Seventh Principle: Problem-Solution-based Holistic Integration of the HRI Rule, also known as “*Ariyasacca*-Based Learning” (ABL), understanding the true condition of the problem is essential in the process of solving problems according to the Four Noble Truths. The Dhamma principles under the framework of the four developments are suggested for the holistic integration purpose in the most detailed way, with the BSDG concept as the KPIs for solving problems in a way that is direct, appropriate, and sustainable. The BI Theory indicates definite possibilities of who, what, when, where, why, and how one integrates knowledge and practice of Buddhism, science, and multidiscipline to one’s day-to-day life relevant to the twenty-first century for sustainable development of wisdom (*paññā*) and virtue (*guna-dhamma*).

Chapter 5

Conclusion, Discussion, and Suggestion

In this chapter, initially, the research team concluded the research findings according to the three objectives in order. Then, the outstanding points of the research findings presented in this work were discussed with the current knowledge. Finally, some useful suggestions were given at the end. The presentation framework is presented in the following order: - 1) Conclusion, 2) Discussion, and 3) Suggestions.

5.1 Conclusion

The research findings were concluded according to the three objectives in order: 1) Development of Wisdom and Virtue in the 21st Century According to Buddhism and SDGs, 2) Creating a Theory of Buddhism Integration for Sustainable Development of Wisdom and Virtue in the 21st Century, and 3) Validating a Theory of Buddhism Integration for Sustainable Development of Wisdom and Virtue in the 21st Century.

5.1.1 Development of Wisdom and Virtue in the 21st Century According to Buddhism and SDGs

1. Theravāda View on Roles and Functions of Wisdom and Virtue in the 21st Century: Virtue plays a key role in ethical development. The term virtue depicts a very broad meaning which includes both the higher training of morality and the higher training of concentration as in the Buddhist Threefold Training. With the twelve kinds of wisdom consisting of 1 single-fold section, 5 dyads, 4 triads, and 2 tetrads, it plays a vital role as an introspection knowledge that leads to prosperity; seeing things as they are; and overcoming wrong views; and developing wisdom and virtue. The function of wisdom and virtue is to develop wisdom and virtue. The “Ten investigations of information by wisdom” is the wisdom

that goes through a process of analyzing and investigating carefully before accepting each set of information leading to virtuous practices.

2. Theravāda View on The Process of Wisdom and Virtue Development: The process of wisdom development deals with three levels of the database that are the foundation for intellectual development, namely perception (*sañña*), view (*diṭṭhi*), and knowledge (*ñāṇa*) embodied in wisdom development by the triad type of wisdom (*cintāsutabhāvanāmayavasena*). The process of virtue development deals with ten wholesome courses of action. They are the ten ways to develop or to cleanse one's body, speech, and mind.

3. Theravāda Ways to Develop Wisdom and Virtue in the 21st Century According to Buddhism and SDGs: The fundamental ways depend on the perception-view-knowledge three processes of wisdom to develop knowledge based on three kinds of wisdom. The most important way of the gradual purification development of wisdom is the seven gradual purifications in the Relay Chariots Sutta (Rathavinīta Sutta). The ways to develop virtue in the 21st Century, Theravāda suggests three steps based on the Ten Wholesome Courses of Action. The wisdom-virtue framework aligns well with the SDGs. First, wisdom fosters critical thinking and informed decision-making, contributing to Goal 4 (Quality Education) and Goal 12 (Responsible Consumption and Production). Then, virtue promotes values like integrity, compassion, social justice, mindfulness, and mental well-being, contributing to Goal 16 (Peace, Justice, and Strong Institutions), Goal 3 (Good Health and Well-being), and Goal 4 (Quality Education). Together, these elements advocate for a holistic approach to personal and social well-being for sustainable development.

4. Mahāyāna Ways to Develop Wisdom and Virtue in the 21st Century According to Buddhism and SDGs:

In Mahāyāna Buddhism, wisdom-virtue holistic learning ways of development, wisdom, and virtue are not separate but are integral to each other. The most important thing for intellectual development is education in terms of precept, concentration, and wisdom. The way to develop virtue according to Mahāyāna based on the Perfections and the Four

Immeasurable Minds. They can significantly contribute to achieving the SDGs. First, Holistic Learning: The Threefold Training supports SDG 4 (Quality Education), SDG 13 (Climate Action), and SDG 15 (Life on Land) through sustainable practices; Second, The Perfections: A bodhisattva's virtue practices promote justice, equality, and peace, supporting SDG 5 (Gender Equality), SDG 11 (Sustainable Cities and Communities), and SDG 16 (Peace, Justice, and Strong Institutions); Third, The *Brahmavihāra*: Driving efforts to alleviate suffering, aligning with SDG 1 (No Poverty) and SDG 3 (Good Health and Well-Being). By embodying wisdom and virtue, individuals and communities can actively contribute to a more sustainable and equitable world. These are the Mahāyāna ways to develop wisdom and virtue in the 21st Century according to Buddhism and SDGs.

5. Vajrayāna Four-Step Practice to Develop Wisdom and Virtue in the 21st Century According to Buddhism and SDGs: There are four steps to develop wisdom and virtue in Vajrayāna Buddhism. They can be arranged starting from virtue to wisdom respectively. When it comes to the development of virtue and wisdom in the 21st century Vajrayāna teachings provide a huge number of resources which does not require much time and are friendly to the busiest lifestyle.

5.1.2 Creating a Theory of Buddhism Integration for Sustainable Development of Wisdom and Virtue in the 21st Century

The Theory of Buddhism Integration (BI) aims to sustainably develop wisdom and virtue for the universal, all citizens, all professions, all genders, all ages, and all religions, who are living in the 21st Century. The two rules are the Rule of Dual-Relational Integration (DRI), and the Rule of Holistic-Relational Integration (HRI). Each rule is made up of three and four principles from the first to the seventh principle respectively. These seven principles explain seven different phenomena of multidimensional integration.

1. The Rule of Dual-Relational Integration (DRI): The DRI Rule refers to the effort to bridge and harmonize the content, information, and knowledge between these two distinct domains. While Points of Parity (POP) depict the common characteristics that two domains have, are called

“CLOSE RELATIONSHIP”; Points of Difference (POD) depict the distinct characteristics that set two domains apart from each other, are called “DISTANT RELATIONSHIP”. The Rule of DRI governs three different integration phenomena according to their principles.

(1) First Principle: Integrating Science into Buddhism. The DRI Rule places Buddhist content at the center and integrates science or modern sciences into it. The Rule starts with paying attention to the Buddhist principles and locating Buddhism as a starting point then bringing modern science to integrate to analyze and understand POP and POD between the two sciences. Integrating science into Buddhism gives science a triple role in (1) promoting (and modernizing) Buddhism by confirming ancient Buddhist insights, (2) proving various Buddhist doctrines and principles, and (3) protecting Buddhism from superstitious and false doctrines.

(2) Second Principle: Integrating Buddhism into Science. The DRI Rule explains the integration of Buddhism into science by placing science or modern science content at the center and integrating Buddhism into it. The Second Principle starts with paying attention to the modern sciences which are to locate science as a substrate then bring Buddhist principles to integrate to analyze and understand both POP and POD between the said two sciences. Integrating Buddhism into science results in Buddhism having three roles (1) imparting wisdom and virtue to science by advocating all scientific discoveries, especially whenever science lacks proper understanding, (2) influencing science in vast scientific areas of consciousness, matters, and ethics, and (3) motivating for science with philosophical viewpoints in Tipiṭaka.

(3) Third Principle: Integrating Buddhism and Science Reciprocally. The Third Principle explains that: **First, integrating Buddhism and Pure Sciences:** intriguing parallels between Buddhism and physics are Buddhism’s concept of the Three Characteristics (*tilakkhaṇa*) about impermanence (*aniccatā*) and physics’ understanding of change (*dukkhatā*) and evolution to acknowledge that everything is in a state of flux or soullessness (*anattatā*). An integration between Buddhism and chemistry involves exploring how Buddhist principles can provide

insight into or resonate with chemical processes in the sense that everything is interconnected and dependent on other factors. Buddhist Biology gives a holistic perspective on life and nature with the broadest scope that starts from the sub-elements of life, life's unit, to the family, society, nation, international, world, galaxy, intergalactic, universe, inter-universe, to all entities encompassing with infinite universes. The DRI between Buddhism and astronomy encourages a holistic view that appreciates both the scientific and existential dimensions of our understanding of the universe. **Second, integrating Buddhism and Applied Sciences:** An integration between Buddhism with medical science pictures a holistic approach to physical and mental health healing, combining the benefits of scientific evidence with the wisdom of Buddhist practices. In applied psychology, Buddhist principles are widely used to explain mental phenomena. As for “renewable energy”, the crisis facing our current fossil fuel-based energy system is alarming, and we urgently need to transition to renewables in all economic and societal activities.

With the Third Principle, Modern sciences play a role in **Simplifying** the profound principles and knowledge of Buddhism to be easy to understand by using scientific technical terms that are universally recognized to describe religious phenomena alongside the perspective of modern sciences. Buddhism plays a crucial role in **Illuminating** modern sciences alongside the spiritual doctrines and phenomenological deep insights of Buddhism.

2. The Rule of Holistic-Relational Integration (HRI): The HRI refers to the effort to bridge and harmonize the process of holistic integrating databases, information, knowledge, perspectives, ideas, and methodologies from multiple different sources, among multiple relational domains. The Rule of HRI governs four different integration phenomena according to their principles.

(1) Fourth Principle: Three-Buddhist-School-based Holistic Integration. The three Buddhist sects mutually share vital principles, such as the Noble Eightfold Path is the Middle Way, Nibbāna as the ultimate goal of life, etc. Under the HRI Rule, this shared standing point becomes POP which is the closest relationship among them. On the contrary, each

sect has its distinctive characteristics, as conveyed through its unique teachings. One of the central doctrines of Buddhism shared by all three sects is the Noble Eightfold Path, leading to the cessation of suffering is Nibbāna.

(2) Fifth Principle: Environment-Mind-Wisdom-based Holistic Integration. It is an integration that allows learners to access a three-dimensional overview of nature. Buddhism is a religion based on nature and conveys principles and beliefs that can be applied to everyday life in harmony. Not only Sakyamuni Buddha, but all Buddhas teach *ovāda-patimokkha*. The Knowledge-based Holistic Integration Triangular Pyramid allows various bodies of knowledge to be integrated to find the true nature from both a modern, concrete scientific perspective and a deep, profound Buddhist perspective based on the wisdom eye. The holistic body of knowledge that humans gain from viewing nature in various aspects, both vertical and horizontal, combined with philosophical and religious concepts, allows humans to see nature and the environment with non-bias.

(3) Sixth Principle: Physical-Environment-Mind-Wisdom-based Holistic Integration. Under the HRI Rule, the Sixth Principle elaborates on the type of integration that allows learners to access a four-dimensional overview of nature. **First, The Science of Physical for *Bhāvitakāyo*:** It refers to an exploration of the physical body or *kāya*. Sciences, such as biology, medical science, physical therapy, etc. also shared the focusing point as the “science of physical”. **Second, The Science of Environment for *Bhāvitasīlo*:** It refers to an exploration of morality or *sīla*. Agriculture involves growing crops and raising livestock to produce food, fiber, and other goods. Astronomy helps us understand our universe and the fundamental laws that govern its structure and behavior. Environmental science seeks to understand the environment’s processes and the impact of human activities on ecosystems. Renewable energy discovers sources that are naturally replenished and can be used repeatedly without depleting them. **Third, The Science of Mind for *Bhāvitacitto*:** It is to purify one’s mind to be high and of quality, to have a mind that does not degenerate and cause suffering to oneself and others. Philosophy of science explores the foundations, methods, and implications of science. Psychology seeks to understand mental processes. Quantum

physics, embraces the bond relationship between matter and energy at the most fundamental level. **Finally, The Science of Wisdom for *Bhāvitapañño*:** In Buddhism, it is very important to augment wisdom for oneself. At this highest intelligence level, Buddhism plays a crucial role in explaining various phenomena in its broadest perspective of metaphysical, epistemological, and ethical questions for the optimal level of wisdom and virtue according to the Sixth Principle under the Rule of HRI.

(4) Seventh Principle: Problem-Solution-based Holistic Integration. Under the Rule of HRI, the seventh principle “Problem-Solution-based Holistic Integration”, also known as “*Ariyasacca*-Based Learning” (ABL) in Buddhism. According to the seventh principle, the HRI employs integral measurement between Buddhist and scientific measurements, all combined named “Buddhist Sustainable Development Goals Key Performance Indicators” or BSDG-KPIs through an integration process.

The first KPI for “**Physical BSDG**” is to measure the success of physical problem solving for both problem clusters “Environmental Challenges” and “Global Health Emergency”. The main Dhamma principles used to solve problems in such problem clusters are contentment (*santosa*), renunciation, and restraint (*saṃvara*), etc. The second KPI for “**Environmental BSDG**” is to measure the success of societal and environmental problem-solving for up to four problem clusters “Environmental Challenges”, “Social Unity & Peace in Crisis”, “Biological, Chemical, Nuclear Hazards”, and “Adverse Outcomes of Technologies”. The main Dhamma-principles used to solve problems in such problem clusters comprise the *Bodhisattva* path, *Bodhisattva* precepts, courses of action, giving, good friend, principles of service, Six Perfections, Tantric precepts, the Five precepts, and virtues for lay people, etc. The third KPI for “**Mental BSDG**” is to measure the success of mental problem solving for three problem clusters “Global Health Emergency”, “Social Unity & Peace in Crisis”, and “Biological, Chemical, Nuclear Hazards”. The main Dhamma principles used to solve problems in such problem clusters are *Bodhicitta*, concentration, sublime states of mind, etc. The last KPI for “**Wisdom BSDG**” to measure the success of wisdom problem solving for only problem cluster “Adverse Outcomes of

Technologies”. The main Dhamma principles used to solve problems in such problem clusters are Kālāma Sutta, *sati-sampajañña*, The Three Wisdoms, and wise consideration, etc.

According to the Seventh Principle of the HRI Rule, the problem-solution-based holistic integrational perspective explains that each problem cluster requires solutions from multiple levels of BSDGs. First, the “**Environmental Challenges**” problem cluster needs the solution from Physical and Environmental BSDGs as a KPI in achieving physical and environmental sustainability. Next, the “**Global Health Emergency**” problem cluster needs the solution from Physical and Mental BSDGs as a KPI in achieving physical and mental sustainability. Both “**Social Unity & Peace in Crisis**” and “**Biological, Chemical, Nuclear Hazards**” problem clusters need the solution from Environmental and Mental BSDGs as a KPI in achieving environmental and mental sustainability. Last, the “**Adverse Outcomes of Technologies**” problem cluster needs the solution from Environmental and Wisdom BSDGs as a KPI in achieving environmental and wisdom sustainability.

