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Preface

General Editor's Note

IT IS A REAL JOY to see in print this special volume presenting ideas and insights of classical Buddhist thought on the important topic of the mind and its potential for transformation. This is the second volume in *Science and Philosophy in Indian Buddhist Classics*, a unique series conceived by and developed under the supervision of His Holiness the Dalai Lama. While the first volume looked at the physical world, this volume investigates the science of the mind. Volumes 3 and 4 in the series, currently being prepared, present the philosophical insights of great Indian Buddhist thinkers.

An important premise behind the series, as His Holiness the Dalai Lama outlines in his own lengthy introduction, is the differentiation of the subject matter of Buddhist texts into the three domains of science, philosophy, and religion. He believes that while the last domain is relevant primarily to practicing Buddhists, the first two — science and philosophy as found in the classical Buddhist sources — can and should be recognized as part of global scientific and philosophical heritage. I urge the reader thus to engage first with the lengthy introduction in which His Holiness outlines in detail his vision, thought, and aspirations behind the creation of the four-volume series, and this volume on Buddhist mind sciences in particular. The opening and closing of his introduction match that of volume 1, with material unique to this volume in between.

One hallmark of ancient Indian systems of thought is their careful inquiry into the nature, function, and trainability of the human mind, with the Buddhist tradition especially excelling in this domain. Beginning with the Buddha himself, going back more than two and half millennia, the Buddhist tradition has emphasized critical inquiry

into one's own mind as an indispensable path to self-mastery, spiritual transformation, and enlightenment. A famous statement attributed to the Buddha tells us that the mind is the forerunner of everything and that the person who has mastered the mind has found true peace. More systematic "scientific" and philosophical approaches emerged in Buddhist tradition a few centuries following the Buddha's death, just before the dawn of the Common Era. Scholars refer to this phase as the Abhidharma period, when, not unlike the story behind the creation of the Oxford English Dictionary, the large corpus of teachings attributed to the Buddha were compiled according to diverse systems of classification. A landmark in this Abhidharma period was the creation of the exhaustive anthology known as the *Great Explanation* (*Mahāvibhāṣa*), dated to the first or second century CE. We see in this compendium one of the first known systematic presentations of what might be called a map of the human mind. At the heart of this mind map is a distinction between the *mind* and *mental factors*, the first referring to the basic fact of awareness and the latter referring to aspects or dimensions of our mental life, defined in terms of their distinct functions. Our volume represents the broadest resource in English on this important dimension of classical Buddhist mind sciences.

Roughly speaking, our volume presents in a distilled manner four distinct aspects of classical Buddhist thought related to the discipline of mind science. First and foremost is this Abhidharma analysis of mental factors — their classifications, definitions, functions, and proximate conditions. Part 2 of our volume, the longest section, is a comprehensive presentation of these mental factors, based primarily on Asaṅga's *Compendium of Knowledge*, but including also critical comparisons with other important Abhidharma sources, such as the Theravāda Abhidhamma. This lengthy section of the volume is of special importance to contemporary psychology and neuroscience, as well as those interested in understanding the larger context of Buddhist-derived completive practices like mindfulness and compassion training. The second dimension of Buddhist mind science presented in our volume relates to what scholars refer to as Buddhist epistemology (*pramāṇa*), especially as developed by Dignāga (fifth–sixth century) and Dharmakīrti (sixth century). Parts 1, 4, and 5 of our volume presents theories and insights from this classical resource in

terms of three key themes of (1) the nature and definition of the mind, including especially a distinction between perceptual and conceptual minds, (2) the mind and its object, including a typology of cognition based on understanding the manner in which the mind engages its objects, and (3) systems of reasoning that can lead to correct inference about both the world and our own mind. The third dimension of Buddhist mind sciences, presented in part 3 of our volume, pertains to the unique perspective of Buddhist tantra, which views the mind and body as ultimately nondual, and to the meditation techniques based on such a view. The fourth and final aspect of Buddhist mind sciences presented in our volume, in part 6, are the theories and methods of mental training, including especially the cultivation of calm abiding (*śamatha*) and insight (*vipaśyanā*) as well as cultivation of loving kindness and compassion.

Readers of our volume are fortunate to have in John Dunne's excellent essays preceding each of the six parts of the book insightful and highly accessible guides to the key themes, questions, and insights specific to each of the sections. Drawing on his expertise both in classical Indo-Tibetan Buddhist thought and contemporary Western thought, especially cognitive science and the philosophy of mind, these essays bring to life the key issues specific to the individual sections. They provide the larger context to the topics and valuable signposts for contemporary readers so that they can ably navigate the vast terrain covered in this volume. Crucially they provide what might be characterized as "conceptual translation" across cultures, which in addition to bringing awareness to language (the use of the word *mind* in plural form, for example) entails relating classical Buddhist concepts to their parallels in contemporary science and philosophy.

Personally, it has been a profound honor to be part of this important project. First and foremost, I would like to offer my deepest gratitude to His Holiness the Dalai Lama for his vision and leadership of this most valuable initiative of bringing the insights of great Buddhist minds to our contemporary world. In both his life and thought, His Holiness has been *the* exemplar for the depth and breadth embodied in the great Buddhist tradition.

I thank the Tibetan editors who worked diligently over many years to create this compilation, especially for their patience with the substantive editorial changes I ended up bringing to the various stages

of their manuscripts. I would like to applaud and thank Dechen Rochard for taking on the challenging task of translating the entirety of this volume. Her mastery of Tibetan, expertise of the subject matter, and Western academic scholarship made her an ideal translator for this important volume. I owe a deep bow of gratitude to John Dunne for working with Dechen to refine the translation and, of course, for writing such masterful essays to introduce each of the sections. I would also like to thank our editor at Wisdom Publications, David Kittelstrom, and his colleague Mary Petrusewicz for their careful preparation of the English translation for publication.

Finally, I offer my deep gratitude to the Ing Foundation for its generous patronage of the Institute of Tibetan Classics and to the Scully Peretsman Foundation for its support of my own work, which made it possible for me to devote the time necessary to edit both the original Tibetan volume as well as this translation.

Through the publication of this volume on the Buddhist mind sciences, may the insights and wisdom of the great Buddhist masters become accessible and a source of benefit to contemporary readers across the boundaries of geography, language, and culture.

Thupten Jinpa

Translators' Note

This volume offers a concise presentation of Buddhist teachings about the mind and cognition as explained in the classical Indian commentaries composed between 200 and 1200 CE. It mainly cites treatises on Abhidharma and on logic and epistemology (*pramāṇa*), as well as contemplative manuals such as Śāntideva's *Engaging in the Bodhisattva's Deeds*, composed by masters whose breadth and depth of study is epitomized by the tradition of Nālandā University and similar monastic institutions of classical Indian civilization. This volume is the second in a series designed to express the core teachings of these Nālandā masters. It contains treasures that may initially be hard to decipher. However, with research and reflection, one can unlock them and use them as medicine for one's mind and life. It is His Holiness the Dalai Lama's heartfelt wish that these treasures may be shared with the world.

Translating this work has presented a number of challenges. First, the material is highly technical, as the quoted texts were not written for the average reader, yet this volume was compiled with the expectation of reaching a broader audience, including educated Tibetans and non-Tibetans in general as well as physicists, cognitive scientists, psychologists, philosophers, and Buddhist scholars in particular. The *geshes* who composed this text are highly trained Tibetan monks who have spent decades mastering the scriptural sources. They have expertly authored the passages linking the quotations and arranged the order of the topics in accordance with their training and without the influence of Western scholarship. This has yielded two outcomes. First, most importantly, this volume is an authentic presentation of a mainstream Tibetan interpretation of the classical Indian sources that it cites, and it covers a vast range of topics in a single work. Second, it has been written in the compressed style of scholastic Tibetan, and as a result, it contains various stylistic features that may be challenging for some audiences, such as a tendency to deploy lists of phenomena sourced from scripture in ways that may seem repetitive and to assume a preexisting knowledge of basic Buddhist doctrine. A translation of such a volume cannot avoid including these repetitions and other stylistic features, and while the translation can help readers by, for example, avoiding obscure renderings of key terms, this translation cannot simply reshape this material to mirror Western scholarship. However, Western scholars can welcome the fact that this volume offers an utterly reliable foundation from which to build bridges between the topics discussed here and their corollaries in modern cognitive science and other disciplines.

Another challenge for the translators is that this volume contains many previously untranslated passages from terse and complex Sanskrit texts, notably from the works of Dharmakīrti. To render them accurately one must know their context, which means familiarizing oneself with each of the cited texts as a whole and reading the relevant commentaries. When Sanskrit editions of texts were available, we consulted those and collated them against the Tibetan canonical versions of the same texts cited by the authors. Apart from commentaries available in both languages, we also consulted relevant subcommentaries extant in Sanskrit but not translated into Tibetan.

All of this research has generally been very helpful for clarifying the meaning of the cited passages, since the Sanskrit versions of the cited texts almost always exhibit less ambiguity in meaning owing to the greater grammatical specificity of the Sanskrit language.