5.1.3 Validating a Theory of Buddhism Integration for Sustainable Development of Wisdom and Virtue in the 21st Century

1. Validation of Buddhism Integration Theory (BI Theory):

Every Theravāda scholar agreed that the Theory offers a new interpretation with a high possibility of wide use due to its all-new research findings. It is a new theory that no one has done. In this work, there are still key academic gaps revealing for other researchers to continue their research soon. The outstanding feature of the BI Theory holds conceptual coherence resulting from precise definitions to be done in a pre-integration stage. The integrated process deals with pretty exact definitions or at least characterizations of each term, then the right process is possible. An integrator must try as hard as possible to make the concepts fit together and be consistent with clear definitions in every pre-integration stage.

2. Validation of the Goal of Sustainable Development of Wisdom and Virtue: The goal of the BI Theory among sciences, modern disciplines, and Buddhism is to help or benefit general people in developing their wisdom and virtue. The discovery of the Theory is

beneficial not only for high-level or elite levels of people or practitioners but for general people too. The goal of the BI Theory is truly for the sustainable development of wisdom and virtue for the benefit of human beings, animals, plants, society, the world, and the environment through a holistic perspective.

5.2 Discussion

The discussion can be conducted in the following two aspects as follows:

5.2.1 Limitations

Many famous scientific theories in physics, chemistry, biology, astronomy, engineering, medicine, agriculture, technology, renewable energy, etc. have been widely accepted around the globe. The exponential scientific progress is a tangible indicator of the flourishing of the arts and sciences in the 21st century. Likewise, the Doctrine and the Discipline (*dhamma-vinaya*) are the essence of the three sects of Buddhism, which have traveled a very long distance for more than 2,500 years. The limitation of the complexity of Buddhist principles and theories of each discipline to be integrated is still an issue that is not clearly stated in the theory. Integral knowledge arises only when sciences are compromised with the wisdom and virtue of Buddhism. In seeking wisdom-virtue-science knowledge, a study of a single discipline may easily mislead to blind results or misinterpretations of complicated nature.

5.2.2 Implications

The BI Theory plays a crucial part in closing that gap by reconciling scientific theories with the wisdom-virtue principles of Buddhism. Its true originality and creativity offer an intellectual breakthrough in the world of Buddhism integration. The Integrated Knowledge Model, research of Yoshiteru Nakamori explores the integration model of thought and knowledge dealing with 3 different integrating models characterizing (1) Debate-EDIS, (2) Experiment-EEIS, and (3) Hermeneutic-EAIR. As to the BI Theory, his work is just one part of the wide-range possibilities of integration under the Seven Principles of the DRI and HRI Rules. The research work on Religion-Science

Integration of Ahmad Zainuri et al. is another example to affirm the paramount of religion-science integration. He integrated pedagogical science with the Islamic religion for optimal learning outcomes. Integration according to such methodology can be found in the Seventh Principle of the HRI Rule: Problem-Solution-based Holistic Integration, which outlines the broadest picture of the various disciplines to be integrated with Buddhism within their respective clusters. Fabian Völker affirmed the holistic approach requires an integrative methodology as its constitutive basis. The BI Theory has laid integrative methodology as the foundation of its seven principles to claim the great chain of integral learning. The Integral Theory of Ken Wilber elaborated on integral approaches (meta-paradigms) and integrating science and religions. His four quadrants integral perspective attempt to integrate various disciplines was successful in fulfilling the overall satisfaction. The BI Theory recognizes the limitations of access to precise and accurate knowledge of each discipline. The BI Theory strongly suggests that the integrators must pay serious attention and be very careful with the integration process and many other factors due to improper integration may lead to undermining between the two sciences. They must try as hard as possible to make the concepts fit together and be consistent with clear definitions in every pre-integration stage.

Above all, the phenomena of multidimensional integration between Buddhism, science, and various fields of discipline available in the 21st century, can be synthesized into the Seven Principles of DRI and HRI Rules under the BI Theory.

5.3 Suggestions

Finally, the research team made the following suggestions. They are divided into three categories: - (1) Policy Suggestions, (2) Operational Suggestions, and (3) Suggestions for Further Research, as follows:

5.3.1 Policy Suggestions

At the national level, the Thai government should be more aware of the importance of integrating Buddhism with modern science and should provide all forms of support to research personnel, lecturers, academics, integrators, and those involved in the field of Buddhist

integration. Research institutes, government sectors, and private agencies should fully support by increasing research funds related to the field of Buddhist integration.

At the international level, international organizations that play an important role in international research, such as international research funding organizations or international research network organizations, should recognize the value of integrating Buddhism and science by including it as one of the themes for research funding consideration.

5.3.2 Operational Suggestions

Researchers who study multidisciplinary knowledge should study and clearly understand the BI Theory: - (1) to deeply understand the disciplines they are studying; (2) to correct errors that may occur at any stage in the overall integration process; and (3) to prevent errors from occurring.

Professors and educators who teach subjects related to Buddhist integration, such as the Seminar on Buddhist Integration and Modern Sciences and the Seminar on Buddhism and Sustainable Development Goals (SDGs), should apply BI Theory in their teaching to ensure correct understanding between teachers and students.

Students studying in programs that require basic integration knowledge should study BI Theory and apply it to their assignments, academic articles and papers, theses, thematic papers, and dissertations.

Program directors or administrators who are involved in administering the programs should integrate the BI Theory into the Integration-based curriculum such as: - A DPhil in Theology and Religion, MPhil in Buddhist Studies, University of Oxford; Doctoral Degree Program in Buddhist Studies, Stanford University; BA. in Comparative Study of Religion, Harvard University; Ph.D. in Theology and Religious Studies, University of Cambridge; Graduate School of Practical Shin Buddhist Studies, Ryukoku University; MA in Clinical Mental Health Counseling: Buddhism-Informed Contemplative Counseling; Master of Divinity, Naropa University; and College of Buddhist Studies, Dongguk University.

Research institutes, knowledge-based organizations, or universities should give importance and consider issues of feasibility in supporting research on multidisciplinary integration to obtain a reliable and accurate knowledge base that will facilitate future references.

5.3.3 Suggestions for Further Research

For the reason that the research is allowed to proceed according to the objectives and scope of the study that have been clearly defined. The research team has not only found the research findings but also found some key academic gaps that are useful for future research listed as follows:

1. A Theory of Knowledge Integration among the Three Buddhist Schools.
2. A Theoretical Model of Wisdom and Virtue Enhancement in the Twenty-First Century.
3. A Creation of Key Performance Indicators (KPIs) of Wisdom and Virtue for Modern Sciences.

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Graduate School: Mahachulalongkornrajavidyalaya University, 2551 B.E.

Mahatthanadull, Sanu and Mahatthanadull, Sarita. “Holistic Well-beings Promotion for Balanced Way of Life according to Buddhist Psychology”. **A Research Report Funded by National Research Council of Thailand (NRCT) Fiscal Year 2016**. Buddhist Research Institute: Mahachulalongkornrajavidyalaya University, 2016.

Panvong, Witoon. “Learning Management on Social Studies by Using Problem-Based Learning (PBL) According to Ariyasacca to Develop the Achievement of the 3rd Secondary School Students”. **Master of Education Thesis in Teaching Social Studies**. Graduate School: Mahachulalongkornrajavidyalaya University, 2022.

(4) In-depth Interviews

Bandarage, Asoka, Dr. Adjunct Professor. California Institute for Integral Studies. USA. Interview. June 30, 2023.

Blum, Mark, Dr. Distinguished Chair in Japanese Studies. University of California. USA. Interview. June 30, 2023.

Brahmali, Bhikkhu. Bodhinyana Monastery. Australia. June 30, 2023.

Godart, G Clinton, Assoc. Prof. Dr. Graduate School of International Cultural Studies. Tohoku University. Japan. Interview. July 13, 2023.

Harvey, Peter, Emeritus Prof. Dr. University of Sunderland. UK. Interview. June 30, 2023.

Hoffman, Frank Johnny, Prof. Dr. Lecturer. IBSC. MCU. Thailand. Interview. June 30, 2023.

Maneeruttanarungroj, Cherdasak, Assoc. Prof. Dr. (Biochemist and Molecular Biologist). Department of Biology. School of Science. KMITL. Thailand, Interview. June 30, 2023.

- Ven. Anuwar, Junaidi, Dr. Mahāyāna Teacher. Thai Plum Village International Mindfulness Practice Center. Indonesia. Interview. October 7, 2023.
- Ven. Bodhi, Bhikkhu. President of the Buddhist Association of the United States (BAUS). NY. USA. Interview. September 9, 2023.
- Ven. Chingyun, Shi, Dr. Chan Master. Buddhism Academic of China HeBei. China. Interview. October 7, 2023.
- Ven. Norbu, Gen Ngawang, Head of Thukdam Research Center. Sera Jey Monastic University. South India. Interview. October 7, 2023.
- Ven. Thabkhe, Geshe, Ph.D. Vajrayāna Master. Sera Jey Monastery. South India. Interview. October 7, 2023.
- Ven. Wangden, Geshe Sonam, Ph.D. Vajrayāna Master. Lharam Geshe. Sera Jey Monastic University. South India. Interview. October 7, 2023.
- Ven. Van, Nam Nguyen, Dr. Mahāyāna Lecturer. Khanh Hoa Buddhist College. Vietnam. Interview. October 7, 2023.
- Vorasuntharosoth, Peerasak, Assoc. Prof. Dr. Former Dean of Engineering Faculty. KMITL. Thailand. Interview. June 30, 2023.

(5) Focus Group Discussions

- Mahāyāna View. September 14th, 2023. (1) Ven. Phamaha Anando, Anon, Asst. Prof. Dr., (2) Ven. Laidong, Dr., and (3) Ven. Kham, Thich Phap, Dr.
- Theravāda View. August 30th, 2023. (1) Most Ven. Phra Methavinairos, Assoc. Prof. Dr., (2) Ven. Phramaha Khunakaro, Somphong, Asst. Prof. Dr., (3) Ven. Walmoruve, Piyaratana, Asst. Prof. Dr., and (4) Intongpan, Praves, Assoc. Prof. Dr.
- Vajrayāna View. September 20th, 2023. (1) Ven. Gyurmey, Tulku Tenzin, Rinpoche, (2) Ven. Lodo, Geshe Lharampa Thabkhe, Dr., and (3) Ven. Norbu, Geshe Ngawang.

APPENDIX I

Question Forms for In-depth Interview & FGD



Form No. ¹

In-depth Interview Question Forms

Objective: To collect data from key informants

Key Informants: Monks and Buddhist scholars from the three Buddhist sects with knowledge of Buddhism and science, and who have expertise in interdisciplinary integration between the two Sciences.

Research Title: A Theory of Buddhism Integration for Sustainable Development of Wisdom and Virtue in the 21st Century

.....

Instructions

1. Objectives of the Research (regarding the interview)
 - 1) To investigate development of wisdom and virtue in the 21st century according to Buddhism and United Nation's Sustainable Development Goals (SDGs);
 - 2) To create a theory of Buddhism integration for sustainable development of wisdom and virtue in the 21st century.
2. All data obtained from this interview will be particularly used only for this research.
3. Please give the best answers based on your Buddhist sect expertise (Theravāda, Mahāyāna or Vajrayāna).
4. This interview form consists of three parts;
 - Part I: General Information of the Key Informant
 - Part II: Opinion on specific issues
 - Part III: Suggestions

Thanking you for your courtesy on this interview

(Assoc. Prof. Dr. Sanu Mahatthanadull)

The Project Leader

Part I: General Information of the Key Informant

1. Name / Family name _____
2. Age _____
3. Occupation _____
4. Sectarian _____
5. Academic Position _____
6. Institute _____
7. Fields of Expertise _____

Part II: Opinion on Specific Issues

Question 1: How can one appropriately develop wisdom (*paññā*) and virtue (*sīla - samādhi*) in the context of the 21st Century?

Question 2: Based on your answer to Question 1, how do you think it is related to the Sustainable Development Goals (SDGs)?

Question 3: Do you think science promotes Buddhism or Buddhism promotes science? In what ways?

Question 4: How do you expect to see the theory of Buddhism Integration (BI Theory) for sustainable development of wisdom and virtue in the 21st Century?

Question 5: The research team theorized the Buddhism Integration Theory (BI Theory) with two rules, namely: - (1) The Rule of Dual-Relational Integration (DRI), and (2) The Rule of Holistic-Relational Integration (HRI). Do you think they're appropriate? Please elaborate on how.

<p>Part III: Suggestions</p>

Do you have any suggestions or recommendations for the research team?

(End of question form)

I have provided the information for the research as above.

(.....)

Key informant

Form No.

Question Forms for FGDs

Objective: To validate a theory of Buddhism integration for sustainable development of wisdom and virtue in the 21st century

Specialists: Various scholars from each Buddhist sect:

Theravāda

Mahāyāna

Vajrayāna

Research Title: A Theory of Buddhism Integration for Sustainable Development of Wisdom and Virtue in the 21st Century

.....

Instructions

The question forms for FGDs consisted of two key questions which were specifically based on the 3rd objective of the research. They are as follows:

Question 1: Please validate the Buddhism Integration Theory (BI Theory) in this research and provide necessary suggestions for the research team.

Question 2: Please validate the Buddhist Sustainable Development Goals (BSDGs) of wisdom and virtue stated in the BI Theory with some suggestions.

Thanking you for your courtesy on this Focus Group Discussion

(Assoc. Prof. Dr. Sanu Mahatthanadull)

The Project Leader

APPENDIX II
Content Validity Index (CVI) Examination Forms

The Content Validity Index (CVI) Form

Research Title: A Theory of Buddhism Integration for Sustainable Development of Wisdom and Virtue in the 21st Century

Explanation: Please read the following interviewing questions then kindly give the scores according to the table of Content Validity Index (CVI) which is used to evaluate the items of the interviewing questions based on the score range from -1 to +1 as shown below:

Clearly understand (Validity) = +1

Unclear (Questionable) = 0

Not clearly understand (Invalidity) = -1

No.	Objectives and Interviewing Questions	CVI Score			Remarks
		+1	0	-1	
	<p>Objective 1: To investigate the development of wisdom and virtue in the 21st century according to Buddhism and the United Nations Sustainable Development Goals (SDGs)</p> <p>Objective 2: To create a theory of Buddhism integration for sustainable development of wisdom and virtue in the 21st century</p>				
Q.1	How can one appropriately develop wisdom (<i>paññā</i>) and virtue (<i>sīla - samādhi</i>) in the context of the 21 st Century?				
Q.2	Based on your answer to Question 1, how do you think it is related to the Sustainable Development Goals (SDGs)?				

No.	Objectives and Interviewing	CVI Score			Remarks
Objective 2: To create a theory of Buddhism integration for sustainable development of wisdom and virtue in the 21st century					
Q.3	Do you think science promotes Buddhism or Buddhism promotes science? In what ways?				
Q.4	How do you expect to see the theory of Buddhism Integration (BI Theory) for sustainable development of wisdom and virtue in the 21 st Century?				
Q.5	The research team theorized the Buddhism Integration Theory (BI Theory) with two rules, namely: - (1) The Rule of Dual-Relational Integration (DRI), and (2) The Rule of Holistic-Relational Integration (HRI). Do you think they're appropriate? Please elaborate on how.				

Remarks: The items that have scores lower than 0.5 will be revised. On the other hand, the items that have scores higher than or equal to 0.5 will be reserved.

I hereby examined the above CVI form and provided suggestions.

(.....)

CVI Examiner

APPENDIX III

Invitation Letters

- In-depth Interviews
- Focus Group Discussions
- CVI Examiners

No AW 8013/w195



MAHACHULALONGKORNRAJAVIDYALAYA UNIVERSITY
 79 Group 1 Lamsai, Wang Noi,
 Ayutthaya 13170, THAILAND
 Tel. (6635) 248-000-5
 Fax (6635) 248-034
 URL : www.mcu.ac.th

20 June 2023

Ven. Bhikkhu Bodhi, President of the Buddhist Association of the United States (BAUS),
 2020 Route 301, Carmel, NY 10512 US

Dear Ven. Bhikkhu Bodhi
Subject: Invitation for an in-depth interview
Enclosed: A copy of the interview question form 1 copy

We hope this letter finds you well. Dr. Sanu Mahatthanadull is an associate professor of religion and theism and the program director of the Ph.D. in Buddhist Studies (International Program) at International Buddhist Studies College, MCU. He, as the project head, and his team are currently conducting research on **A Theory of Buddhism Integration for Sustainable Development of Wisdom and Virtue in the 21st Century**.

We would like to extend an invitation to you for an **in-depth interview**. Your expertise and insights related to the Research make you an ideal candidate for this project. Your valuable perspective will significantly contribute to the depth and quality of the study.

We would be grateful if you could spare time for the interview. Should you have any questions or require further information about the research or the interview process, please do not hesitate to contact Ven. Dhammanan Parisuddhachayo, research coordinator, via email at dhammanan.san@mcu.ac.th or by phone at 66 64 4981942. He would be more than happy to provide any additional details you may need.

We greatly appreciate your time and expertise and look forward to hearing from you soon.

Yours sincerely in the Dhamma,

A handwritten signature in blue ink, appearing to read 'P. Vornat', written over a horizontal line.

(Phrakrupalad Paññāvorawat (Hansā Dhammahāso), Prof. Dr.)

Director of International Buddhist Studies College
 Mahāchulālongkornrājavidyālaya University

International Buddhist Studies College
 Mobile: +66 64 4981942
 Email: dhammanan.san@mcu.ac.th

No AW 8013w195



MAHACHULALONGKORNRAJAVIDYALAYA UNIVERSITY
79 Group 1 Lamsai, Wang Noi,
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URL : www.mcu.ac.th

20 June 2023

Bhikkhu Brahmali, Bodhinyana Monastery, Australia

Dear Bhikkhu Brahmali
Subject: Invitation for an in-depth interview
Enclosed: A copy of the interview question form 1 copy

We hope this letter finds you well. Dr. Sanu Mahatthanadull is an associate professor of religion and theism and the program director of the Ph.D. in Buddhist Studies (International Program) at International Buddhist Studies College, MCU. He, as the project head, and his team are currently conducting research on **A Theory of Buddhism Integration for Sustainable Development of Wisdom and Virtue in the 21st Century**.

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We greatly appreciate your time and expertise and look forward to hearing from you soon.

Yours sincerely in the Dhamma,

(Phrakrupalad Paññāvorawat (Hansā Dhammahāso), Prof. Dr.)
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Mahāchulālongkornrājavidyālaya University

International Buddhist Studies College
Mobile: +66 64 4981942
Email: dhammanan.san@mcu.ac.th

No AW 8013/w195



MAHACHULALONGKORNRAJAVIDYALAYA UNIVERSITY
 79 Group 1 Lamsai, Wang Noi,
 Ayutthaya 13170, THAILAND
 Tel. (6635) 248-000-5
 Fax (6635) 248-034
 URL : www.mcu.ac.th

20 June 2023

Emeritus Prof. Dr. Peter Harvey, Lecturer and Buddhist Researcher, University of Sunderland, United Kingdom

Dear Emeritus Prof. Dr. Peter Harvey
Subject: Invitation for an in-depth interview
Enclosed: A copy of the interview question form 1 copy

We hope this letter finds you well. Dr. Sanu Mahathanadull is an associate professor of religion and theism and the program director of the Ph.D. in Buddhist Studies (International Program) at International Buddhist Studies College, MCU. He, as the project head, and his team are currently conducting research on **A Theory of Buddhism Integration for Sustainable Development of Wisdom and Virtue in the 21st Century**.

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We greatly appreciate your time and expertise and look forward to hearing from you soon.

Yours sincerely in the Dhamma,

(Phrakrupalad Paññāvorawat (Hansā Dhammahāso), Prof. Dr.)
 Director of International Buddhist Studies College
 Mahāchulālongkornrājavidyālaya University



Memorandum

Department International Buddhist Studies College Telephone 0 35-248-000: 7212

No. AW 8013/w208

Date 23 June 2023

Dear Prof. Dr. Frank Johnny Hoffman
Subject: Invitation for an in-depth interview
Enclosed: A copy of the interview question form 1 copy

We hope this letter finds you well. Dr. Sanu Mahatthanadull is an associate professor of religion and theism and the program director of the Ph.D. in Buddhist Studies (International Program) at International Buddhist Studies College, MCU. He, as the project head, and his team are currently conducting research on **A Theory of Buddhism Integration for Sustainable Development of Wisdom and Virtue in the 21st Century**.

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We greatly appreciate your time and expertise and look forward to hearing from you soon.

Yours sincerely in the Dhamma,

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 Mahāchulālongkornrajavidyalaya University

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 Mobile: +66 64 4981942
 Email: dhammanan.san@mcu.ac.th

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MAHACHULALONGKORNRAJAVIDYALAYA UNIVERSITY
79 Group 1 Lamsai, Wang Noi,
Ayutthaya 13170, THAILAND
Tel. (6635) 248-000-5
Fax (6635) 248-034
URL : www.mcu.ac.th

20 June 2023

Assoc. Prof. Dr. G Clinton Godart, Graduate School of International Cultural Studies,
Tohoku University, Japan

Dear Assoc. Prof. Dr. G Clinton Godart
Subject: Invitation for an in-depth interview
Enclosed: A copy of the interview question form 1 copy

We hope this letter finds you well. Dr. Sanu Mahatthanadull is an associate professor of religion and theism and the program director of the Ph.D. in Buddhist Studies (International Program) at International Buddhist Studies College, MCU. He, as the project head, and his team are currently conducting research on **A Theory of Buddhism Integration for Sustainable Development of Wisdom and Virtue in the 21st Century**.

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Mahāchulālongkornrājavidyālaya University

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 79 Group 1 Lamsai, Wang Noi,
 Ayutthaya 13170, THAILAND
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20 June 2023

Dr. Mark Blum, Distinguished Chair in Japanese Studies, University of California, USA

Dear Dr. Mark Blum
Subject: Invitation for an in-depth interview
Enclosed: A copy of the interview question form 1 copy

We hope this letter finds you well. Dr. Sanu Mahatthanadull is an associate professor of religion and theism and the program director of the Ph.D. in Buddhist Studies (International Program) at International Buddhist Studies College, MCU. He, as the project head, and his team are currently conducting research on **A Theory of Buddhism Integration for Sustainable Development of Wisdom and Virtue in the 21st Century**.

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We greatly appreciate your time and expertise and look forward to hearing from you soon.

Yours sincerely in the Dhamma,

A handwritten signature in blue ink, appearing to read 'P. Vorawat', with a long horizontal flourish extending to the right.

(Phrakrupalad Paññāvorawat (Hansā Dhammahāso), Prof. Dr.)
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20 June 2023

Dr. Asoka Bandarage, Distinguished (Adjunct) Professor, California Institute for Integral Studies, USA

Dear Dr. Asoka Bandarage
Subject: Invitation for an in-depth interview
Enclosed: A copy of the interview question form 1 copy

We hope this letter finds you well. Dr. Sanu Mahatthanadull is an associate professor of religion and theism and the program director of the Ph.D. in Buddhist Studies (International Program) at International Buddhist Studies College, MCU. He, as the project head, and his team are currently conducting research on **A Theory of Buddhism Integration for Sustainable Development of Wisdom and Virtue in the 21st Century**.

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Mahāchulālongkornrajavidyālaya University

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79 Group 1 Lamsai, Wang Noi,
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20 June 2023

Assoc. Prof. Dr. Peerasak Vorasuntharosoth, Former Dean of Engineering Faculty, KMITL
and Former Director of Thailand Institute of Scientific and Technological Research, Thailand

Dear Assoc. Prof. Dr. Peerasak Vorasuntharosoth
Subject: Invitation for an in-depth interview
Enclosed: A copy of the interview question form 1 copy

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Tel. (6635) 248-000-5
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20 June 2023

Assoc. Prof. Dr. Cherdsak Maneeruttanarungroj, Department of Biology, School of Science, KMITL, Thailand

Dear Assoc. Prof. Dr. Cherdsak Maneeruttanarungroj
Subject: Invitation for an in-depth interview
Enclosed: A copy of the interview question form 1 copy

We hope this letter finds you well. Dr. Sanu Mahatthanadull is an associate professor of religion and theism and the program director of the Ph.D. in Buddhist Studies (International Program) at International Buddhist Studies College, MCU. He, as the project head, and his team are currently conducting research on **A Theory of Buddhism Integration for Sustainable Development of Wisdom and Virtue in the 21st Century**.

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79 Group 1 Lamsai, Wang Noi,
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Tel. (6635) 248-000-5
Fax (6635) 248-034
URL : www.mcu.ac.th

20 June 2023

Ven. Junaidi Anuwar, Dr., Mahāyāna Teacher, Thai Plum Village International Mindfulness Practice Center, Indonesia

Dear Ven. Junaidi Anuwar, Dr.
Subject: Invitation for an in-depth interview
Enclosed: A copy of the interview question form 1 copy

We hope this letter finds you well. Dr. Sanu Mahatthanadull is an associate professor of religion and theism and the program director of the Ph.D. in Buddhist Studies (International Program) at International Buddhist Studies College, MCU. He, as the project head, and his team are currently conducting research on **A Theory of Buddhism Integration for Sustainable Development of Wisdom and Virtue in the 21st Century**.

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We greatly appreciate your time and expertise and look forward to hearing from you soon.

Yours sincerely in the Dhamma,

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20 June 2023

Ven. Nam Nguyen Van, Dr., Mahāyāna Lecturer, Khanh Hoa Buddhist College, Vietnam

Dear Ven. Nam Nguyen Van, Dr.
Subject: Invitation for an in-depth interview
Enclosed: A copy of the interview question form 1 copy

We hope this letter finds you well. Dr. Sanu Mahatthanadull is an associate professor of religion and theism and the program director of the Ph.D. in Buddhist Studies (International Program) at International Buddhist Studies College, MCU. He, as the project head, and his team are currently conducting research on **A Theory of Buddhism Integration for Sustainable Development of Wisdom and Virtue in the 21st Century**.

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79 Group 1 Lamsai, Wang Noi,
Ayutthaya 13170, THAILAND
Tel. (6635) 248-000-5
Fax (6635) 248-034
URL : www.mcu.ac.th

20 June 2023

Ven. Shi Chingyun, Dr., Chan Master, Buddhism Academic of China HeBei, China

Dear Ven. Shi Chingyun, Dr.
Subject: Invitation for an in-depth interview
Enclosed: A copy of the interview question form 1 copy

We hope this letter finds you well. Dr. Sanu Mahatthanadull is an associate professor of religion and theism and the program director of the Ph.D. in Buddhist Studies (International Program) at International Buddhist Studies College, MCU. He, as the project head, and his team are currently conducting research on **A Theory of Buddhism Integration for Sustainable Development of Wisdom and Virtue in the 21st Century**.

We would like to extend an invitation to you for an **in-depth interview**. Your expertise and insights related to the Research make you an ideal candidate for this project. Your valuable perspective will significantly contribute to the depth and quality of the study.

We would be grateful if you could spare time for the interview. Should you have any questions or require further information about the research or the interview process, please do not hesitate to contact Ven. Dhammanan Parisuddhachayo, research coordinator, via email at dhammanan.san@mcu.ac.th or by phone at 66 64 4981942. He would be more than happy to provide any additional details you may need.

We greatly appreciate your time and expertise and look forward to hearing from you soon.

Yours sincerely in the Dhamma,

(Phrakrupalad Paññāvorawat (Hansā Dhammahāso), Prof. Dr.)
Director of International Buddhist Studies College
Mahāchulālongkornrājavidyālaya University

International Buddhist Studies College
Mobile: +66 64 4981942
Email: dhammanan.san@mcu.ac.th

No AW 8013/w195



MAHACHULALONGKORNRAJAVIDYALAYA UNIVERSITY
79 Group 1 Lamsai, Wang Noi,
Ayutthaya 13170, THAILAND
Tel. (6635) 248-000-5
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URL : www.mcu.ac.th

20 June 2023

Ven. Geshe Sonam Wangden (Ph.D.), Vajrayāna Master, Lharam Geshe, Sera Jey Monastic University, South India

Dear Ven. Geshe Sonam Wangden (Ph.D.)
Subject: Invitation for an in-depth interview
Enclosed: A copy of the interview question form 1 copy

We hope this letter finds you well. Dr. Sanu Mahatthanadull is an associate professor of religion and theism and the program director of the Ph.D. in Buddhist Studies (International Program) at International Buddhist Studies College, MCU. He, as the project head, and his team are currently conducting research on **A Theory of Buddhism Integration for Sustainable Development of Wisdom and Virtue in the 21st Century**.

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Yours sincerely in the Dhamma,

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20 June 2023

Ven. Gen Ngawang Norbu, Head of Thukdam Research Center, Sera Jey Monastic University, South India

Dear Ven. Gen Ngawang Norbu
Subject: Invitation for an in-depth interview
Enclosed: A copy of the interview question form 1 copy

We hope this letter finds you well. Dr. Sanu Mahatthanadull is an associate professor of religion and theism and the program director of the Ph.D. in Buddhist Studies (International Program) at International Buddhist Studies College, MCU. He, as the project head, and his team are currently conducting research on **A Theory of Buddhism Integration for Sustainable Development of Wisdom and Virtue in the 21st Century**.