A further challenge concerns the interaction of intellectual traditions. In this volume we have broadly three systems of knowledge to consider: classical Indian, medieval Tibetan, and modern Western. Sanskrit is a remarkably rich language, and a single term can have as many as a dozen different meanings. Hence, when translating from Sanskrit to Tibetan several hundred years ago, Tibetan masters and their Indian collaborators had to make choices that necessarily precluded some readings of the Sanskrit original. A further difficulty occurs nowadays when translating into English. This volume treats numerous topics that have also received considerable attention within the Western intellectual and scientific disciplines. These disciplines each have their own specialized lexicons, and to enhance the accessibility of this translation for scholars within those disciplines, a broad knowledge of their disciplinary terminology was necessary to select suitable terms to convey the meaning of the Buddhist sources. This is a very difficult job. Some terms may seem suitable at first glance, but one may find after exploring them more deeply that they mean something quite different from what is being conveyed in the Buddhist literature. Hence, a great deal of circumspection is required in choosing among technical terms that already exist in English, as there is a great risk of causing confusion. But where the meaning adequately coincides, preference has been given to technical terms that already have some currency in English.

One of the greatest challenges in this volume has been to find ways of translating the various terms for mind, which often appear in the plural in Sanskrit and Tibetan sources. As noted in the introductory essay to part 1, the term *mind* is used in Buddhist texts to convey episodic mental moments that occur in a continuous stream within each living being, where one moment becomes the cause for the next. A single mental moment is often referred to as “a mind,” so one person will have many minds arising and ceasing from moment to moment. Although we tried to avoid it, on many occasions we have had no other option than to use the terms *minds* and *consciousnesses* in the plural.

Translation is not univocal. As David Bellos has said, there is no single translation for any utterance of more than trivial length. Some of the texts cited in this volume have existing English translations, and we consulted them at certain stages of the work, though we did not actually use them here. We have thought very deeply about the translation choices that we made in this volume. Some of them we were fortunate enough to agree on immediately. Others we disagreed about initially, so we researched, discussed further, and eventually arrived at a consensus. Likewise, although the first volume of this series was already in print before we finalized the present volume, we have not always adopted the terminology used in the first volume. This is partly because each volume covers a different area of specialization, and when translating a topic that is treated in depth, one may need a more refined set of terms than those used when translating the same topic merely in passing. In any case, as with any translation work, we have tried to balance technical accuracy with readability for a broader audience. This is always a difficult task, and some variation is inevitable. It may be too soon to expect that these often rarefied texts can be rendered into an English version that is universally acceptable. The gradual transmission of Buddhist scientific and philosophical traditions to the West is still in its early stages. We hope that this volume will serve as a substantial contribution toward its unfolding.

As for the process of translating this volume, the first draft was completed by Dechen Rochard within the two-year time frame allotted by the Gaden Phodrang Trust. During this time Dechen was resident in Dharamsala for several months each year so as to consult with the geshe editors. Having reached the submission deadline, the text was passed on to Thupten Jinpa for his comments and suggested changes, after which it was submitted for publication and copyedited. At this point John Dunne was brought on board to write the introductory essays, which are designed to serve as an additional bridge for readers not versed in Buddhist doctrine. John's participation led to revisiting the translation, this time as a collaborative effort, with a view to making the language more suitable for a Western scientific audience. Owing to his extremely full schedule, John engaged the help of three assistants to review and research the work. As well as trying to incorporate terminology

appropriate to various academic disciplines such as cognitive science, John gave special attention to citations from Sanskrit texts, with or without Sanskrit editions. During this process Dechen traveled to Madison, Wisconsin, to work in collaboration with John. They continued to consult over the internet once she returned to the United Kingdom, and together they produced the final draft.

Dechen and John are both deeply honored to have been called to work on this project. We are profoundly grateful to His Holiness the Dalai Lama for his vast and compassionate vision in conceiving of this project and for his immense energy in propelling it to completion.

In accordance with His Holiness's wishes, Dechen has been based in India for several months each year, where she has had the opportunity to meet all the members of the Compendium Compilation Committee. She is delighted to have consulted with Khen Thamthog Rinpoche, Thupten Jinpa, Yangteng Rinpoche, Geshe Thupten Palsang, and Gelong Thupten Yarphel; and she is especially grateful to have worked closely with the four main editors of this text: Khen Rinpoche Geshe Jangchub Sangye of Ganden Shartse, Geshe Lobsang Khechok of Drepung Gomang, Geshe Chisa Drungchen Rinpoche of Ganden Jangtse, and Geshe Ngawang Sangye of Drepung Loseling. She would also like to express sincere appreciation to her old friend and fellow alumnus from Cambridge University, Thupten Jinpa, for his suggestions regarding terminology and for his patient revision of the first draft, as well as to Tenzin Tsepak, another old friend and fellow alumnus from the Institute of Buddhist Dialectics, for kindly sharing his thoughts regarding certain points of scholarship. She would like to thank her colleague Ian Coghlan for the many conversations pertinent to the translation of the first two volumes during the early years of working on this project, and Jamphel Lhundup for so kindly taking care of practical matters regarding the project and residence in Dharamsala.

John and Dechen are delighted to have collaborated on this project. We would like to thank Jeremy Manheim, Geshe Kelsang Wangmo, and Ven. Tenzin Legtsok for their skillful assistance in helping to prepare the second draft. We also wish to thank senior editor at Wisdom Publications, David Kittelstrom, for his valued suggestions regarding style and clarity of content in preparing this text for publication, as well as publisher Daniel Aitken, copyeditor

Mary Petrusewicz, production editor Ben Gleason, and proofreader Megan Anderson for their helpful input at certain stages of the work.

May the translation of this work bring the teachings of the Nālandā masters to the attention of the world, and may they be understood and used to develop both inner and outer peace.

Dechen Rochard and John Dunne

Introduction

My Encounter with Science[1]

In my childhood I had a keen interest in playing with mechanical toys. After reaching India in 1959, I developed a strong wish to engage with scientists to help expand my own knowledge of science as well as to explore the question of the relationship between science and religion. The main reason for my confidence in engaging with scientists rested in the Buddha's following statement:

> Monks and scholars, just as you test gold
> by burning, cutting, and polishing it,
> so too well examine my speech.
> Do not accept it merely out of respect.

The Buddha advises his disciples to carefully analyze when they engage with the meaning of his words, just as a goldsmith tests the purity of gold through burning, cutting, and rubbing. Only after we have gained conviction through such inquiry, the Buddha explains, is it appropriate to accept the validity of his words. It is not appropriate to believe something simply because one's teacher has taught it. Even with regard to what he himself taught, the Buddha says, we must test its validity for ourselves through experimentation and the use of reason. The testimony of scriptures alone is not sufficient. This profound advice demonstrates the centrality of sound reasoning when it comes to exploring the question of reality.

In Buddhism in general, and for the Nālandā masters of classical India in particular, when it comes to examining the nature of reality, the evidence of direct perception is accorded greater authority than both reason-based inference and scripture. For if one takes a scripture

to be an authority in describing the nature of reality, then that scripture too must first be verified as authoritative by relying on another scriptural testimony, which in turn must be verified by another scripture, and so on, leading to an infinite regress. Furthermore, a scripture-based approach can offer no proof or rebuttals against alternative standpoints proposed by opponents who do not accept the validity of that scripture. Even among scriptures, some can be accepted as literal while some cannot, giving us no reliable standpoints on the nature of reality. It is said that to cite scripture as an authority in the context of inquiring into the nature of reality indicates a misguided intelligence. To do so precludes us from the ranks of those who uphold reason.

In science we find a similar approach. Scientists take experimentation and the logic of mathematics as arbiters of truth when it comes to evaluating the conclusions of their research; they do not ground validity in the authority of some other person. This method of critical inquiry, one that draws inferences about the unobservable, such as atomic particles, based on observed facts that are evident to our direct perception, is shared by both Buddhism and contemporary science. Once I saw this shared commitment, it greatly increased my confidence in engaging with modern scientists.

With instruments like microscopes and telescopes and with mathematical calculations, scientists have been able to carefully analyze phenomena from atomic particles to distant planets. What can be observed by the senses is enhanced by means of these instruments, allowing scientists to gain new inferences about various facts. Whatever hypothesis science puts forth must be verified by observation-based experiments, and similarly Buddhism asserts that the evidence of direct perception must ultimately underpin critical inquiry. Thus with respect to the way conclusions are drawn from evidence and reasoning, Buddhism and science share an important similarity. In Buddhism, however, empirical observation is not confined to the five senses alone; it has a wider meaning, since it includes observations derived from meditation. This meditation-based empirical observation grounded in study and contemplation is also recognized as part of the means of investigating reality, akin to the role scientific method plays in scientific inquiry.

Since my first visit to the West, a trip to Europe in 1973, I have

had the opportunity to engage in conversations with great scientists, including the noted twentieth-century philosopher of science Sir Karl Popper, the quantum physicist Carl Friedrich von Weizsäcker, who was the brother of the last West German president and also a colleague of the famed quantum physicists Werner Heisenberg and David Bohm.[2] Over many years I have had the chance to engage in dialogues with scientists on a range of topics, such as cosmology, neurobiology, evolution, and physics, especially subatomic-particle physics. This latter discipline of particle physics shares methods strikingly similar to those found in Buddhism, such as the Mind Only school's critique of the external material world that reveals that nothing can be found when matter is deconstructed into its constitutive elements, and similarly the statements found in the Middle Way school treatises that nothing can be found when one searches for the real referents behind our concepts and their associated terms. I have also on numerous occasions had dialogues with scientists from the fields of psychology and the science of mind, sharing the perspectives of the Indian tradition in general, which contains techniques of cultivating calm abiding and insight, and the Buddhist sources in particular, with its detailed presentations on mind science.