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Yours sincerely in the Dhamma,

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79 Group 1 Lamsai, Wang Noi,
Ayutthaya 13170, THAILAND
Tel. (6635) 248-000-5
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URL : www.mcu.ac.th

20 June 2023

Ven. Geshe Thabkhe (Ph.D.), Vajrayāna Master, Sera Jey Monastery, South India

Dear Ven. Geshe Thabkhe (Ph.D.)
Subject: Invitation for an in-depth interview
Enclosed: A copy of the interview question form 1 copy

We hope this letter finds you well. Dr. Sanu Mahatthanadull is an associate professor of religion and theism and the program director of the Ph.D. in Buddhist Studies (International Program) at International Buddhist Studies College, MCU. He, as the project head, and his team are currently conducting research on **A Theory of Buddhism Integration for Sustainable Development of Wisdom and Virtue in the 21st Century**.

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Yours sincerely in the Dhamma,

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MAHACHULALONGKORNRAJAVIDYALAYA UNIVERSITY
79 Group 1 Lamsai, Wang Noi,
Ayutthaya 13170, THAILAND
Tel. (6635) 248-000-5
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URL : www.mcu.ac.th

23 August 2023

Subject: Invitation to participate in a focus group discussion
Dear Most Ven. Phra Methavinairos, Assoc. Prof. Dr.
Enclosed: A copy of the question form for FGD 1 copy
A program of FGD: Theravāda View 1 copy

You are cordially invited by International Buddhist Studies College to participate in a focus group discussion for the International Buddhist Studies College (IBSC)'s research team conducted. The FGD aims to validate a theory of Buddhism integration for sustainable development of wisdom and virtue in the 21st century from Theravāda experts. The focus group discussion will take place on Wednesday, August 30th, 2023, 2nd Floor, Buddhapaññā Meeting Room, Phra Buddhaghosācāriya Building, International Buddhist Studies College (IBSC), Mahāchulālongkornrājavidyālaya University, Wang Noi, Ayutthaya.

The research team consists of faculty members and Ph.D. students of the International Buddhist Studies College (IBSC), Mahāchulālongkornrājavidyālaya University. The research entitled “**A Theory of Buddhism Integration for Sustainable Development of Wisdom and Virtue in the 21st Century**” under the research fund in the academic year 2023.

We would appreciate your input on this matter.

Yours in the Dhamma,

(Phra Medhivajjarapundit (Hansā Dhammahāso), Prof. Dr.)
Director of International Buddhist Studies College
Mahāchulālongkornrājavidyālaya University

Correspondence
Phra Dhammanan Parisuddhajayo
Mobile: 0644981942
Email: dhammanan.san@mcu.ac.th



Memorandum

Department International Buddhist Studies College **Telephone** 0 35-248-000: 7212

No. AW 8013/w278

Date 23 August 2023

Subject: Invitation to participate in a focus group discussion
Dear Ven. Phramaha Somphong Khunakaro, Asst. Prof. Dr.
Enclosed: A copy of the question form for FGD 1 copy
 A program of FGD: Theravāda View 1 copy

You are cordially invited by International Buddhist Studies College to participate in a focus group discussion for the International Buddhist Studies College (IBSC)'s research team conducted. The FGD aims to validate a theory of Buddhism integration for sustainable development of wisdom and virtue in the 21st century from Theravāda experts. The focus group discussion will take place on Wednesday, August 30th, 2023, 2nd Floor, Buddhapaññā Meeting Room, Phra Buddhaghosācāriya Building, International Buddhist Studies College (IBSC), Mahāchulālongkornrājavidyālaya University, Wang Noi, Ayutthaya.

The research team consists of faculty members and Ph.D. students of the International Buddhist Studies College (IBSC), Mahāchulālongkornrājavidyālaya University. The research entitled “**A Theory of Buddhism Integration for Sustainable Development of Wisdom and Virtue in the 21st Century**” under the research fund in the academic year 2023.

We would appreciate your input on this matter.

Yours in the Dhamma,

(Phra Medhivajarpundit (Hansā Dhammahāso), Prof. Dr.)

Director of International Buddhist Studies College
 Mahāchulālongkornrājavidyālaya University

Correspondence
 Phra Dhammanan Parisuddhajayo
 Mobile: 0644981942
 Email: dhammanan.san@mcu.ac.th



Memorandum

Department International Buddhist Studies College **Telephone** 0 35-248-000: 7212

No. AW 8013/w278

Date 23 August 2023

Subject: Invitation to participate in a focus group discussion
Dear Ven. Piyaratana Walmoruve, Asst. Prof. Dr.
Enclosed: A copy of the question form for FGD 1 copy
 A program of FGD: Theravāda View 1 copy

You are cordially invited by International Buddhist Studies College to participate in a focus group discussion for the International Buddhist Studies College (IBSC)'s research team conducted. The FGD aims to validate a theory of Buddhism integration for sustainable development of wisdom and virtue in the 21st century from Theravāda experts. The focus group discussion will take place on Wednesday, August 30th, 2023, 2nd Floor, Buddhapañña Meeting Room, Phra Buddhaghosācāriya Building, International Buddhist Studies College (IBSC), Mahāchulālongkornrājavidyālaya University, Wang Noi, Ayutthaya.

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We would appreciate your input on this matter.

Yours in the Dhamma,

(Phra Medhivajrapundit (Hansā Dhammahāso), Prof. Dr.)
 Director of International Buddhist Studies College
 Mahāchulālongkornrājavidyālaya University

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79 Group 1 Lamsai, Wang Noi,
Ayutthaya 13170, THAILAND
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23 August 2023

Subject: Invitation to participate in a focus group discussion
Dear Assoc. Prof. Dr. Praves Intongpan
Enclosed: A copy of the question form for FGD 1 copy
A program of FGD: Theravāda View 1 copy

You are cordially invited by International Buddhist Studies College to participate in a focus group discussion for the International Buddhist Studies College (IBSC)'s research team conducted. The FGD aims to validate a theory of Buddhism integration for sustainable development of wisdom and virtue in the 21st century from Theravāda experts. The focus group discussion will take place on Wednesday, August 30th, 2023, 2nd Floor, Buddhapaññā Meeting Room, Phra Buddhaghosācāriya Building, International Buddhist Studies College (IBSC), Mahāchulālongkornrājavidyālaya University, Wang Noi, Ayutthaya.

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We would appreciate your input on this matter.

Yours in the Dhamma,

(Phra Medhivajarpundit (Hansā Dhammahāso), Prof. Dr.)
Director of International Buddhist Studies College
Mahāchulālongkornrājavidyālaya University

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Memorandum

Department International Buddhist Studies College **Telephone** 0 35-248-000: 7212

No. AW 8013/w278

Date 23 August 2023

Subject: Invitation to participate in a focus group discussion
Dear Ven. Phamaha Anon Anando, Asst. Prof. Dr.
Enclosed: A copy of the question form for FGD 1 copy
 A program of FGD: Mahāyāna View 1 copy

You are cordially invited by International Buddhist Studies College to participate in a focus group discussion for the International Buddhist Studies College (IBSC)'s research team conducted. The FGD aims to validate a theory of Buddhism integration for sustainable development of wisdom and virtue in the 21st century from Mahāyāna experts. The focus group discussion will take place on Thursday, September 14th, 2023, from 1.00 p.m. via Zoom Application 7767776667, password: 2020.

The research team consists of faculty members and Ph.D. students of the International Buddhist Studies College (IBSC), Mahāchulālongkornrājavidyālaya University. The research entitled “**A Theory of Buddhism Integration for Sustainable Development of Wisdom and Virtue in the 21st Century**” under the research fund in the academic year 2023.

We would appreciate your input on this matter.

Yours in the Dhamma,

(Phra Medhivajarpundit (Hansā Dhammahāso), Prof. Dr.)
 Director of International Buddhist Studies College
 Mahāchulālongkornrājavidyālaya University

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 Mobile: 0644981942
 Email: dhammanan.san@mcu.ac.th

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MAHACHULALONGKORNRAJAVIDYALAYA UNIVERSITY
79 Group 1 Lamsai, Wang Noi,
Ayutthaya 13170, THAILAND
Tel. (6635) 248-000-5
Fax (6635) 248-034
URL : www.mcu.ac.th

23 August 2023

Subject: Invitation to participate in a focus group discussion
Dear Ven. Laidong, Dr.
Enclosed: A copy of the question form for FGD 1 copy
A program of FGD: Mahāyāna View 1 copy

You are cordially invited by International Buddhist Studies College to participate in a focus group discussion for the International Buddhist Studies College (IBSC)'s research team conducted. The FGD aims to validate a theory of Buddhism integration for sustainable development of wisdom and virtue in the 21st century from Mahāyāna experts. The focus group discussion will take place on Thursday, September 14th, 2023, from 1.00 p.m. via Zoom Application 7767776667, password: 2020.

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We would appreciate your input on this matter.

Yours in the Dhamma,

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79 Group 1 Lamsai, Wang Noi,
Ayutthaya 13170, THAILAND
Tel. (6635) 248-000-5
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URL : www.mcu.ac.th

23 August 2023

Subject: Invitation to participate in a focus group discussion
Dear Ven. Thich Phap Kham, Dr.
Enclosed: A copy of the question form for FGD 1 copy
A program of FGD: Mahāyāna View 1 copy

You are cordially invited by International Buddhist Studies College to participate in a focus group discussion for the International Buddhist Studies College (IBSC)'s research team conducted. The FGD aims to validate a theory of Buddhism integration for sustainable development of wisdom and virtue in the 21st century from Mahāyāna experts. The focus group discussion will take place on Thursday, September 14th, 2023, from 1.00 p.m. via Zoom Application 7767776667, password: 2020.

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23 August 2023

Subject: Invitation to participate in a focus group discussion
Dear Ven. Tulku Tenzin Gyurmey Rinpoche
Enclosed: A copy of the question form for FGD 1 copy
A program of FGD: Vajrayāna View 1 copy

You are cordially invited by International Buddhist Studies College to participate in a focus group discussion for the International Buddhist Studies College (IBSC)'s research team conducted. The FGD aims to validate a theory of Buddhism integration for sustainable development of wisdom and virtue in the 21st century from Vajrayāna experts. The focus group discussion will take place on Wednesday, September 20th, 2023, from 6.00 p.m. via Zoom Application 7767776667, password: 2020.

The research team consists of faculty members and Ph.D. students of the International Buddhist Studies College (IBSC), Mahāchulālongkornrājavidyālaya University. The research entitled "**A Theory of Buddhism Integration for Sustainable Development of Wisdom and Virtue in the 21st Century**" under the research fund in the academic year 2023.

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23 August 2023

Subject: Invitation to participate in a focus group discussion
Dear Ven. Geshe Lharampa Thabkhe Lodoe, Dr.
Enclosed: A copy of the question form for FGD 1 copy
A program of FGD: Vajrayāna View 1 copy

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Yours in the Dhamma,

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Mahāchulālongkornrājavidyālaya University

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23 August 2023

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A program of FGD: Vajrayāna View 1 copy

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20 June 2023

Dear Most Ven. Phra Methavinairos, Assoc. Prof. Dr.
Subject: Invitation for a CVI Examiner
Enclosed: A copy of the CVI form 1 copy

We hope this letter finds you well. Dr. Sanu Mahatthanadull is an associate professor of religion and theism and the program director of the Ph.D. in Buddhist Studies (International Program) at International Buddhist Studies College, MCU. He, as the project head, and his team are currently conducting research on **A Theory of Buddhism Integration for Sustainable Development of Wisdom and Virtue in the 21st Century**.

We would like to extend an invitation to you for a **Content Validity Index (CVI) examiner** in order to examine the research tools that will be used in the research.

We would be grateful if you could spare time for the CVI Examination. Should you have any questions or require further information about the research, please do not hesitate to contact Ven. Dhammanan Parisuddhachayo, research coordinator, via email at dhammanan.san@mcu.ac.th or by phone at 66 64 4981942. He would be more than happy to provide any additional details you may need.

Yours sincerely in the Dhamma,

(Phrakrupalad Pafñāvorawat (Hansā Dhammahāso), Prof. Dr.)

Director of International Buddhist Studies College
Mahāchulālongkornrajavidyālaya University

International Buddhist Studies College
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20 June 2023

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Yours sincerely in the Dhamma,

(Phrakrupalad Paññāvorawat (Hansā Dhammahāso), Prof. Dr.)

Director of International Buddhist Studies College
Mahāchulālongkornrājavidyālaya University

International Buddhist Studies College
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20 June 2023

Dear Assoc. Prof. Dr. Amnaj Buasiri
Subject: Invitation for a CVI Examiner
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Yours sincerely in the Dhamma,

A handwritten signature in blue ink, appearing to read 'Phrakrupalad Paññāvorawat'.

(Phrakrupalad Paññāvorawat (Hansā Dhammahāso), Prof. Dr.)

Director of International Buddhist Studies College
 Mahāchulālongkornrājavidyālaya University

International Buddhist Studies College
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20 June 2023

Dear Assoc. Prof. Dr. Konit Srithong
Subject: Invitation for a CVI Examiner
Enclosed: A copy of the CVI form 1 copy

We hope this letter finds you well. Dr. Sanu Mahatthanadull is an associate professor of religion and theism and the program director of the Ph.D. in Buddhist Studies (International Program) at International Buddhist Studies College, MCU. He, as the project head, and his team are currently conducting research on **A Theory of Buddhism Integration for Sustainable Development of Wisdom and Virtue in the 21st Century**.

We would like to extend an invitation to you for a **Content Validity Index (CVI) examiner** in order to examine the research tools that will be used in the research.

We would be grateful if you could spare time for the CVI Examination. Should you have any questions or require further information about the research, please do not hesitate to contact Ven. Dhammanan Parisuddhachayo, research coordinator, via email at dhammanan.san@mcu.ac.th or by phone at 66 64 4981942. He would be more than happy to provide any additional details you may need.

Yours sincerely in the Dhamma,

(Phrakrupalad Paññāvorawat (Hansā Dhammahāso), Prof. Dr.)

Director of International Buddhist Studies College
Mahāchulālongkornrājavidyālaya University

International Buddhist Studies College
Mobile: +66 64 4981942
Email: dhammanan.san@mcu.ac.th

No AW 8013/w194



MAHACHULALONGKORNRAJAVIDYALAYA UNIVERSITY
79 Group 1 Lamsai, Wang Noi,
Ayutthaya 13170, THAILAND
Tel. (6635) 248-000-5
Fax (6635) 248-034
URL : www.mcu.ac.th

20 June 2023

Dear Assoc. Prof. Dr. Suvin Raksat
Subject: Invitation for a CVI Examiner
Enclosed: A copy of the CVI form 1 copy

We hope this letter finds you well. Dr. Sanu Mahatthanadull is an associate professor of religion and theism and the program director of the Ph.D. in Buddhist Studies (International Program) at International Buddhist Studies College, MCU. He, as the project head, and his team are currently conducting research on **A Theory of Buddhism Integration for Sustainable Development of Wisdom and Virtue in the 21st Century**.