Today we live in an age when the power of science is so pervasive that no culture or society can escape its impact. In a way, there was no choice but for me to learn about science and embrace it with a sense of urgency. I also saw the potential for an emerging discourse on the science of mind. Recognizing this, and wishing to explore how science and its fruits can become a constructive force in the world and serve the basic human drive for happiness, I have engaged in dialogue with scientists for many years. My sincere hope is that these dialogues across cultures and disciplines will inspire new ways to promote both physical and mental well-being and thus serve humanity through a unique interface of contemporary science and mind science. Thus, when I engage in conversations with scientists, such as in the ongoing Mind and Life Dialogues, I have the following two aims.[3]

The first concerns expanding the scope of science. Not only is the breadth of the world's knowledge vast, advances are being made year by year that expand human knowledge. Science, however, right from its inception and especially once it began to develop quickly, has been

concerned primarily with the world of matter. Unsurprisingly, then, contemporary science focuses on the physical world. Because of this, not much inquiry in science has been made into the nature of the person — the inquirer — as well as into how memory arises, the nature of happiness and suffering, and the workings of emotion. Science's advances in the domain of the physical world have been truly impressive. From the perspective of human experience, however, there are dimensions of reality that undoubtedly lie outside the current domain of scientific knowledge. It is of vital importance that the science of mind takes its place among the current fields of human investigation. The brain-based explanations in contemporary science about the different classes of sensory experience will be enriched by incorporating a more expanded and detailed understanding of the mind. So my first goal in my dialogues with scientists is to help make the current field of psychology or mind science more complete.

Not only do Buddhism and science have much to learn from each other, but there is also a great need for a way of knowing that encompasses both body and mind. For as human beings we experience happiness and suffering not only physically but mentally as well. If our goal is to promote human happiness, we have a real opportunity to pursue a new kind of science that explores methods to enhance happiness through the interface of contemporary science with contemplative mind science. It is my belief that, while acknowledging the great contribution that science has made in advancing human knowledge, our ultimate aim should always be to help create a comprehensive approach to understanding our world.

This takes us to the second goal behind my dialogues with scientists — how best to ensure that science serves humanity. As humans, we face two kinds of problems, those that are essentially our own creation and those owing to natural forces. Since the first kind is created by we humans ourselves, its solution must also be within our human capacity. In contemporary human society, we do not lack knowledge, but the persistence of problems that are our own creation clearly demonstrates that we lack effective solutions to these problems. The obstacle to solving these problems is the presence in the human mind of excessive self-centeredness, attachment, anger, greed, discrimination, envy, competitiveness, and so on. Such

problems also stem from deficits in our consideration of others, compassion, tolerance, conscientiousness, insight, and so on. Since many of the world's great religions carry extensive teachings on these values, I have no doubt that such teachings can serve humanity through helping to overcome the human-made problems we face.

The primary purpose of science is also to benefit and serve humanity. Discoveries in science have brought concrete benefits in medicine, the environment, commerce, travel, working conditions, and human relationships. There is no doubt that science has brought great benefits when it comes to alleviating suffering at the physical level. However, since mental suffering is connected with our perception and attitude, material progress is not enough. Even in countries where science has flourished greatly, problems like theft and violent disputes persist. As long as the mind remains filled with greed, anger, conceit, envy, and so on, no matter however perfect our material facilities, a life of genuine happiness is not possible. In contrast, if we possess qualities like contentment and loving kindness, we can enjoy a life of happiness even without great material facilities. Happiness in life is primarily a function of the state of the mind.

If contemporary society were to pay more attention to the science of mind, and more importantly, if science were to engage more with societal concerns, including fundamental human values, I believe that this could lead to great advancement and novel outcomes. Although science has not concerned itself with the enhancement of ethics and the cultivation of basic human values such as kindness, since science has emerged as a means to serve humanity, it should never be completely divorced from the values that are of great importance to the flourishing of human society.

In Indian philosophical traditions in general, and in Buddhism in particular, one finds many techniques for training the mind, such as the cultivation of calm abiding (*śamatha*) and insight (*vipaśyanā*). These definitely have the potential to make important contributions to contemporary psychology as well as to the field of education. The mental-training techniques developed in these traditions are uniquely potent for alleviating mental suffering and promoting greater inner peace. So my second goal for my dialogues with contemporary scientists is to see how these techniques, as well as their underlying insights, can be best harnessed to the task of transforming our

contemporary education system so that our society does not suffer from a deficit in basic ethics.

Today no aspect of human life is not impacted by science and technology. Science occupies a central place in both our personal and our professional lives. It is critically important that we reflect on the ultimate purpose of science, on what larger consequences and impact science can have in our world. In the early part of the twentieth century, many believed that the spread of science would erode faith in religion. Yet today, in the beginning of this twenty-first century, there seems to be a renewed interest in ethics in general and, in particular, the insights of those ancient traditions that contain systematic presentations of mind science and philosophy.

Three Domains in the Subject Matter of Buddhist Texts

In our society, all sorts of immoral acts are committed on a regular basis. We observe murder, theft, cheating, violence against others, exploitation of the weak, misuse of public goods, abuse of alcohol and other addictive substances, and disregard for societal responsibility. We also see people suffer from social isolation, from vengefulness, envy, extreme competitiveness, and anxiety. I see all these as consequences primarily of our neglect of ethics and basic human qualities such as kindness. It is essential for us to pay attention to the means that would help promote basic ethics. The profound interdependence of today's world calls us to create a society permeated by kindness.

What kind of foundation is necessary for this? Since religion-based ethical teachings are grounded in the philosophical views of their respective faith traditions, an ethics contingent on religion alone will exclude those who are not religious. If ethics is contingent on religion, it will be ignored by those who adhere to no religious faith. We do not need to be religious to see the value of kindness; we can discern it by observing our everyday life. Even animals survive by relying on the care of others.

Furthermore, impulses for empathy, kindness, helpfulness, and tolerance seem naturally present in small infants, well before the

influence of religious faith begins. Looking to these innate qualities and their associated behaviors as a foundation, I have striven to promote an approach to ethics and basic human values that does not rely on the perspectives of a specific religious tradition. My reason is simply this: we can enjoy a life of peace and happiness without religion. In contrast, if we are divorced from human love and kindness, our very survival is at risk; even if we do survive, our life becomes devoid of joy and trapped in loneliness.

We can promote ethics on the basis of a specific religion, but prioritizing the perspective of one religion over others is problematic in today's deeply interconnected and global society, which is characterized by a multiplicity of religions and cultures. For an approach to the promotion of ethics to be universal, it must appeal to the fundamental values we share as human beings. If we neglect these basic human values, who can we blame for the negative consequences? Thus, when I speak of secular ethics, I am speaking of these fundamental values that are inherent to human nature, and that are in fact the very foundation of the ethical teachings of the world's religious traditions.[4]

Historically, there have been societies where respect was accorded to the perspectives of both believers and nonbelievers. For example, although the materialist Cārvāka school was the object of vehement critiques from other schools in ancient India, it was a custom to refer to the upholders of that viewpoint in honorific terms. Consonant with this ancient tradition, when India gained its independence in the twentieth century, the country adopted a secular constitution independent of any specific religious faith. This establishment of a secular constitution was not to show disrespect for religion; it was to promote peaceful coexistence among all religious faiths. One of the major forces behind the adoption of this secular constitution was Mahatma Gandhi, himself a deeply religious person. Conscious of this important historical precedent, I feel no apprehension in promoting a secular universal approach to ethics.

My own personal view is that, in general, people should remain within their own traditional religions. Changing faith can lead to difficulties for oneself, and it can also undermine the basis of interreligious harmony. With this belief I have never harbored any intention to make converts or convince followers of other religions to

become Buddhists. What is appropriate for believers is to contribute to the common good by practicing those aspects of the teachings that can serve humanity as a whole. Such teachings are definitely present in all the world's main religions.

Within Buddhism, for example, I see two things with the greatest potential to serve everyone, regardless of their faith. One is the presentation on the nature of reality, or "science," as found in the Buddhist treatises, and the second encompasses the methods or techniques for training the mind to alleviate mental suffering and promote greater inner peace. In this regard it is important to differentiate among three distinct domains within the subject matter of the Buddhist sources: the presentations (1) on the natural world, or science, (2) on philosophy, and (3) on religious beliefs and practice. In general, when one speaks of religion or religious practice, it is linked with faith in a source of refuge. In this religious sense, Buddhism, too, is relevant only to Buddhists and has no particular connection to those who follow other religions and those who have no religious faith. Clearly presentations rooted in religious faith are not universally applicable, especially when we recall that among today's world population, as many as a billion human beings identify themselves as nonbelievers.

Buddhist philosophy contains aspects, such as the principle of dependent arising, that can be relevant and beneficial even to those outside the Buddhist faith. This philosophy of dependent arising can of course conflict with standpoints that espouse a belief in a self-arisen absolute being or an eternal soul, but for others, this philosophy can help expand their outlook and enable them to see things in life from multiple angles, which prevents the narrow fixation that blames everything on a single cause or condition. I see great benefit in extracting the scientific and philosophical explorations found in Buddhist texts and presenting them independently of the strictly religious teachings. This allows someone who is not Buddhist to learn about the Buddhist scientific explorations of reality as well as Buddhist philosophical insights. It also gives many people the opportunity to learn how Buddhist traditions have developed their worldview and their philosophical outlook on the ultimate nature of reality.

Take, for example, the Buddha's first teaching, the four noble

truths, which is common to all Buddhist traditions. In this teaching, we can observe a clear differentiation among the "ground" (the nature of reality), the path, and the result. The statements on the nature of the four truths, e.g., "This is the noble truth of suffering," present the ground; the statements on the function of the truths, e.g., "Suffering is to be known," present the path; and the statements pertaining to the agent and the fruits of the path, e.g., "Suffering is to be known, yet there is nothing to be known," explain how the result of the path comes to be actualized. My point is that, whether the presentation is of philosophy or of ethical precepts, the fundamental approach in the Buddhist texts is to ground them in an understanding of the nature of reality.

In what is called the Mahāyāna, or Great Vehicle, too, the presentation on the two truths (conventional and ultimate) is the ground, the presentation of the two aspects (method and wisdom) is the path, and the presentation of the two buddha bodies (the form and truth bodies) is the result. All of these are grounded in an understanding of the nature of reality. Even in the case of the highest aim in Buddhism — the attainment of the two buddha bodies, or the buddhahood that is the embodiment of the four buddha bodies[5] — the potency to actualize these aims can be found in the innate mind of clear light that resides naturally within us. The presentations found in the Buddhist sources are developed on the basis of an understanding of the nature of reality. If we look at the way the words of the Buddha were interpreted in the treatises composed by the great Buddhist thinkers of the past, such as the masters of Nālandā University, there too the subject matter of the entire corpus of Buddhist texts, including those that were translated into Tibetan running into more than three hundred volumes, fall into the threefold classification of the ground, the path, and the result.

As stated, the content of the Buddhist texts can be grouped within the three domains of (1) the nature of reality, or science, (2) philosophical tenets or views, and (3) religious practice, namely the presentation of the path and the way in which the results of the path are actualized. I see great benefits if we engage with the works in the Kangyur (the scriptures) and Tengyur (the treatises) on the basis of critically examining whether their contents present science, philosophy, or religious practice.

Buddhist Presentations on Reality or Buddhist Science

In brief, the presentation of the nature of reality or science in the classical Buddhist texts can be summarized in the following four major topics: (1) the nature of the physical world, (2) the presentation of the mind, the cognizing subject, (3) how the mind engages its object, and (4) the science of logical reasoning by means of which the mind understands its object. The first topic, the nature of the physical world, as well as the presentation of the philosophical outlook and methods of inquiry underlying Buddhist science, were covered in volume 1 of the series. So in this introduction I will focus my discussion on the remaining three topics, which are the topics covered in the present volume.

The Mind, the Cognizing Subject

In general, the word *science* refers to a body of knowledge about the world obtained through a method that is verifiable by anyone who repeats the same experiment. The term can thus refer both to the body of knowledge acquired and to the method used to acquire it. In other words, *science* can refer to a specific systematic method of inquiry. For example, when a scientist investigates a particular question, he or she first develops a hypothesis. Through experiments certain results are revealed, and these findings are then subjected to confirmation by a second or a third party, such as one's colleagues. When the findings of different scientists converge, these findings come to be accepted as part of the canon of scientific knowledge. The way such discoveries are made is characterized as the scientific method. This basic feature of the scientific method seems to accord with two of the three criteria of existence proposed in the Buddhist Madhyamaka texts: that it is (1) known by a conventional valid cognition and that it is (2) not contravened by some other conventional valid cognition.[6]

Discussions of the nature of cognition or the science of mind in Buddhist sources define what is cognition, categorize the types of mind, and explore those categorized minds in detail. For example, when cognitions are differentiated, we find such twofold classifications as the division into sensory and mental cognition,

which is made on the basis of whether a cognition is dependent on a physical sense faculty. There is also the twofold classification of valid versus nonvalid cognition, based on whether a given cognition is veridical. A distinction is drawn also between conceptual and nonconceptual processes, based on whether a cognition engages with its object through applying a conceptual category, such as "This is so and so," and on whether a universal image is involved in the cognition. A distinction is also drawn between the mind, which is primary, and its concomitant mental factors on the basis of whether it cognizes its object as a whole or whether it apprehends specific attributes of its object. A differentiation is made between mistaken and nonmistaken cognition based on whether the object of that awareness exists in the way that it appears to that cognition. Also, in terms of its object, a distinction is made between reflexive awareness and objective awareness. Finally, based on the ways they engage their objects, there is the sevenfold taxonomy of cognition — (1) distorted cognition, (2) doubt, (3) correct assumption, (4) indeterminate perception, (5) direct perception, (6) inferential understanding, and (7) subsequent cognition (part 4).

The Buddhist sources on mind science also explore in great detail such topics as the nature of the mental factors and their divisions, their specific functions, the process by which they arise, and their inter-relations (part 2). They also explore the nature of ignorance, and the question of how ignorance that is a distorted cognition gives rise to inappropriate attention, which in turn gives rise to afflictions like attachment and aversion, and how attachment and aversion give rise to other destructive emotions like pride, jealousy, and so on, which disturb one's mental equilibrium. Likewise, they address how attachment gives rise to mental excitation and distraction to external stimuli, and how mental laxity leads to the loss of alert awareness of the chosen object. The sources also deal with the question of how mental dullness arises, which makes the mind unserviceable and brings unclarity to the mind, as if darkness has come to settle. These sources also present ways to cultivate their counteragents, such as wisdom that helps differentiate the specific characteristics of phenomena, love, empathy, forbearance, confidence, mindfulness, and meta-awareness. In short, these texts present the techniques for enhancing qualities such as those cited and also for cultivating

concentration that is characterized by single-pointedness of mind, which enhances one's capacity to sustain single-pointed attention for prolonged periods (part 6).

In brief, these Buddhist sources identify over a hundred distinct mental factors and explain how certain types of mental factors act as antidotes to other factors, and how this law of contradiction within the mental world facilitates the possibility of eliminating certain types of afflictions through enhancing the power of their counteragents. Thus this science of mind found in the Buddhist sources is something meaningful with a potential to benefit the more than seven billion human beings on Earth.

The Buddhist sources also present various levels of subtlety of consciousness. For example, consciousness during the waking state is considered grosser, consciousness in dream state comparatively subtler, and compared to that, consciousness during deep sleep is subtler still. There is also the differentiation of consciousness into the threefold category of gross, subtle, and very subtle. Within this classification, the first encompasses the five sense perceptions, the second includes the six root afflictions as well as the eighty indicative conceptions, while the third, very subtle level of consciousness, includes the minds of the four empty states.[7] Even among the minds of the four empty states, differentiations of subtlety can still be drawn. For example, compared to the innate mind of clear light, the three minds of luminosity are grosser, while the innate mind of clear light is understood to be the most subtle level of consciousness. This innate mind is characterized as energy-wind from the point of view of its movement toward an object, and as consciousness from the point of view of awareness (part 3).

An important set of topics within the Buddhist science of mind include how, given that the adventitious stains do not reside in the mind's essential nature, the essential nature of mind is that of clear light; how the continuum of this luminous and knowing reality is stable since it has no beginning; and how the qualities of the mind have the potential for limitless enhancement, for once perfected they do not require exertion of new efforts.[8] These above points are so critical that anyone who lacks deeper knowledge of these will only have partial understanding of the great Buddhist treatises.

Similarly, there are ideas and insights in Buddhist epistemological treatises, such as those of Dignāga and Dharmakīrti, that can enrich contemporary cognitive science. These include, among others, the presentations on the nature of sensory cognitions, the logical reasoning establishing how sensory cognitions are devoid of conceptualization, how thoughts engage actual reality via the medium of universals, the characteristics of universals, how general terms and cognition of universals apply to the plurality of particulars, and the various arguments put forth to demonstrate the unreality of general characteristics.

How the Mind Engages Its Object

Based on how a given object appears to the mind, a distinction is drawn between negatively characterized phenomena and positive phenomena. Similarly, based on whether the given cognition engages its object due to the object casting its form to it, there is the distinction between cognitions that engage by way of exclusion and those that engage by way of affirmation. There is also the distinction between identity and difference based on how thoughts conceive their objects, because when the object universal of a thing appears to a thought, it does so either as singular or plural. Similarly, what is essentially a single entity can be understood to possess conceptually distinct attributes, with one serving as the basis for inferring the other; for instance, being a *product* can help infer something to be *impermanent*, although that which is a product and that which is impermanent are one and the same entity. Also when a single cognition takes something as an object, one can distinguish two aspects of such cognition, the way it appears and the way it is apprehended, so a distinction can be drawn between the mind's appearing object and its object as cognized. The latter is known also as the engaged object, for when the person engages with that object just as apprehended by that cognition, he or she is not deceived. Similarly, a thing can be characterized as the object or focus of a given cognition because it serves as the basis for the mind to eliminate false conceptualizations (part 4).