We would like to extend an invitation to you for a **Content Validity Index (CVI) examiner** in order to examine the research tools that will be used in the research.

We would be grateful if you could spare time for the CVI Examination. Should you have any questions or require further information about the research, please do not hesitate to contact Ven. Dhammanan Parisuddhachayo, research coordinator, via email at dhammanan.san@mcu.ac.th or by phone at 66 64 4981942. He would be more than happy to provide any additional details you may need.

Yours sincerely in the Dhamma,

(Phrakrupalad Paññāvorawat (Hansā Dhammahāso), Prof. Dr.)

Director of International Buddhist Studies College
Mahāchulālongkornrājavidyālaya University

International Buddhist Studies College
Mobile: +66 64 4981942
Email: dhammanan.san@mcu.ac.th

APPENDIX IV
The Utilization of the Research Findings



A Certifying Letter of the Utilization of the Research or Creative Work Mahachulalongkornrajavidyalaya University

June 26, 2024

Topic: The Utilization of the Research

To: Assoc. Prof. Dr. Sanu Mahatthanadull

I, Assoc. Prof. Dr. G Clinton Godart, Graduate School of International Cultural Studies, Tohoku University, Japan, have utilized the research entitled “**A Theory of Buddhism Integration for Sustainable Development of Wisdom and Virtue in the 21st Century**”

I hereby certify that the research findings of **Assoc. Prof. Dr. Sanu Mahatthanadull et al.** were utilized as follows:

- Utilization of academic benefits, such as lectures, teaching, and the development of teaching styles.
- Utilization of Knowledge in Buddhism
- Commercial utilization, such as research and/or creative work to develop inventions
- Policy or national-level utilization
- Objectives-based utilization/goals of the research / creative work

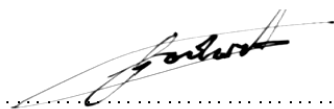
The period of utilization from February 2024 up to the present, in which the use of this research caused good results as follows:

- As a guideline for professors in applying the research findings to their teaching, learning process, and activities related to Buddhist integration for the students of Tohoku University.

- The body of knowledge of the BI Theory that the faculty members at Tohoku University can productively apply to their self-practice for sustainable development in twenty-first-century learning.

- The faculty members, researchers, and students can use the body of knowledge of the research to further develop their academic work in many dimensions.

I certify that the above statements are true in all respects.


 Utilizer
 (Assoc. Prof. Dr. G Clinton Godart)
 Graduate School of International Cultural Studies
 Tohoku University, Japan



**A Certifying Letter of the Utilization of the Research or Creative Work
Mahachulalongkornrajavidyalaya University**

June 26, 2024

Topic: The Utilization of the Research

To: Assoc. Prof. Dr. Sanu Mahatthanadull

I, Assoc. Prof. Dr. Cherdsak Maneeruttanarungroj, Department of Biology, School of Science, KMITL, Thailand, has utilized the research entitled “**A Theory of Buddhism Integration for Sustainable Development of Wisdom and Virtue in the 21st Century**”

I hereby certify that the research findings of **Assoc. Prof. Dr. Sanu Mahatthanadull et al.** were utilized as follows:

- Utilization of academic benefits, such as lectures, teaching, and the development of teaching styles.
- Utilization of Knowledge in Buddhism
- Commercial utilization, such as research and/or creative work to develop interventions
- Policy or national-level utilization
- Objectives-based utilization/goals of the research / creative work

The period of utilization from February 2024 up to the present, in which the use of this research caused good results as follows:

- As a guideline for professors in applying the research findings to their teaching, learning process, and activities related to Buddhist integration for the students in the Department of Biology, School of Science, KMITL.

- The body of knowledge of the BI Theory that the faculty members at Tohoku University can productively apply to their self-practice for sustainable development in twenty-first-century learning.

- The faculty members, researchers, and students can use the body of knowledge of the research to further develop their academic work in many dimensions.

I certify that the above statements are true in all respects.

Utilizer

(Assoc. Prof. Dr. Cherdsak Maneeruttanarungroj)
Department of Biology, School of Science, KMITL



**A Certifying Letter of the Utilization of the Research or Creative Work
Mahachulalongkornrajavidyalaya University**

June 26, 2024

Topic: The Utilization of the Research
To: Assoc. Prof. Dr. Sanu Mahatthanadull

I, Ven. Geshe Thabkhe (Ph.D.), Vajrayāna Master, Sera Jey Monastery, South India, has utilized the research entitled “**A Theory of Buddhism Integration for Sustainable Development of Wisdom and Virtue in the 21st Century**”


I hereby certify that the research findings of **Assoc. Prof. Dr. Sanu Mahatthanadull et al.** were utilized as follows:

- Utilization of academic benefits, such as lectures, teaching, and the development of teaching styles.
- Utilization of Knowledge in Buddhism
- Commercial utilization, such as research and/or creative work to develop inventions
- Policy or national-level utilization
- Objectives-based utilization/goals of the research / creative work

The period of utilization from February 2024 up to the present, in which the use of this research caused good results as follows:

- Monastery members utilized as a guideline for applying the research findings to their teaching, learning process, and daily activities related to Buddhist integration.
- Masters and practitioners used and applied the BI Theory productively to their self-practice for sustainable development in twenty-first-century lifelong learning.
- The monastery members, researchers, and students can use the body of knowledge of the research to further develop their academic work in many dimensions.

I certify that the above statements are true in all respects.


 Utilizer
 (Ven. Geshe Thabkhe, Ph.D.)
 Vajrayāna Master
 Sera Jey Monastery, South India

APPENDIX V

**Comparison Table of Output, Outcome, and Impact
of the Research Project**

Comparison Table of Output, Outcome, and Impact of the Research Project

Objective Achieved	Output	Outcome	Impact
Objective 1: To investigate the development of wisdom and virtue in the 21st century according to Buddhism and the United Nations Sustainable Development Goals (SDGs)	Body of knowledge of the development of wisdom and virtue in the 21 st century according to Buddhism and the SDGs	A complete version of the research report /Five Chapters	<ul style="list-style-type: none"> • Individuals are fully aware of the development of wisdom and virtue in the 21st century • Universities and Organizations applied the body of knowledge to their work missions
	Three academic articles based on each Buddhist school (TMV)	Publication of academic articles in the Q3-4 SCOPUS journals	<ul style="list-style-type: none"> • The widespread cognitive impact of knowledge on the development of wisdom and virtue in the 21st century on TMV • Highly cited Academic Articles
Objective 2: To create a theory of Buddhism integration for sustainable development of wisdom and virtue in the 21st century	A draft version of the theory of Buddhism integration for sustainable development of wisdom and virtue in the 21 st century	A complete version of the research report /Five Chapters	<ul style="list-style-type: none"> • The Buddhist community is being stimulated, especially in terms of integrating Buddhism with science by a specific theory
Objective 3: To validate a theory of Buddhism integration for sustainable	A New Theory of Buddhism integration (The BI Theory) for sustainable development of wisdom and virtue in the 21 st century	A complete version of the research report /Five Chapters	<ul style="list-style-type: none"> • Individuals understand Buddhism and science and can tangibly and properly integrate them into multi-disciplinary studies. • Universities and organizations have integrated the BI Theory

Objective Achieved	Output	Outcome	Impact
development of wisdom and virtue in the 21st century	A research article on the BI Theory	Publication of research article in the Q1 SCOPUS journals	<ul style="list-style-type: none">• The widespread cognitive impact of knowledge on the BI Theory• Highly cited the BI Theory's original research article

APPENDIX VI

Illustrations

- FGD: Theravāda View
- FGD: Mahāyāna View
- FGD: Vajrayāna View
- Action Plan & Responsible Tasks
- Research Team Meetings



Faculty of Buddhism

Programme

Focus Group Discussion (FGD): Theravāda View
August 30th, 2023 at 2nd Floor, Buddhapañña Meeting Room,
Phra Buddhaghosacara Building,
International Buddhist Studies College (IBSC)
Mahachulalongkornrajavidyalaya University, Wang Noi, Ayutthaya

Research Title: A Theory of Buddhism Integration for Sustainable Development of Wisdom and Virtue in the 21st Century
FGD' Objective: To validate a theory of Buddhism integration for sustainable development of wisdom and virtue in the 21st century from Theravāda experts

Time	Activities
1:00 p.m.	<ul style="list-style-type: none"> Group Photo
1:10-1:20 p.m.	<ul style="list-style-type: none"> Introducing the FGD expert names by the moderator
1:20-1:30 p.m.	<ul style="list-style-type: none"> Presenting the research team and work by Assoc. Prof. Dr Sanu Mahatthanadull, Head of research.
1:30-2:45 p.m.	<ul style="list-style-type: none"> Group Discussion <ol style="list-style-type: none"> Most Ven. Phra Methavinairos, Assoc. Prof. Dr. Mahamakut Buddhist University (MBU). Ven. Phramaha Somphong Khunakaro, Asst. Prof. Dr. Vice Director of IBSC, MCU. Ven. Piyaratana Walmoruwe, Asst. Prof. Dr. Director of BA (Buddhist Studies) English Programme, Faculty of Buddhism, MCU. Assoc. Prof. Dr. Praves Intongpan, Department of Philosophy and Religion, Kasetsart University.
3:00 p.m.	<ul style="list-style-type: none"> Conclusion End of meeting

* This Program is subject to change without prior notice.

Coordinator: Ven. Phra Dammanan Pharisuddhachayo Tel: 064 4981942

Moderator & Data recorder: Ven. Nguyen Anh Tuan, Dr.

Focus Group Discussion (FGD):

Theravada View A Theory of Buddhism Integration for Sustainable Development of Wisdom and Virtue in the 21st Century

August 30th, 2023

Research team

at 2nd Floor, Buddhapañña Meeting Room,
Phra Buddhaghosacara Building,
International Buddhist Studies College (IBSC)
Mahachulalongkornrajavidyalaya University, Wang Noi, Ayutthaya

Group Discussion

Assoc. Prof. Dr. Saru Mahatthananul, Head of research

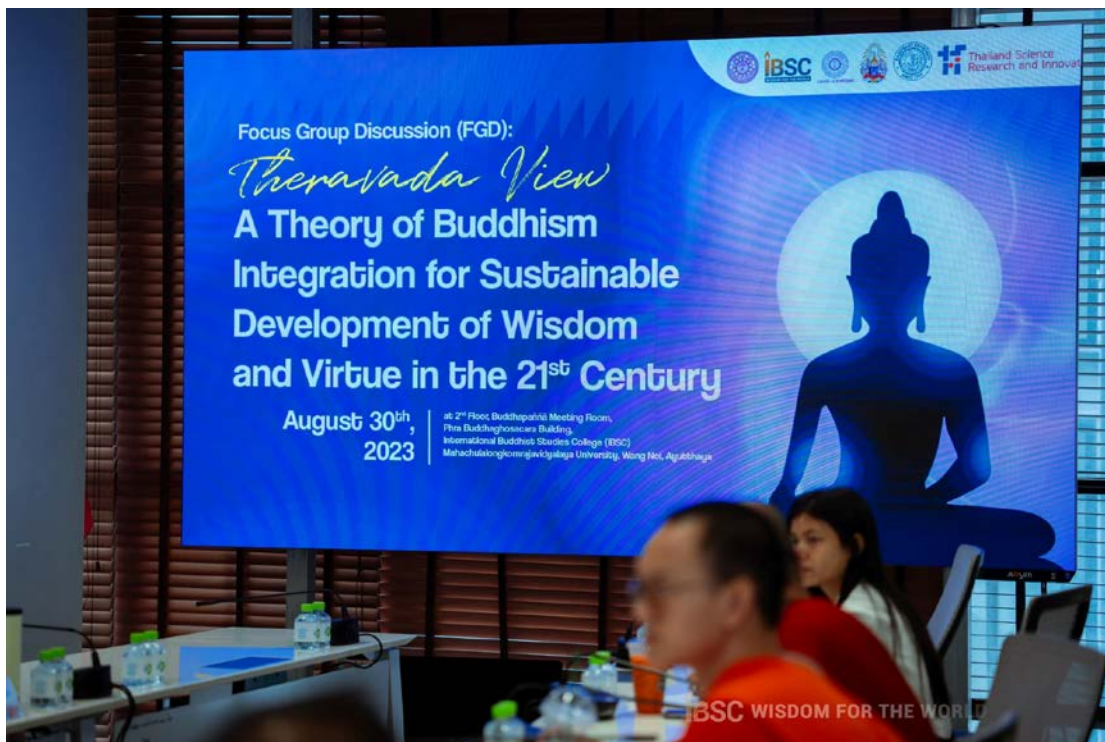
Assoc. Prof. Dr. Piyasara Wattanasri, Director of BA (Buddhist Studies) English Programme, Faculty of Buddhism, MCU

Assoc. Prof. Dr. Pinit Kongsong, Department of Philosophy and Religion, Kasetsart University

Assoc. Prof. Dr. Phra Mahavajirana, Assoc. Prof. Dr. Mahamakulabuddhachulalongkornrajavidyalaya University (MBU)

Assoc. Prof. Dr. Piyasara Wattanasri, Associate Professor, Vice Director of IBSC, MCU























Programme

Focus Group Discussion (FGD): Mahāyāna View

September 14th, 2023 from 1.00 p.m. via Zoom Application 7767776667
Password 2020

Research Title: A Theory of Buddhism Integration for Sustainable Development of Wisdom and Virtue in the 21st Century
FGD' Objective: To validate a theory of Buddhism integration for sustainable development of wisdom and virtue in the 21st century from Mahāyāna experts

Time	Activities
1:00 p.m.	<ul style="list-style-type: none"> • Group Photo
1:10-1:30 p.m.	<ul style="list-style-type: none"> • Introducing the FGD expert names • Presenting the research team and work by Ven. Ngyen Ang Tuan, Dr. (Co-researcher)
1:30-2:45 p.m.	<ul style="list-style-type: none"> • Group Discussion • Validation of (1) Methodology and (2) Theory by <ol style="list-style-type: none"> 1. Asst. Prof. Dr. Phamaha Anon Anando, IBSC Lecturer, MCU, Thailand; 2. Ven. Dr. Ven. Laidong, Executive Director of Guangdong Buddhist Association, Executive Dean of Guangzhou Kelin Academy, China; 3. Ven. Dr. Thich Phap Kham, Director of, Director of Hongkong Plum Village International Buddhist Meditation Center, Hong Kong.
3:00 p.m.	<ul style="list-style-type: none"> • Conclusion • End of meeting

* This Program is subject to change without prior notice.

Coordinator: Ven. Phra Dammanan Pharisuddhachayo Tel: 064 4981942

IBSC
Thailand Science Research and Innovation

Focus Group Discussion (FGD):
Mahayana View

**A Theory of Buddhism
Integration for Sustainable
Development of Wisdom
and Virtue in the 21st Century**

September 14th, 2023 Zoom Application
776 777 6667 Password 2020

Research team

Group Discussion

Ver. Dr. Thich Phap Kham
Director of Hoang Phat, Phat, International Buddhist Meditation Center, Hoang Phat

Ver. Dr. Ven. Laidong
Executive Director of Guangdong Buddhist Association,
Executive Dean of Guangzhou South Academy, China

Asst. Prof. Dr. Phameha Anon Anando
IBSC Lecturer, MCU, Thailand

Assoc. Prof. Dr. Sanu Mahachhansakul
Head of research

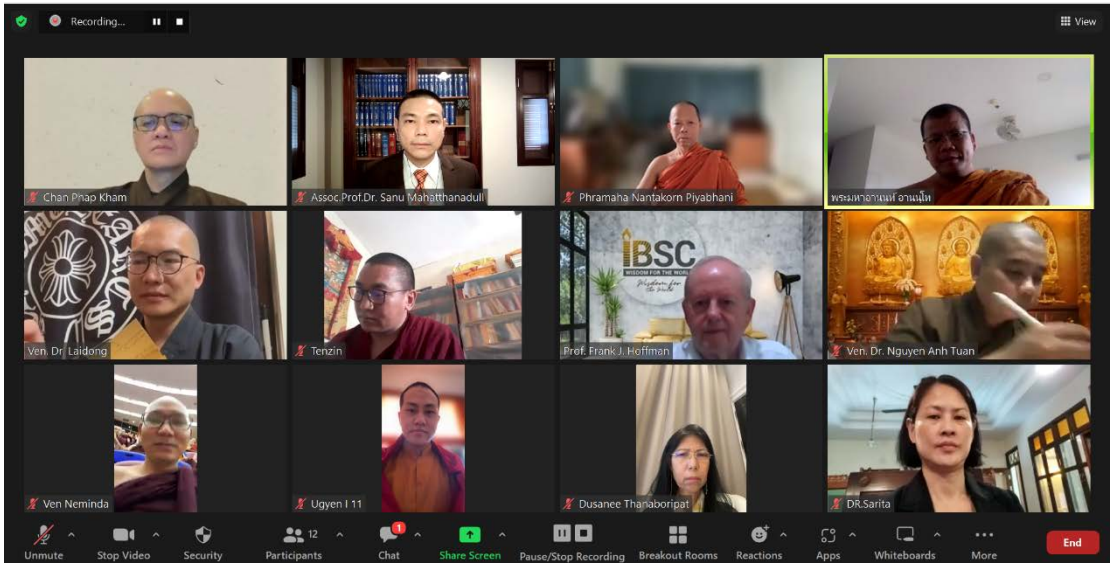
IBSC
Thailand Science Research and Innovation

Focus Group Discussion (FGD):
Mahayana View

**A Theory of Buddhism
Integration for Sustainable
Development of Wisdom
and Virtue in the 21st Century**

September 14th, 2023

Zoom Application
776776667 Password 2020



Focus Group Discussion (FGD):
Mahayana View

A Theory of Buddhism Integration for Sustainable Development of Wisdom and Virtue in the 21st Century

September 14th, 2023 Zoom Application 776 777 6667 Password 2020

Group Discussion

Ven. Dr. Thich Phap Kham
Director of Buddhist Law Dept.
International Buddhist Studies Center, Hanoi

Ven. Dr. Ven. Laidong
Executive Director of Guangxi Buddhist Association,
Executive Dean of Guangxi Kuli Academy, China

Asst. Prof. Dr. Phramaha Anon Arando
ESIC Lecturer, MCI, Thailand

Assoc. Prof. Dr. Saru Mahathirathakul
Faculty of Research

A THEORY OF BUDDHISM INTEGRATION FOR SUSTAINABLE DEVELOPMENT OF WISDOM AND VIRTUE IN THE 21ST CENTURY

4.2.3 Rule of Holistic Relational Integration (HRI)

Buddhism-Science Integration Triangular Pyramid

W = Wisdom
B = Behavior & Society
M = Mind
S = Sciences

The diagram is a triangular pyramid with vertices labeled W, B, and S. The edges are labeled with numbers: W-B (W1, W2, W3, W4, W5), B-S (B1, B2, B3, B4, B5), and S-W (S1, S2, S3, S4, S5). The center of the pyramid is labeled '31 - Holistic'.

Recording... View

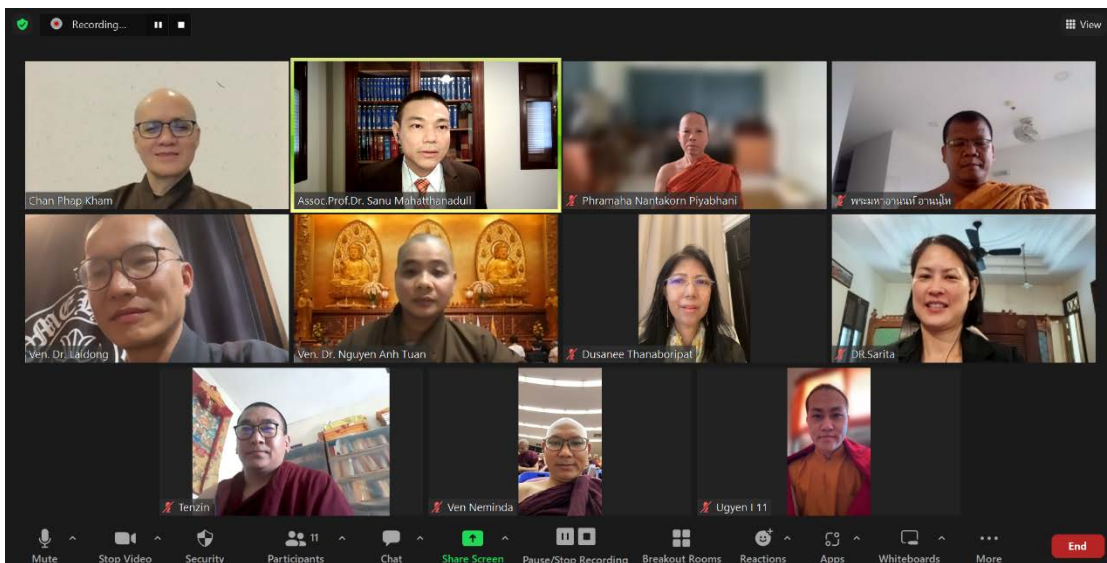
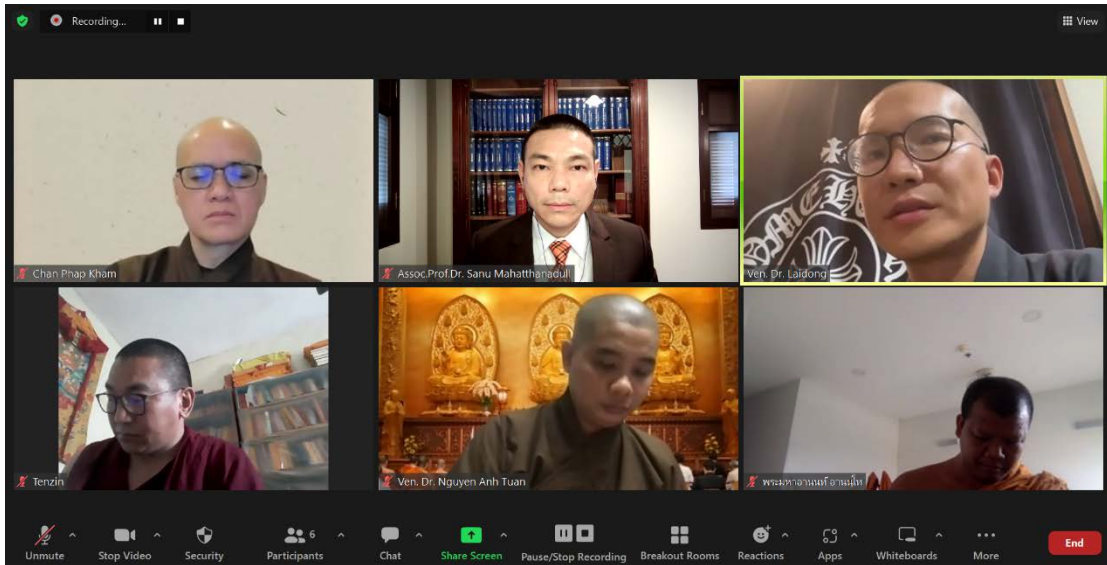
Chan Phap Kham, Assoc. Prof. Dr. Saru Mahathirathakul, Phramaha Nantakorn Piy...

Assoc. Prof. Dr. Saru Mahathirathakul, Ven. Dr. Laidong, Ven. Dr. Nguyen Anh Tuan

Dusaneel Thanabripat, DR Sarita, Tenzin

Ugyen I 11, Ven Neminda

Mute Stop Video Security Participants Chat Share Screen Pause/Stop Recording Breakout Rooms Reactions Apps Whiteboards More End





Programme

Focus Group Discussion (FGD): Vajrayāna View
September 20th, 2023 from 6.00 p.m. via Zoom Application 7767776667
Password 2020

Research Title: A Theory of Buddhism Integration for Sustainable Development of Wisdom and Virtue in the 21st Century
FGD' Objective: To validate a theory of Buddhism integration for sustainable development of wisdom and virtue in the 21st century from Vajrayāna experts

Time	Activities
1:00 p.m.	<ul style="list-style-type: none"> Group Photo
1:10-1:30 p.m.	<ul style="list-style-type: none"> Introducing the FGD expert names Presenting the research team and work by Ven. Ugyen Tshering, Dr. (Co-researcher)
1:30-2:45 p.m.	<ul style="list-style-type: none"> Group Discussion Validation of (1) Methodology and (2) Theory by <ol style="list-style-type: none"> Ven. Tulku Tenzin Gyurmey Rinpoche, President of TSF, TTS & DCH.; Junior English Translator of HH Dalai Lama; Ven. Geshe Lharampa Thabkhe Lodoe, Dr., Director of Sera Jey Modern Education; Ex-Director of Sera Jey Science Center; Ven. Geshe Ngawang Norbu, Director of, Ex-Director of Sera Jey Science Center; Ex-Director of Sera Jey Modern Education.
3:00 p.m.	<ul style="list-style-type: none"> Conclusion End of meeting

* This Program is subject to change without prior notice.

Coordinator: Ven. Phra Dammanan Pharisuddhachayo Tel: 064 4981942

Focus Group Discussion (FGD):

Vajrayana View
**A Theory of Buddhism
 Integration for Sustainable
 Development of Wisdom
 and Virtue in the 21st Century**

September 20th, 2023, Time 6.00 p.m.
 Zoom Application 776776667 Password 2020

Research team

Assoc. Prof. Dr. Sanu Mahatcheranadul,
 Head of research

Ven. Geshe Lharangpa Thabkhe Lodoe, Dr.
 Director of Sera Jey Modern Education
 Co-Director of Sera Jey Science Center

Ven. Geshe Ngawang Norbu,
 Director of Sera Jey Science Center
 Co-Director of Sera Jey Modern Education

Ven. Tashi Tenzin Chogyal Rinpoche,
 President of TSJ (TSJ-USA),
 Junior English Translator of His Dalai Lama

Focus Group Discussion (FGD):

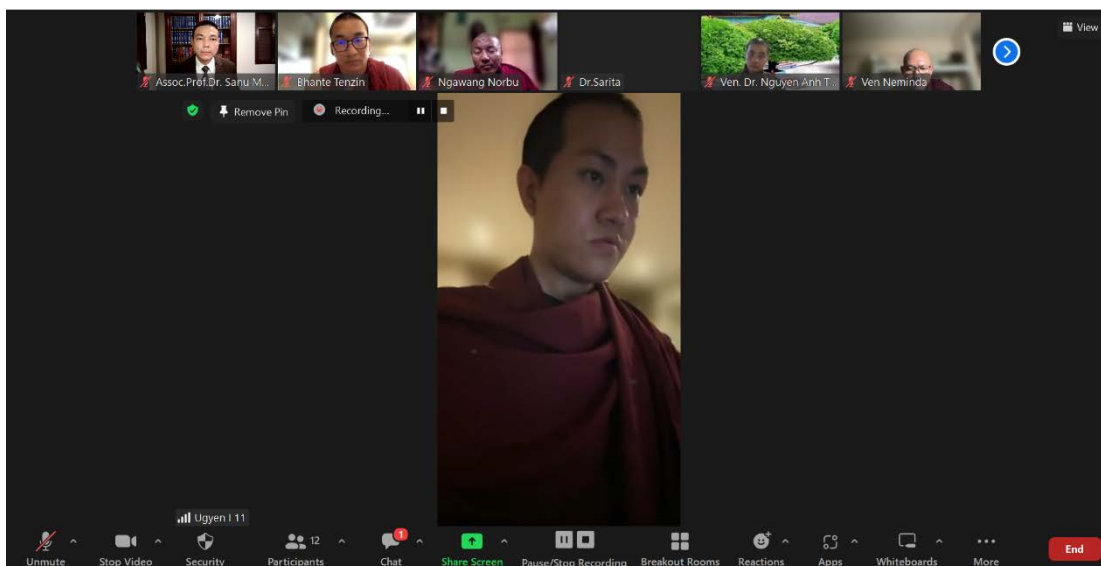
Vajrayana View
**A Theory of Buddhism
 Integration for Sustainable
 Development of Wisdom
 and Virtue in the 21st Century**

September 20th, 2023, Time 6.00 p.m.
 Zoom Application
 776776667 Password 2020











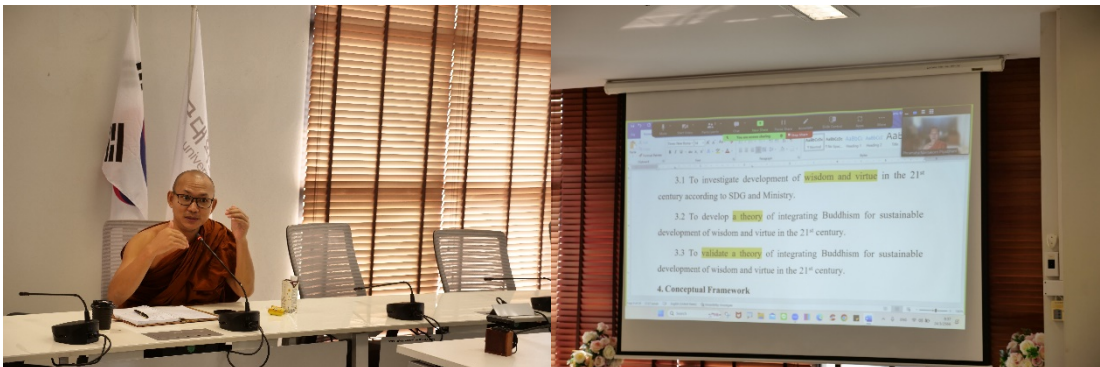
Research Action Plan

Action Plan		Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	1 st Meeting: Research team preparation										
2	2 nd Meeting: Assign tasks responsibility										
3	3 rd Meeting: Progressive Report No.1										
4	4 th Meeting: Progressive Report No.2										
5	Content Validity Index (CVI) Exam										
6	In-depth Interviewing with the key-informants										
7	5 th Meeting: Submission of the assigned tasks										
8	Focus Group Discussions (FGDs)										
9	6 th Meeting: Consideration of the Draft version										
10	Submission of the research report's final version to BRI										
11	Submission of the Articles: (SCOPUS Journals)										
12	Article Publications: (SCOPUS Journals)										