These Buddhist sources also contain debates on whether sensory cognitions perceive their objects by assuming an image of the object

being perceived. Those who advocate this notion of the object image state that when sensory cognitions perceive their objects, they do so by having a likeness of the object appear to the mind. If this is not the case, they argue, one will not be able to account for the diversity of perceptions that one can experience in relation to even a single object. Those who reject the notion of images argue that if sensory cognitions perceive via the medium of such images, this would mean that they do not directly perceive their objects, and furthermore, there is no evidence for the existence of external objects that are not perceptible by the senses (part 4).

The Science of Logical Reason by Means of Which the Mind Understands Its Object

The science of reasoning represents the means by which the mind engages its object, and it is like a key that helps open the doors to the secrets of reality that remain hidden from our senses. The science of logical reasoning is therefore extremely important. The basis for the application of logical reason lies in the four principles of reason, which we discussed in volume 1 (pages 10–12). The important topics covered in the Buddhist sources on logical reasoning include the characteristics necessary for a valid proof, the logical relationship between the evidence and the thesis being proven, and so on. Although, in general, one can infer the presence of something related on the basis of its relationship to something else, not all specific characteristics of that related thing can be inferred. For example, one can infer a cause from the presence of its effect, and similarly, one can draw inferences based on a shared essential nature; however, not all features of the cause or the thing can be inferred through such types of reasoning (part 5).

Also, based on the logical relationship that exists between the evidence and the thesis within a given syllogism, correct evidence is classified into three categories (effect evidence, nature evidence, and evidence consisting in nonperception).[9] Within the category of effect evidence, depending on how the syllogism is presented in line with the intention of the person to whom it is directed, five types of effect evidence are distinguished in Buddhist sources. As for nature evidence, a differentiation is made into two types, based on whether

the term that states the evidence indicates an activity of a person. Within the class of evidence consisting in nonperception also, two types are identified based on whether the nonperception takes the form of the nonperception of a fact that is logically related to what is being negated or whether the nonperception is being proven on the basis of the perception of an incompatible fact. In general, in the case of something that exists but lies beyond our perception, mere nonperception cannot prove its nonexistence. Nonetheless, even here, one can demonstrate the inappropriateness of a claim on the basis of the absence of its knowledge. In contexts where a fact under discussion is something that would be perceivable were it present, here nonperception can lead to correct knowledge of its nonexistence. Thus there are two general classes of evidence consisting in nonperception (part 5).

With this second category of evidence consisting in nonperception — namely, where what is being negated is in general perceivable — there is the nonperception of something related whose presence is necessarily dependent upon the presence of its correlate. An example of this type of reasoning is where the absence of fire, on which the existence of smoke depends, is used as a basis to infer the absence of smoke. Within this type of reasoning, through the nonperception of something related, the related thing might be its cause, its universal, or its essential nature. Thus there are three kinds. In the case of evidence consisting in nonperception based on the perception of something contradictory, there is the one where the evidence is effected by the perception of something contradictory in the sense of being contrary. There is also a second type where the evidence is effected by the perception of something contradictory in the sense of being mutually exclusive without any possible alternative, as in the law of excluded middle. The Buddhist reasoning of dependent origination used to negate self-existence, for example, belongs to this second type of reasoning. Within the first kind, the perception of something contradictory in the sense of being contrary, again there are three kinds: that of essential nature, that of effects, and that of pervading universal. Within each of these three, one can further distinguish among the opposing fact itself, its effect, and its pervading universal; thus twelve distinct forms of reasoning can be differentiated.[10] In fact, there can be many different ways in which

this type of reasoning can be further distinguished (part 5).

Further, there is the reasoning in the form of a consequence that reveals a contradiction within the opponent's position. Although this type of consequence-revealing reasoning on the whole negates viewpoints primarily through demonstrating a logical contradiction within the opponent's position, there are some that also implicitly present correct logical syllogisms to establish a given thesis. Those that do not imply such a correct syllogism negate their opponent's viewpoint by leveling objections.[11]

In brief, the science of logical reasoning offers a multiplicity of avenues to critically analyze reality, and through these diverse avenues, insight into the ultimate nature of reality can be discerned. When one engages with reality repeatedly through these avenues of inquiry, the cognitive power of one's mind will come to be enhanced, leading to the development of a balanced view when it comes to understanding the ultimate nature of reality.

Buddhist Philosophy

Philosophy represents the summation of the conclusions about the nature of reality developed through critical inquiry. In *Science and Philosophy in the Indian Buddhist Classics*, philosophy will be treated in volumes 3 and 4, but I will touch on it briefly here. In Buddhism, works explicitly presenting philosophical views evolved early. We see this with the appearance of the *Questions of King Menander* before the Common Era, the Abhidharma treatises starting around the first century CE, the six philosophical treatises of Nāgārjuna shortly thereafter,[12] and so on. There also appeared, in Buddhism's classical era, treatises in which the principal views of both Buddhist and non-Buddhist Indian schools were presented together in a single work and critically examined. For example, Bhāvaviveka composed his *Blaze of Reasoning* in the fifth century, and in the eighth century Śāntarakṣita authored his *Compendium of Reality*.

Buddhism's basic philosophy is encapsulated in what are known as the view of the four "seals," or axioms: all conditioned things are impermanent, all contaminated things are characterized by suffering, all phenomena are empty and devoid of selfhood, and nirvāṇa is peace. *Impermanence* refers to the fact that things, right from their

birth, do not remain static even for a single moment. This is because things do not depend on some third condition for their disintegration; the very causes that produce them also make them susceptible to disintegration. We can see this truth of impermanence for ourselves if we contemplate deeply the gross changes we observe in things. The statement that "all contaminated things are characterized by suffering" indicates how our existence is bound to a causal nexus of undisciplined states of mind that keeps it under their power. As for the statement "nirvāṇa is peace," Dharmakīrti identifies this with the possibility of eliminating pollutants from the mind. He establishes the existence of such a state of freedom through reasoning so that we do not need to rely on faith alone to explain it. The teaching on no-self relates principally to the ultimate nature of reality, namely that things do not exist the way they appear to.

All Buddhist schools reject the existence of a self that is eternal, unitary, and autonomous. Yet many Buddhist schools assume that what we call "self" or "person" must nonetheless exist in some form. We find the assertion that the self exists on the basis of the aggregates, with some proposing that all five aggregates constitute that person and others positing the mind alone to be the person. Some, recognizing that the six types of consciousness are unstable like bubbles in water, assert eight classes of consciousness and posit foundational consciousness (*ālayavijñāna*) to be the real person. Others, seeing faults in identifying the person with the aggregates, assert a self (or person) that is neither identical to nor different from the aggregates.

As we can see, there is a divergence of interpretations and subtleties among the various Buddhist schools with respect to the meaning of no-self. The Tibetan tradition relies chiefly on the interpretation of the Perfection of Wisdom sūtras by Nāgārjuna and his disciples. In this view, the meaning of no-self is understood by way of dependent origination. Two types of selflessness are differentiated from the perspective of their bases (persons and phenomena), but there is no difference in subtlety in what is negated; in both contexts, it is independent existence. The very fact that things are dependently originated establishes that they are devoid of self-existence. When we think, for example, in terms of the designator and the designated, the knower and the known, the agent and the act, and

so on, we can see the utter mutuality and contingency of these things. If the table in front of us, for example, were to exist objectively without depending on conceptual designation, the table itself could provide the criteria of what constitutes a table from its own side. This is not the case. We have no choice but to accept that what we call "table" is posited by the mind.

What we see is a mutual dependence. The objective world exerts constraints on the mind, and the mind in turn exerts constraints on the objective world. Take the simple example of a handwritten letter *a*. So many factors converge that are part of its dependent reality. There is, for example, the shape of the letter, the pen that wrote it, the ink used to write it, the paper on which it is written, the person who wrote it, the intention of the writer, the convention that established this letter, those who accept this as a letter, and the cultural environment in which this letter has a meaningful usage. Without these, its existence as a letter is simply impossible. The nature of all things is exactly like this. Therefore things are explained as having a nature of dependence requiring so many other factors for their existence. This is why Madhyamaka thinkers such as Candrakīrti speak of how things are unfindable when subjected to ultimate analysis and of how their existence can only be posited as designated by the mind. This view is strikingly similar to explanations found in contemporary physics about how nothing can be found to possess reality when analyzed at the subatomic level.

Another important philosophical view in Buddhist texts is that of the two truths. We find the language of "two truths" in the non-Buddhist Indian philosophical schools as well. In Buddhism, all four schools of thought equally accept the notion of two truths, but what constitutes these two varies from school to school.[13] Between the two Mahāyāna schools, for example, there is not much difference in the way the Cittamātra (Mind Only) and Madhyamaka (Middle Way) schools define the two truths. Nonetheless there is a substantial difference in the specific examples they give for those two truths.