Responsible Tasks for the Research Team Members & the Research Assistants

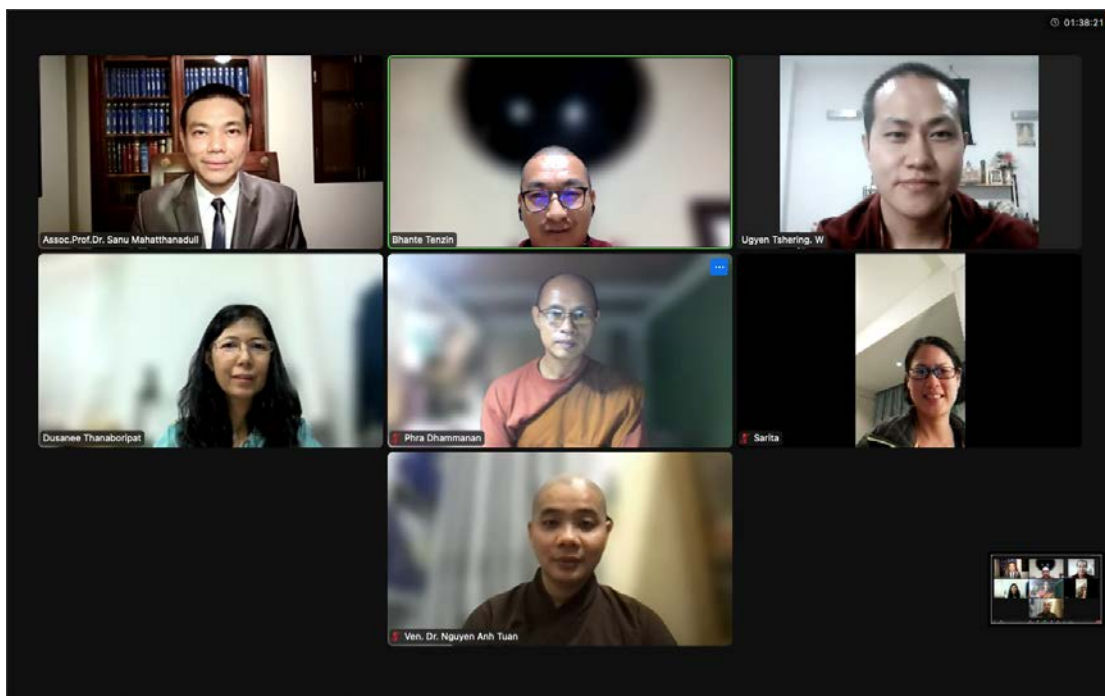
Chapter/ Task	Topic	(1) Dr. Sanu	(2) Dr. Nantakorn	(3) Dr. Neminda	(4) Dr. Tuan	(5) Dr. Ugyen	(6) Dr. Dusanee	(7) Dr. Sarita	(8) Ven. Tenzin	(9) Ven. Dhammanon
Chapter 1	Introduction									
Chapter 2	Review of Literature & Research Works									
2.1	Concept of SDGs and the Development of Wisdom and Virtue									
2.2	The Concept of the 21 st Century									
2.3	The Concept of Wisdom and Virtue in Theravāda Buddhism									
2.4	The Concept of Wisdom and Virtue in Mahāyāna Buddhism									
2.5	The Concept of Wisdom and Virtue in Vajrayāna Buddhism									
2.6	Theories of Sciences and Integration									
2.7.1	Related Research Works from Theravāda Sect									
2.7.2	Related Research Works from Mahāyāna Sect									
2.7.3	Related Research Works from Vajrayāna Sect									
2.7.4	Related Research Works from the Three Sects									
Chapter 3	Research Methodology									
Chapter 4	Research Findings									
4.1.1	Dev. of Wisdom and Virtue in the 21 st Century: Theravāda View									
4.1.2	Dev. of Wisdom and Virtue in the 21 st Century: Mahāyāna View									
4.1.3	Dev. of Wisdom and Virtue in the 21 st Century: Vajrayāna View									
4.2	A Theory of Buddhism Integration									
4.3	Validating a Theory of Buddhism Integration									
4.4	Concluding Remarks									
Chapter 5	Conclusion, Discussion, and Suggestion									
Others	In-depth interviews (Google Form/interview/docs preparation)									
	3 School-FGDs (Zoom Meeting/docs preparation)									
	Formatting & Finalizing the research work									
	Theravāda Article Writing									
	Mahāyāna Article Writing									
	Vajrayāna Article Writing									
	Research Article Writing									
	Publication in SCOPUS Journals (4 articles)									

1st Meeting, March 24, 2023

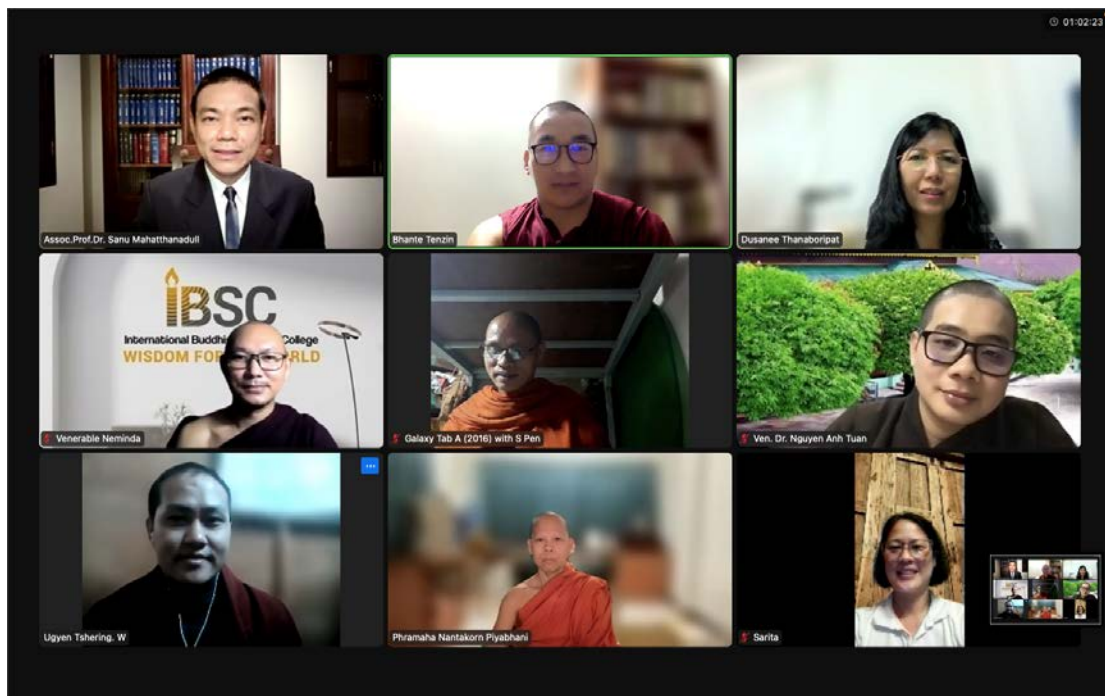




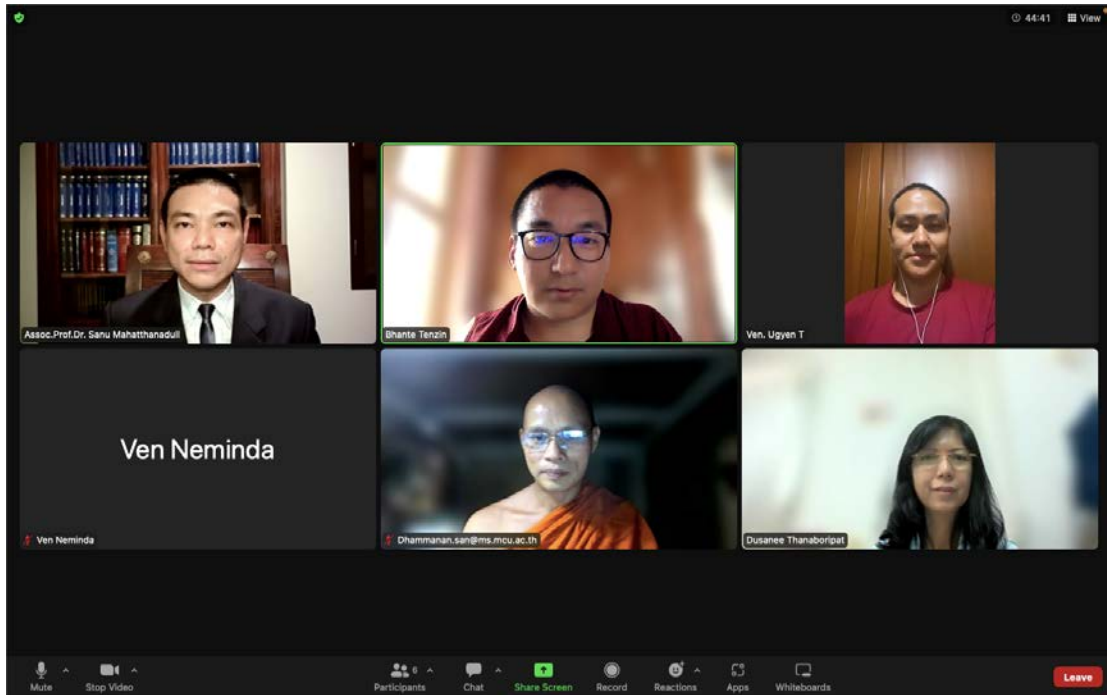
2nd Meeting, April 19, 2023



3rd Meeting, May 10, 2023



4th Meeting, June 14, 2023



5th Meeting, July 12, 2023 / 6th Meeting, August 9, 2023



Biography of the Researchers



1. Researcher's Curriculum Vitae (Head of the Project)

- 1.1 Name-Surname** Assoc. Prof. Dr. Sanu Mahatthanadull
- 1.2 Nationality** Thai
- 1.3 Present Position** Program Director of Ph.D. in Buddhist Studies
(International Program)
- 1.4 Institute** International Buddhist Studies College,
Mahachulalongkornrajavidyalaya University.
79 Mu 1 Lamsai Sub-District Wang Noi
District Phranakorn Si Ayutthaya Province
13170
Tel. 035-24800-5 X 8505, 8502
Mobile Phone 081-407-9000
E-mail: petchsanu@hotmail.com
Website: ibsc.mcu.ac.th

1.5 Educational Background

- Ph.D. (Buddhist Studies), MCU, 2013
M.A. (Buddhist Studies), MCU, 2010
B.A. (Advertisement), Bangkok University,
1995

- 1.6 Areas of Expertise**
- Theravāda Buddhism
 - Abhidhamma study
 - Pāli language
 - Pāli translation
 - Buddhist integration
 - Buddhist biology
 - Multidisciplinary study

1.7 Experiences Related to the Research

1.7.1 Head of the Research Project

- 1) “Buddhist Biology: Life-Supporting Factors According to the Seven Suitable (*Sappāya*)” (Thai Edition). Research funded by the National Research Council of Thailand (NRCT), 2014.
- 2) “The Five Precepts: Criterion and Promotion of Individual and Social Peace” (Thai Edition). Research funded by Thai Health Promotion Foundation, 2015.
- 3) “A Study of the Holistic Well-beings Promotion for Balanced Way of Life according to Buddhist Psychology”. Research funded by the National Research Council of Thailand (NRCT), 2016.
- 4) “Human Behaviors in Promoting Balance of Family according to Buddhist Psychology”. Research funded by the National Research Council of Thailand (NRCT), 2017.
- 5) “A Conceptual Model of Bi-dimensional Development for Happiness Access by Biofeedback Process”, Research funded by the National Research Council of Thailand (NRCT), 2017.

1.7.2 Co-researcher

- 1) “Strengthening the Emotional Strength of Professional Nurses: Principle and Buddhist Ideal, 2016.
- 2) “The Integrated Buddhist Psychology: The Model and Process for Promotion Holistic Health of Families and Society”, A Research Fund of National Research Council of Thailand (NRCT), 2016.
- 3) “Development of Plasma Generator Improving Titanium Alloys Surface for Biomedical Applications”, Research Report, (BRI: MCU), 2018.
- 4) “Mindfulness: The Development of Mindfulness-Based-Learning Model in the 21st Century”, A Research Fund of National Research Council of Thailand (NRCT), 2021.

1.8 Address

N/A



2. Researcher's Curriculum Vitae (Co-researcher)

2.1 Name-Surname Venerable Phramaha Nantakorn Piyabhani (Ket-in), Asst. Prof. Dr.

2.2 Nationality Thai

2.3 Present Position Director of Master of Arts Program in Buddhist Studies (International Program)

2.4 Institute International Buddhist Studies College,
Mahachulalongkornrajavidyalaya University
79 Mu 1 Lamsai Sub-District Wang Noi District
Phranakorn Si Ayutthaya Province 13170
Tel. 035-24800-5 X 8505, 8502
Mobile Phone 085-916-2045
E-mail: la_ket_in09@hotmail.com
Website: ibsc.mcu.ac.th

2.5 Educational Background

Ph.D. (Buddhist Studies), University of Delhi, India, 2010

M.A. (Buddhist Studies), University of Delhi, India, 2005

B.A. (English), MCU, 2002

2.6 Areas of Expertise

- Pali Language Studies
- Theravada Buddhist Studies
- Abhidhamma Studies

2.7 Experiences Related to the Research

2.7.1 Head of the Research Project

- 1) “The Creating and Developing Buddhist Happiness Indicators according to the Buddha’s Principle of Teaching”, Research funded by the National Research Council of Thailand (NRCT), 2015.
- 2) “An Analytical Study of the Factors Causing Sexual Deviation as Depicted in Buddhist Scriptures”, Research funded by the National Research Council of Thailand (NRCT), 2017.
- 3) “Buddhism-based Moral Solution to Commercial Surrogacy Issue in Thai Society”, Research funded by the National Research Council of Thailand (NRCT), 2018.
- 4) “Suicide: Buddhism-based Moral Solution to Suicide Issues in Thai Society”, Research funded by the National Research Council of Thailand (NRCT), 2020.
- 5) “The Development of Systematic Thinking Based on a Buddhist Approach in the 21st Century”, Research funded by Science Research and Innovation Fund, 2021.