In brief, *ultimate truth* pertains to the ultimate nature of things while *conventional truth* relates to perspectives rooted in the apparent world. Both the Madhyamaka and Cittamātra schools explain ultimate truth in terms of emptiness. Cittamātra speaks of the emptiness of external reality or the emptiness of subject-object duality, while

Madhyamaka speaks of the emptiness of real existence of everything, even the minutest particles of matter. Conventional truth encompasses the entirety of the everyday reality we perceive — the natural world, the beings who inhabit it, arising and disintegration, progress and decline, cause and effect, happiness and suffering, good and bad, and so on. In short, the flowerpot we see in front of us is conventional truth, while its absence of objective existence — that this pot cannot be found when sought through ultimate analysis — is its ultimate truth.

That pot is empty at the very moment it is perceived, and it can be perceived while simultaneously being empty. Madhyamaka thinkers explain this by saying that the two truths have the same nature but are conceptually distinct. When the Buddhists speak of the way things exist, they maintain that we need to transcend both extremes — the extreme of reification and the extreme of denial — and view things simply as they are.

Buddhist Religion

Generally speaking, although aspects of the Buddhist tradition that fall under religion are connected with faith, the basic framework of Buddhist religious practice is grounded in the principle of causality, which is part of the laws of nature. For example, the impulse to shun pain is part of our natural disposition, and our existence as conditioned beings is the basis for the arising of suffering. Therefore Buddha taught the reality of *suffering* as the first truth of our existence. Since suffering necessarily arises from a cause, he identified the second truth as the *origin* of suffering. These two truths pertain to the cause and effect of suffering. What is the cause of suffering? Its ultimate source is explained as ignorance, and since this ignorance can be brought to an end, the Buddha taught the third truth, the *cessation* of suffering and its origin. Since such a cessation must also have a cause, the Buddha taught the truth of the *path*, the means of attaining such a cessation. There is thus a cause-and-effect pair of truths pertaining to the attainment of freedom. Clearly the foundation of Buddhist practice described in the four noble truths is the natural law of cause and effect.

When Dharmakīrti introduces the truth of cessation, he

demonstrates the possibility of bringing an end to ignorance, the cause of suffering. Nowhere does he speak of the need to demonstrate the truth of cessation by relying on scriptural authority. Furthermore, Dharmakīrti offers a profound explanation of suffering and its origin in terms of the sequence of the twelve links of dependent origination, and cessation and the path in terms of the reverse order of the twelve links.[14] Since happiness and suffering are characteristics of sentient experience, no account of them can be divorced from sentient experience. Therefore Dharmakīrti also offers an extensive account of cause and effect as it relates to the inner world of experience. Furthermore, when one speaks of Dharma (religion) in Buddhism, its true meaning must be understood in terms of the attainment of nirvāṇa. The term *Dharma* refers to the means and the path that lead to nirvāṇa as well as the scriptures taught by the teacher, the Buddha, that present this path.

Having now distinguished three domains of subject matter in the Buddhist sources — (1) scientific presentations about the natural world, (2) philosophy, and (3) religious practice — we might ask from what sources the presentations in this series on the first two dimensions, science and philosophy, are developed. Among the Buddhist classics available in Tibetan, we have the two canonical collections introduced above. The precious collection of the Kangyur contains translations of the Buddha's words as embodied in the "three baskets" (Tripiṭaka), containing both sūtra and tantra teachings. The precious collection of the Tengyur contains the treatises of great masters such as the seventeen Nālandā masters that include Nāgārjuna and Asaṅga, the two trailblazers prophesized by the Buddha.[15]

The Tibetan translations that comprise the Kangyur and the Tengyur are the largest body of Indian Buddhist texts extant today anywhere. Today modern scholars who engage in objective studies of Indian Buddhist sources state that these Tibetan collections not only contain the largest number of texts but also represent the best translations and most comprehensive Buddhist canon. Many of these works composed in classical Indian languages, especially Sanskrit, were entirely lost in their original language through changes of history and environmental conditions. Only a few of the great works remain in original Sanskrit. In the Pali canon, we find scriptures associated with the Theravāda tradition but not of other Buddhist

schools, such as the Mahāyāna sūtras and tantras. Although a great number of Buddhist texts were translated into Chinese, modern researchers say that because of the character of the Chinese language, those translations tend to be looser and do not match the rigorous correspondence, both in terms and meaning, found in the Tibetan translations. Today, therefore, the Tibetan language is the storehouse for the Buddha's scriptural teachings in their entirety. By offering access to the complete system of the Indian Buddhist tradition encompassing all three vehicles — the shared teachings, the Mahāyāna, and the Vajrayāna — there is simply no alternative to the literary heritage of the Tibetan language.

On This Compendium of Buddhist Science and Philosophy

Unlike the world's other major religions, the Buddhist tradition's canons contain an extremely large number of texts. Even in the case of the part translated into Tibetan, there are more than five thousand individual texts in over 320 large volumes. The size of the collection means that it would be difficult for a person to read the entire collection even once. So a tradition emerged, from the period of the trailblazers, to extract the essential points from this vast body of scripture and present them in accord with the interests and capacities of the aspirants, in accessible formats such as compendiums and manuals. For example, Nāgārjuna composed the *Compendium of Sūtras*; Śāntideva too composed a compendium of sūtras[16] as well as the *Compendium of Training*; the glorious Atiśa composed the *Extensive Compendium of Sūtras* (*Mahāsūtrasamuccaya*); and the trailblazer Asaṅga composed his *Compendium of Knowledge*. Similarly, Dignāga wrote his *Compendium of Valid Cognition* (*Pramāṇasamuccaya*), bringing together the essential points of numerous works he had authored previously, such as his *Analyses*[17] and his short verse texts. All of these various compendiums proved to be of tremendous benefit to subsequent students of Buddhism.

Taking these precedents as our inspiration, I recognize that in today's time, too, presentations based on the words of the excellent teacher, the Buddha, pertaining to the basic nature of reality as well as associated philosophical concepts can be a source of benefit to

humanity, irrespective of whether one is Buddhist or non-Buddhist, religious or not religious. My aspiration has been to see the creation of these compendiums in a format consistent with the approach of contemporary academic scholarship. This way these presentations can benefit many people. So several years ago I discussed this vision with others and tasked a group of scholars to initiate the project. Today, this group has completed the work of creating compendiums on the presentations on the nature of reality and on philosophy, the first two domains within the threefold division of the subject matter of Buddhist texts. With great efforts the compilers have gathered a vast number of citations from authoritative sources relevant to these two domains. Thus my wish to see such compendiums on science and philosophy from the Buddhist classics — wherein the presentations on these two domains are explained separately in their own rights — has today become a reality. I offer my appreciation to the compendium editors as well as to those senior scholars who have advised the editors. I also thank the translators who have rendered these volumes into other languages.

Given that the scriptures and their commentarial treatises in the Buddhist classics are so vast and profound in their meaning, it is conceivable that there are shortcomings in these volumes in the form of omission, overreading, or even error. At the very least, what the editors have achieved is a series that demonstrates with clarity that there exists within the subject matter of the Buddhist texts three distinct domains of science, philosophy, and religious practice. If, in the future, there should be a need for additional material or deletion of some elements, the structure is now in place so that such modifications can be made easily.

In conclusion, I would like to share my hope that these volumes on the presentations on the nature of reality and their associated philosophical concepts from the Buddhist sources will make an important contribution to our collective human knowledge by offering the gift of a new set of insights. I pray that these volumes become a source of great benefit to many people.

The Buddhist monk Tenzin Gyatso, the Dalai Lama
Introduction translated into English by Thupten Jinpa

Part 1

MIND

The Path of Knowledge

From their earliest days, Buddhist traditions have emphasized the importance of the mind. Traditional accounts maintain that Prince Siddhārtha, who went on to become the historical figure we call the Buddha, the "Awakened One," experienced a kind of spiritual crisis some time in his twenties. The crux of that crisis was the problem of *duḥkha*, a term that is usually translated as "suffering," but which also points to a subtler, more elusive sense of persistent dissatisfaction. It is said that the young prince left his life of leisure and privilege and set out to solve the problem of suffering, and he encountered a panoply of options offered by various spiritual guides. Among the traditions he encountered, some urged spiritual seekers to manipulate their bodies through physical practices, including severe austerities. Such approaches, in various ways, see the problem of suffering as primarily a physical — and not a mental — issue, and they thus propose that the problem of suffering can be solved through manipulating the external world, the body, or both. Traditional accounts maintain that young Prince Siddhārtha plunged into such practices, and eventually, owing to the emaciation brought on by his physical austerities, he could press his hand on his belly and easily feel his backbone underneath. This hyperbolic image of the gaunt prince starkly conveys the strength of his determination to find a physical resolution to the problem of suffering and dissatisfaction.

In the end, however, Siddhārtha turned away from this more physical approach and adopted a perspective that appears to have been increasingly influential in his time. The physical world and the body itself must be maintained, but the problem of suffering cannot be eliminated through purely physical manipulations. Instead, suffering arises from a fundamental distortion in how we experience the world, such that we live in a state of perpetual ignorance (Skt., *avidyā*) or confusion (*moha*). Thus, to relieve suffering, one must remove that fundamental confusion by counteracting it with wisdom (*prajñā*), which "sees things as they truly are" (*yathābhūtadarśana*).