2.7.2 Co-researcher

- 1) “An Analysis of Policies and Strategies of Buddhism and Cultural Tourism in ASEAN Community”, Research funded by the National Research Council of Thailand (NRCT), 2016.
- 2) “A Conceptual Model of Bi-dimensional Development for Happiness Access by Biofeedback Process”, Research funded by the

National Research Council of Thailand
(NRCT), 2017.

2.8 Address

Wat Sangvejvisayaram, Watsamphraya Sub-
district, Phranakorn District, Bangkok, Thailand
10200.



3. Researcher's Curriculum Vitae (Co-researcher)

- 3.1 Name-Surname** Ven. Neminda, Dr.
- 3.2 Nationality** Myanmar
- 3.3 Present Position** Lecturer
- 3.4 Institute** International Buddhist Studies College,
Mahachulalongkornrajavidyalaya University
79 Mu 1 Lamsai Sub-District Wang Noi District
Phranakorn Si Ayutthaya Province 13170
Tel. 035-24800-5 X 8505, 8502
Mobile Phone 063-341-9403
E-mail: neminda@ibsc.mcu.ac.th
Website: ibsc.mcu.ac.th

3.5 Educational Background

- Ph.D. (Buddhist Studies), IBSC, MCU, 2019
M.A. (Buddhist Studies), University of
Kelaniya, Sri Lanka, 2015
B.A. (Myanmar Scripture), Mandalay
University, 2006

- 3.6 Areas of Expertise**
- Mindfulness Meditation and Therapy
 - Pāli language
 - Theravāda Tipiṭaka Studies
 - Inter-Religious Dialogues Studies
 - Multiculturalism

3.7 Experiences Related to the Research

3.7.1 Researcher

- 1) “A Buddhist Approach Based on Loving-Kindness: The Solution of the Conflict in Modern World”, 2019.
- 2) “A Study of Economic Ethics for a Ruler” 2015.

3.7.2 Co-researcher

“Developing Mind by Using Mindfulness as a Base in the 21st Century”, Research Project Funded, Science Research, and Innovation Fund, IBSC, MCU, Thailand, 2564.

3.7.3 Articles

“Buddhist Meditation Chaplaincy: Spiritual Care for Death”, Journal of the International Buddhist Studies College (JIBSC), MCU, Vol.1. No.2, December 2015.

“The Role of Buddhism in Digital Era: How to improve Lack of Spiritual progress and to Maintain Human Etiquette in Myanmar”, MCU, Thailand, 2017.

“Buddhist Approach to Human Society Development: Economic Ethics for a Ruler”, JIBSC, vol. 5., No.1, January-June, IBSC, MCU, Thailand, 2019.

“Conflict Management by Buddhist Peaceful Means of Loving-kindness (Metta)”, JIABU, Vol. 12, No. 1, MCU, Thailand, 2019.

“Ethics for Mindfulness Meditation: Theory and Practice”, 2nd International Academic Forum in Theravada and Mahayana Buddhism, IBSC, MCU, Thailand, 2019.

“Buddhist Meditation: Theory and Practice of Mindfulness Meditation in Abhidhamma Pitaka”, Globality and Locality, August, IBSC, MCU, 2022.

“Buddhist Approach to Meditation Therapy of Life Recovery and Resilience: Case Study of Meditation Therapy in Myanmar”, The 20th National and 4th International Symposium, MBU, Thailand, 2022.

3.8 Address

Dormitory A, International Buddhist Studies College, Mahachulalongkornrajavidyalaya University, 79 Group, Lam Sai, Wang Noi, Phra Nakhon Si Ayutthaya, 13170, Thailand.



4. Researcher's Curriculum Vitae (Co-researcher)

4.1 Name-Surname Nguyen Anh Tuan, Dr.

4.2 Nationality Vietnamese

4.3 Present Position Director of Bachelor of Arts program in Buddhist Studies (international program), International Buddhist Studies College (IBSC), Mahachulalongkornrajavidyalaya University.

4.4 Institute International Buddhist Studies College (IBSC), Mahachulalongkornrajavidyalaya University (MCU), 79 Moo 1, Ban Lam Sai, Wangnoi, Phranakorn Si Ayutthaya province, Thailand.

4.5 Educational Background

Ph.D. (Buddhist Studies), IBSC, MCU, 2022

M.A (Buddhist Studies), IBSC, MCU, 2018

B.A (Mahayana Studies), Mahapanya Vidyalai College, MCU, 2015

4.6 Areas of Expertise - Mindfulness and Mahayana Meditation

- Chinese language

- Mahayana Tipitaka Studies

- Buddhist Arts, History

4.7 Experiences Related to the Research

4.7.1 Research:

1) **“Guideline for Educational Business to Customer's Need in Digital Economic”**, A research funded by International Buddhist

Studies College,
Mahachulalongkornrajavidyalaya University,
2022. (Thai version).

2) **“Establishing a Model of the Harmony of Religious Diversity in 21st Century”**, Research Project Funded by Thailand Science Research and Innovation Fund, 2023.

4.7.2 Thesis, and Dissertation

1) A Comparative Study of The Buddhist Saṅgha Administrative System Between Thailand and Vietnam in The Modern Time, **Master of Arts Thesis (Buddhist Studies)**, International Buddhist Studies College: Mahachulalongkornrajavidyalaya University, 2018.

2) A Buddhist Approach of Socially Engaged Buddhism for an Establishment of The Five – Precepts Society in Thailand, **Doctor of Philosophy Dissertation (Buddhist Studies)**, International Buddhist Studies College: Mahachulalongkornrajavidyalaya University, 2021.

4.7.3 Research Articles

“Establishing a Model of the Harmony of Religious Diversity in 21st Century”, Research Project Funded by Thailand Science Research and Innovation Fund. London: International Journal of Religion, 2024.

4.7.4 Academic Articles

1) “A Comparison on the Structures of Buddhist Sangha Administrative System Between Thailand and Vietnam”. **Journal of the International Association of Buddhist Universities (JIABU)**, Buddhist Contribution to

Human Development, Vol. 11 No. 3, JIABU Special Edition on the United Nations Day of Vesak Conference 2561/2018. Bangkok: Mahachulalongkornrajavidyalaya University Press, May 2018: 65-83., 2018.

2) “A Buddhist Approach of Socially Engaged Buddhism for a Skillful Communication”, **the Journal of the International Buddhist Studies** (JIBS), Vol. 12, No. 2 (December 1, 2021): 64-75., 2021.

3) “**Five Mindfulness Trainings: A Socially Engaged Buddhism Approach to Solving Social Problems**”, proceeding Document. International Conference on Globality and Locality: Mind and Mindfulness Practice, International Buddhist Studies College (Thailand) and Dongguk University (Korea). August 25th, 2022. Seoul: National Research Foundation of Korea, 2022: 197-214.

4.8 Address

International Buddhist Studies College (IBSC), Mahachulalongkornrajavidyalaya University (MCU), 79 Moo 1, Ban Lam Sai, Wangnoi, Phranakorn Si Ayutthaya province, Thailand.
E-mail: nguyenanhtuan@ibsc.mcu.ac.th
Facebook: Thích Thông Đạo
Tel: +87 772901993 (Viet Nam)
+66614548554 (Thailand)



5. Researcher's Curriculum Vitae (Co-researcher)

5.1 Name-Surname Ugyen Tshering, Dr.

5.2 Nationality Bhutanese

5.3 Present Position Lecturer

5.4 Institute: International Buddhist Studies College,
Mahachulalongkornrajavidyalaya University
79 Mu 1 Lamsai Sub-District Wang Noi District
Phranakorn Si Ayutthaya Province 13170

5.5 Educational Background:

Ph.D. (Buddhist Studies), MCU

M.A. (Buddhist Philosophy), Tango Buddhist University

M.A. (Buddhist Studies), MCU

B.A. (Buddhist Philosophy), Tango Buddhist University

5.6 Areas of Expertise: Theravāda Studies

Mahāyāna Studies

Vajrayana Buddhism Studies

5.7 Experiences Related to the Research:

A Concept of Reincarnation (*Punarjanman*) in Tibetan Buddhism, A Philosophical Study of Mādhyamaka (Middle Way), the Concept of Mental Healing Process in the Buddha's Teaching, and the Findings of Gross National

Happiness inclusive of Worldly Happiness and
Mystical Happiness.

5.8 Address:

MCU international dorm B, Lam sai, Wang
Noi, Phranakorn Si Ayutthaya.



6. Researcher's Curriculum Vitae (Co-researcher)

- 6.1 Name-Surname** Assoc.Prof.Dr. Dusanee Thanaboripat
- 6.2 Nationality** Thai
- 6.3 Present Position** Editor-in-Chief, Current Applied Science and Technology journal
- 6.4 Institute** King Mongkut's Institute of Technology
Ladkrabang 1 Soi Chalongsung 1, Ladkrabang
District, Bangkok 10520
Tel. 02-3298107
Mobile Phone 081-816-3202
E-mail: dusanee.th@kmitl.ac.th
Website: <https://www.kmitl.ac.th/>
- 6.5 Educational Background**
- Ph.D. (Buddhist Studies) MCU, 2020
Ph.D. (Applied Microbiology) University of
Strathclyde, Scotland, UK, 1983
B.Sc. (Biology) Kasetsart University, 1978
- 6.6 Areas of Expertise**
- Area of Buddhism and Sciences
 - Biology
 - Microbiology

6.7 Experiences Related to the Research

6.7.1 Research

1) An analysis of animal biotechnology based on the Buddhist law of action (*Kamma*)

6.7.2 Article

1) Thanaboripat, D. and Mahatthanadull, S. 2020. Transgenic animals and Buddhist law of action (kamma). *JIBSC* 6(2), 21-31.

2) Mahatthanadull, S. and Thanaboripat, D. 2021. Animal biotechnology and ethical issues. *Current Applied Science and Technology* 21(2), 405-415.

6.8 Address

53/58 Chalermprakiat Road Soi 17,
Nongbon, Prawet, Bangkok 10250



7. Researcher's Curriculum Vitae (Co-researcher)

7.1 Name-Surname Dr. Sarita Mahatthanadull

7.2 Nationality Thai

7.3 Present Position Independent researcher

Mobile Phone 089-667-8048

E-mail: sari_tarn@hotmail.com

7.4 Institute 999 Moo 1, Nong Prue, Bang Phli District,
Samut Prakan 10540, Thailand.

7.5 Educational Background

Ph.D. (Buddhist Studies), IBSC, MCU, 2561

MS. (Organizational Communication) Murray
State University, KY., U.S.A, 2546

B.Econ. Thammasat University, 2542

7.6 Areas of Expertise - Economics

- Family Studies

- Theravāda Buddhism

7.7 Experiences Related to the Research

1) Co-researcher of the project “The Five Precepts: Criterion and Promotion of Individual and Social Peace” (Thai Edition). Research funded by Thai Health Promotion Foundation, 2015.

2) Co-researcher of project “A Study of the Holistic Well-beings Promotion for Balanced Way of Life according to Buddhist Psychology”. Research funded by the National Research Council of Thailand (NRCT), 2016.

3) Co-researcher of project “Human Behaviors in Promoting Balance of Family according to Buddhist Psychology”, Research funded by the National Research Council of Thailand (NRCT), 2017.

4) Co-researcher of the project “A Conceptual Model of Bi-dimensional Development for Happiness Access by Biofeedback Process”, Research funded by the National Research Council of Thailand (NRCT) fiscal year C.E.2017”, Research funded by the National Research Council of Thailand (NRCT), 2018.

7.8 Address

Thai Airways-Operations Center (OPC) at Suvarnabhumi Airport



8. Researcher's Curriculum Vitae (Research Assistant)

- 8.1 Name-Surname** Ven. Tenzin Dorjee
- 8.2 Nationality** Indian (Tibetan)
- 8.3 Present Position** PhD researcher, Visiting Lecturer at MCU.
- 8.4 Institute** International Buddhist Studies College,
Mahachulalongkornrajavidyalaya University. 79
Mu 1 Lamsai Sub-District Wang Noi District
Phranakorn Si Ayutthaya Province 13170
Mobile Phone 0618738945
tenzindorjee@ibsc.mcu.ac.th
- 8.5 Educational Background**
- Ph.D. (Researcher)
M.A. (Buddhist Studies) MCU
B.A (Buddhist Philosophy) Sera Jey Monastic
University
- 8.6 Areas of Expertise** -Mahayana Buddhism
-Tibetan (Vajrayana) Buddhism
-Advance in Four Buddhist Tenets (Vaibhāsika,
Sautrankika, Cittamātra, and Mādhyamika)
- 8.7 Address** Sera Jey Monastery, Karnataka state, Mysore,
India.



9. Researcher's Curriculum Vitae (Research Assistant)

- 9.1 Name-Surname** Ven. Phra Dhammanan Parisuddhajayo
- 9.2 Nationality** Thai
- 9.3 Present Position** Ph.D. Candidate of IBSC
- 9.4 Institute** International Buddhist Studies College,
Mahachulalongkornrajavidyalaya University. 79
Mu 1 Lamsai Sub-District Wang Noi District
Phranakorn Si Ayutthaya Province 13170
Mobile Phone 0644981942
thammaenjoy@gmail.com
- 9.5 Educational Background**
M.A. (Buddhist Studies), IBSC, 2022
B.A. (Buddhist Studies), Faculty of Buddhism,
2019
- 9.6 Areas of Expertise** - Meditation
- Computer
- 9.7 Address** Domitory old A, 79 Moo.1 MCU wang noi,
Lamsai, Wang Noi, Ayutthaya, 13170.



10. Researcher's Curriculum Vitae (Project Adviser)

10.1 Name-Surname Most Ven. Phra Brahmawatcharatheeracharn,
Prof. Dr.

10.2 Nationality Thai

10.3 Present Position Rector of Mahachulalongkornrajavidyalaya
University

10.4 Institute Office of the Rector,
Mahachulalongkornrajavidyalaya University.
79 Mu 1 Lamsai Sub-District Wang Noi
District, Phranakorn Si Ayutthaya Province
13170

Tel. 035-24800-5 X 8034

Mobile Phone 081-899-4107

E-mail: pmsomjin@gmail.com

Website: ibsc.mcu.ac.th

10.5 Educational Background

Ph.D. (Pālī & Buddhist Studies) BHU, India.

M.A. (Buddhist Studies), MCU.

B.A. Sukhothai Thammathirat University.

Pālī Study Grade IX

10.6 Address Wat Pak Nam, Pak Klong sub-district,
Bhasicharoen district, Bkk, Thailand 10160.