By interpreting suffering as a problem of ignorance, Siddhārtha

had embarked on a spiritual path that, in common with some other Indian traditions, came to be known as a "path of knowledge" (*jñānamārga*). For any path to knowledge, including all Indian Buddhist traditions, the fundamental goal of philosophy and contemplative practice is to uproot the confusion that underlies all suffering. Buddhist accounts often focus on exactly what constitutes ignorance — the foundational cognitive distortion that lies at the root of suffering — since identifying ignorance properly enables one to cultivate its antidote. Different levels of philosophical analysis interpret ignorance differently, and at the most basic level, ignorance concerns the cognitive distortions that induce the sense that one has a fixed and completely autonomous personal identity. Subsequent volumes in this series will examine not only that basic level but also the more finely grained accounts found at higher levels of analysis, such as the radical anti-essentialism found in Madhyamaka philosophy. For all these levels of analysis, the key point is that the defect that produces suffering and dissatisfaction is within the mind itself, and Buddhist theorists from the earliest period onward were thus obliged to engage in an extensive and robust inquiry into the nature of the mind. In that endeavor, they explored the processes of cognition, the contours of affective states, the constituents of reliable knowledge, the meditative methods for transformation, and so on. This volume, compiled by a skilled team of Tibetan scholars, presents the Indian Buddhist account of the mind and its workings, and in this first part, our authors focus on the nature of the mind itself, along with key issues related to cognition. Before examining some key issues in part 1, let's clarify the sources and methods for this account.

Sources and Methods

As noted in Thupten Jinpa's introductory essays in the first volume of this series, the main sources for this compilation come from Buddhist works written originally in Sanskrit, although some are now only available in Tibetan translation. The present volume on mind cites dozens of sources, including discourses (*sūtras*) attributed to the Buddha, but three genres are especially central: the Abhidharma corpus, the *pramāṇa* or epistemological literature, and manuals for contemplative practice. Also key to the first volume of this series, the

analysis of what, in many Western contexts, would be a moment of mind or a "mind event." In a way that can be additionally confusing, Buddhist authors will often speak of plural "minds" that pertain to the same person at different points of time or in different contexts, such as the mind in a moment of visual consciousness or the mind in a moment of one-pointed concentration. Both of these minds could be in the same continuum, such that in referring to someone named Jane, one could speak of "Jane's many minds," a locution that seems odd in Western contexts. In our translation, we have tried to avoid using the plural *minds* as much as possible, but it is important to note that, even in the singular, the term *mind* refers to a single mind event — that is, a discrete moment in a mental continuum.

Turning now to the nature of mind, our authors focus on the most widely cited account — namely, that mind is clear (Tib., *gsal ba*) and aware (*rig pa*). Here, the term *clear* renders two distinct Sanskrit terms that evoke the phenomenal character of mind and also one of its essential properties. In relation to the Sanskrit term *prakāśa*, the Tibetan translation is most accurately rendered as "luminous," in the sense that the mind "illuminates" or presents contents, much as a lamp illuminates whatever is nearby. Unlike a physical lamp, however, the mind does not depend on proximity to "illuminate" whatever is present in a moment of consciousness; a concept of the Eiffel Tower, for example, can be presented in consciousness without any need for one to be in Paris. A second key feature is that, even in exceptional cases where a moment of consciousness has no cognitive content, a mind or moment of consciousness still includes the phenomenal character of presenting or illuminating, even though there is no content to be illuminated.

The mind is also clear in that it is transparent (Skt., *prabhāsvara*). Here, the term *clear* points to a fundamental property of mind. Water, for example, is by nature clear, in that even when it is murky, the impurities that obscure it can be removed, and its natural clarity or transparency will return. Likewise, the mind is clear in that no particular object (such as the Eiffel Tower) or affective state (such as anger) is essential to a moment of consciousness. This point is especially crucial for Buddhist approaches to personal transformation and behavior change, since it means that the dysfunctional habits that produce suffering and dissatisfaction can be transformed, precisely

because they are not essential to the mind itself. This means in particular that ignorance — the fundamental cognitive distortion that underlies suffering — is not an essential property of the mind, and it is therefore possible to remove that distortion without putting an end to consciousness itself.

While the mind is clear — or perhaps "luminously clear," to capture the two senses encompassed by that term — it is also aware (Tib., *rig pa*; Skt., *saṃvit*). In general, this means that a mind or moment of consciousness has an epistemic character; that is, the mind does not simply illuminate, it also does so in an informative way. More specifically, at the level of analysis deployed by our authors, a mind or moment of consciousness is *about* its object, and it presents that object in a way that is relevant to action that engages that object. Our authors point out that mind, by virtue of being aware, is distinct from matter, which lacks this character. Yet two points here are crucial. First, while the mind is distinct from matter, it nevertheless depends on a material "basis" for it to function. In other words, the mind is necessarily embodied, and the constraints posed by a particular embodiment — such as the capacities of one's sensory organs — must be taken into account when examining cognitive processes and other aspects of the mind. Second, while the mind is intrinsically aware by virtue of presenting objects as relevant to embodied action, it is not necessarily the case that a moment of awareness — that is, any given mind event — provides reliable information about its object. It is for this reason, in part, that Buddhist theorists are so concerned to distinguish the many varieties of awareness.

Varieties of Cognition: The Case of Sensory and Mental Consciousness

Much of part 1 is devoted to examining different ways of categorizing mind, and of particular note here is the distinction between sense consciousness and mental consciousness. In this context, the use of the term *minds* in the plural does not apply just to the continuum of mind events. We can also properly say that a sentient being in any given moment may have multiple minds. This points to an important feature of the Buddhist account presented by our authors — namely,

that it adopts what could be called a modularity thesis, similar to some contemporary accounts in cognitive science. Modularity itself is a complex topic, and contemporary notions encompass a variety of competing approaches. In simple terms, *modularity* means that distinct cognitive processes are executed by distinct mental modules that are "encapsulated," in that they can function independently of other modules. Strong forms of modularity often connect these functions to specific brain regions, and they may posit modularity even at complex levels of processing. Weaker forms of modularity assert that modules operate at more basic levels of processing, and such theories may not maintain a strong correspondence between a module and any localized brain region. From the perspective of this highly simplified account of modularity, the Indian Buddhist theorists assert a weak form of modularity, especially in regard to the five forms of sense consciousness.

In brief, an instance of sense consciousness emerges initially when the physical sense faculty contacts the object and thereby becomes its *dominant condition* (Skt., *adhipatipratyaya*). With additional conditions in place, the mental processes required to produce, for example, the first moment of a visual consciousness can occur simultaneously with the processes that produce the first moment of any other sense consciousness, such as an auditory or olfactory one. In this way, multiple sense "minds" can (and usually do) arise simultaneously, and this suggests that sense consciousness exhibits at least a weak form of modularity. For at the low level of processing required to produce the first moment of a sense consciousness, the five kinds of sense consciousness operate independently of each other.

Our authors point out that the low level of processing that produces an initial moment of sense consciousness is not sufficient to induce an action that engages with a sensory object. To facilitate action toward a sensory object, it must be conceptualized or categorized, and this can only occur when the data from sense consciousness moves into mental consciousness. At that point, on the basis of additional conditions such as desires and goals, a concept that facilitates goal-oriented action can occur. Now, however, the modularity related to sense consciousness no longer applies, because only one mental consciousness can occur at any given time. When conceiving sense objects, mental consciousness depends on the lower-

level processing provided by sense consciousness as well as other mental processes such as memory.

One important aspect of this articulation of six types of consciousness — mental consciousness and the five forms of sense consciousness — is that it reflects the commitment to developing models of cognition that do not require an autonomous self (Skt., *ātman*) or perceiver (*bhoktṛ*) as the agent of a cognitive act. Drawing on the work of Dignāga and Dharmakīrti, our authors point out that the sense of subjectivity in any moment of consciousness is simply a momentary "phenomenal form" or "image" (*ākāra*) that emerges simultaneously with the image or representation of the object. This "image" of subjectivity thus has no causal role or agency in that moment of visual perception; it instead reflects a basic structural feature — the subject-object relation — that characterizes any moment of consciousness bearing on an object.

Epistemic Reliability and the Suspicion of Concepts

The emphasis on building cognitive models that set aside any notion of an autonomous, unchanging "self" acting as the agent of cognition returns us to the basic problem of suffering and dissatisfaction. As noted above, Buddhist theorists in India maintain that the fundamental problem of suffering is caused by ignorance, a fundamental cognitive distortion whose most basic manifestation is precisely this sense of an autonomous, unchanging "self" as the agent of actions, the perceiver of perceptions, the controller of the mind-body system, and so on. For these theorists, this distortion can only be solved by cultivating a form of wisdom that counteracts it. A basic theory here is that two cognitive states can stand in opposition to one another such that one necessarily inhibits the other from arising. An additional claim is that, when a nondeceptive (Skt., *avisaṃvādi*) cognition — one that is epistemically reliable — comes into conflict with an unreliable one, the reliable cognitive state, if sufficiently robust, will always inhibit the unreliable one. Moreover, the dispositions that cause the unreliable or distorted cognition to arise can eventually be eliminated by using contemplative techniques to immerse oneself in the experience of the reliable cognition. This basic model, discussed at length in part 6, applies to all cases where one seeks to eliminate

cognitive distortions, and it applies especially to the cultivation of wisdom as a means to uproot ignorance.

Given the central role played by epistemic reliability or nondeceptivity in practices designed to transform a practitioner, it is no surprise that this issue surfaces repeatedly in Buddhist analyses of cognitive processes. The Indian Buddhist tradition contains an enormous amount of material simply on the question of epistemic reliability, especially in the context of a *valid cognition* (*pramāṇa*), which is both reliable and also a motivator of action. The foundational question of epistemic reliability leads to many other nuanced and subtle inquiries that produce the taxonomies in this section of part 1. One intriguing distinction that emerges in these taxonomic analyses is the notion that epistemic reliability can still apply to cognitions that are "mistaken" (*bhrānta*). Well-formed inferences, for example, are always epistemically reliable, but since they are necessarily conceptual, they are also mistaken. Here, epistemic reliability is rooted in the way that a cognition facilitates effective action in relation to an object, and in part this means that a cognition need only be accurate in regard to the causal capacities of the object relevant to one's goal-oriented action. Thus, if I infer from billowing smoke that a fire is occurring in a particular location, my conceptual cognition of fire can enable me to take effective action — whether I seek warmth or want to douse the fire. Yet that conceptualization of "fire" itself is also mistaken, precisely because it is conceptual.

The notion that conceptual cognitions are necessarily mistaken — even when they are epistemically reliable — reflects an overall suspicion of conceptuality that characterizes Indian Buddhism from its earliest days, but the technical account in part 1 draws especially on Dharmakīrti and other Buddhist epistemologists. For these theorists, conceptual cognitions are always mistaken in two ways. First, the object that appears phenomenally in my awareness, known as the conceptual "image" (*pratibimba*) of the object, is taken to be identical to the functional thing that I seek to act upon as the *engaged object* (*pravṛttiviṣaya*) of my action. In other words, the phenomenally presented object "fire" in my conceptual cognition does not have the causal properties of an actual fire — the thought of a fire cannot burn wood. Yet our cognitive system creates a fusion (*ekīkaraṇa*) of this phenomenal appearance with the engaged object to

thought, see chapter 2 of the Dalai Lama, *The Universe in a Single Atom: The Convergence of Science and Spirituality* (New York: Morgan Road Books, 2005). An account of scientific empiricism is given by Bas C. van Fraassen in *The Empirical Stance* (New Haven, CT: Yale University Press, 2002).

external and internal things can appear to it), it has the quality of knowing its object, and it has the nature of mere experience.

Thus, when identifying the nature of the mind, the sūtras teach that the mind is difficult to catch hold of: being intangible, it is weightless; like a firebrand spinning around, it does not rest; like the constantly moving waves of the ocean, it is unstable; like a forest fire, it ignites all deeds of body and speech; like a great river, the mind forcefully draws along a vast number of internal movements of awareness; and so forth.

In general, the mind is the main factor involved in accomplishing the goals that living beings desire. The mind, unlike physical things, is difficult to identify. Yet if we train our mind, then in reliance on mindfulness, meta-awareness, heedfulness, and so on, we will attain both temporary [3] and final happiness. Therefore, in the Buddhist tradition, the system of analyzing the mind in great detail flourished from the earliest times. This is also the main reason why Buddhist texts have extensive explanations about psychology. For example, in the Buddha's own *Dhammapada* it states:

> Do not commit any evil,
> practice supreme virtue,
> thoroughly tame your own mind;
> this is the teaching of the Buddha.[18]

Both the happiness and suffering that arise in relation to beings' desired goals finally depend on the functioning of the mind — for it is owing to the force of having one's mind tamed or not tamed that temporary or lasting happiness and suffering arise. The essence of the Buddha's teaching is said to be the thorough taming of the mind. The *Collection of Aphorisms* also says:

> Taming the mind is excellent.
> A tamed mind leads to bliss.[19]

A tamed mind is the highest excellence, and it is on the basis of a well-tamed mind that happiness arises. [4] *Engaging in the Bodhisattva's Deeds* also makes the same point:

"In this way, all fear and
immeasurable suffering
arise from the mind,"
so taught the Speaker of Truth.[20]

Generally in the context of Buddhist texts, the terms *cognition* (which is the translation of the Sanskrit word *buddhi*), *consciousness* (the translation of *jñā*[*na*]), and *awareness* (the translation of *samvitti*) are all treated as coextensive or synonymous. The nature of *cognition* is stated to be awareness, and the nature of *consciousness* is said to be clear (or luminous)[21] and aware. "Clear" here expresses the essential nature of consciousness, and "aware" expresses its function. "Clear" also indicates: (1) that consciousness is beyond the nature of matter, which is characterized as tangible and obstructive, so it is clear in nature; (2) that just as reflections appear in a mirror, any internal or external object whatsoever — good or bad, pleasant or unpleasant — can appear in consciousness, so consciousness is luminous in that it illuminates objects; and (3) that the essential nature of consciousness is not contaminated by the stains of mental afflictions such as attachment, so its nature is clear or luminous. Thus several meanings of the word *clear* are stated in the texts.

That consciousness is devoid of the property of obstructivity is explicitly stated in the sūtras. For example, the *Teaching on the Undifferentiated Nature of the Sphere of Reality* says: "Is this mind blue? Is it yellow?"[22] Also [5] the *Chapter on the Thirty-Three* says: "The mind has no form, it cannot be pointed out, it has no obstructivity, and it is not representable."[23] Passages such as these explain how the mind lacks color and shape, cannot be visually pointed out, and has no obstructivity.

As noted above, consciousness is posited to be luminously clear in that any internal or external object whatsoever — good or bad, pleasant or unpleasant — can appear in it. This is explained as follows. Just as sunlight or electric light illuminates forms, any external or internal phenomena can be illuminated by — that is, they can appear to — consciousness; it is what makes objects known or manifest. Yet the illumination of sunlight or electric light and the "luminous clarity" that is the essential nature of consciousness are

by its very nature self-luminous.

Exposition of Valid Cognition says:

> Therefore, according to us, the mind itself is luminous,
> since it is by nature luminous clarity; [9]
> and something else [namely, an object] is also luminous
> in that it is illuminated by projecting its form into the mind.[32]

The mind, the subjective, is luminous because it is by nature itself luminous clarity. Something else — namely an object such as a visible form — becomes the appearing object of that consciousness by means of something like the transference of its image — that is, visible form and so on — into that luminously clear consciousness. Therefore it is said that forms and so on clearly appear to that consciousness.[33] In that case, consciousness has both the quality of illuminating, in the sense of being illuminating itself, and the quality of illuminating its object, in the sense that the image (*rnam pa*) of the object appears. In some contexts, when "luminously clear" and "aware" are discussed, the mind may be additionally called "empty" in the sense of being naturally empty of obstructivity, for those texts identify the nature of consciousness as having three qualities — emptiness, luminous clarity, and awareness.

The second quality of consciousness mentioned above is *awareness*, which expresses the function of consciousness. *Exposition of Valid Cognition* says:

> Consciousness has the attribute of apprehending its object;
> it apprehends it in the way that it exists;
> and by virtue of being existent, the nature of the object
> is to produce consciousness.[34]

Consciousness apprehends its object or operates by way of cognizing its object, [10] which must indicate that the foremost unique attribute of consciousness is to apprehend its object or to cognize its object.

Śāntarakṣita speaks about the essential nature of consciousness in terms of having the quality of cognizing its own nature, which is the opposite of the nature of matter or something having a material form.

awareness," Śāntarakṣita's reasoning, from a general point of view, points to a hugely important difference between matter and consciousness. For example, to know something physical such as a red lotus flower or, to use Śāntarakṣita's example, something external such as a chariot, it must depend on some other nonphysical phenomenon, namely, consciousness. Thus, in general, whereas consciousness can be aware of consciousness, a physical thing cannot be aware of a physical thing. Therefore obstructive physical phenomena do not have the quality of knowing objects. [12]

If, in general, matter and consciousness are fundamentally different with respect to their essential natures — in such terms as whether they are obstructive, exist by nature as clear and cognizing, and are in the nature of mere experience — then the question arises, which of these two must be considered fundamental in reality? Also, what is the nature of the relationship between matter and consciousness? Now the proponents of the Cārvāka ancient Indian philosophical school posit physical phenomena to be fundamental and inner mental phenomena to be mere attributes of physical phenomena — like the shadow of a physical object, like the light of an oil lamp, or like the potency of beer. However, the general position of classical Buddhist thinkers is that material phenomena and consciousness are equally fundamental in reality.[38] They maintain that just as physical phenomena cannot be reduced ultimately to some kind of substance or stuff of consciousness, likewise mental phenomena cannot be reduced ultimately to some kind of material substance such as the subtle elements.

Furthermore, although anything that is not consciousness, such as something physical, cannot be the substantial cause of consciousness, both matter and consciousness are mutually dependent on each other. Hence one must definitely accept that the two have a cooperative causal relationship. It is very clear, for example, that the sense consciousnesses would not arise without their causal bases, the physical sense organs. Also, most types of mental consciousness, having been drawn forth by a sense consciousness, [13] are indirectly dependent on the physical sense faculties. Likewise, according to Buddhist philosophical views, many specific worldly environments have a karmic relationship with the beings living in them. In particular, the texts of the highest yoga tantra[39] present the essential

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