

From *Fathoming the Mind:*
Inquiry and Insight in Dūdjom Lingpa's Vajra Essence
by B. Alan Wallace

Epilogue

All of us sentient beings in saṃsāra suffer and wish to be free. But we human beings have exceptional mental abilities of intelligence, memory, language skills, and imagination to enable us to explore the scope of suffering to which we are vulnerable, the true sources of our suffering, the possibility of genuine, lasting freedom, and the way to realize such freedom. But so many of us squander our extraordinary mental gifts by focusing primarily on the pursuit of hedonic satisfaction through the acquisition of material goods, influence, and prestige. In this way, our precious human lives pass by in vain. For many people in our modern world, the meaninglessness of the natural world in general and of human existence in particular is regarded as self-evident. The universe is a mindless machine, and we are biological robots programmed to survive and procreate. This view is said to be supported by scientific evidence. Likewise, the belief that human existence ends in oblivion—the total annihilation of our awareness and personal existence—is accepted by many as an incontrovertible, scientific fact, which only “religious believers” fail to accept. So the cessation of all experience at death is something that we both fear and, at times, quietly, long for. But simply believing something doesn't make it true.

Over the past 150 years, with the domination of science and the media by the unquestioned beliefs of materialism, and the domination of human civilization by materialistic values and consumerism, due to overpopulation and rampant overconsumption (especially by the very wealthy), we are fouling and depleting the entire ecosystem to such an extent that we are rapidly driving other species into extinction and imperiling the survival of our own species. It is well documented that humanity has killed off 50 percent of the wildlife on our planet within just the past forty years, and the trend continues.¹ While human history is filled with the tragic

¹ See Gerardo Ceballos, Paul. R. Ehrlich, and Rodolfo Dirzo, “Biological Annihilation via the Ongoing Sixth Mass Extinction Signaled by Vertebrate Population Losses and Declines,” *Proceedings of the National Academy of Sciences* 114.30 (2017): doi:10.1073/pnas.1704949114: <http://www.pnas.org/content/early/2017/07/05/1704949114.full>. See also “World Wildlife Populations Halved in 40 Years,” a report by Roger Harrabin, BBC environment analyst, September 30, 2014, <http://www.bbc.com/news/science-environment-29418983>.

consequences of people justifying the most vicious behavior in the name of religion, materialism threatens to bring human history itself to an untimely and violent end.

We suffer because of the ignorance of not knowing the nature of reality and the delusion of misapprehending the nature of our own existence and of the world around us. Some such delusion we acquire through our social upbringing. Materialism is a primary example. But the deeper delusion, one that we are all born with, is the tendency to reify ourselves as subjects and all other phenomena as objects. All other innate and acquired delusions and their derivative mental afflictions, such as greed and hatred, are based on it.

By using our exceptional capacity of intelligence in the most meaningful ways, we can explore the reality of suffering and the nature of our ordinary consciousness to discover that, as much as we may resist the idea, our own personal suffering does not cease at death. There is no such easy escape from reality. With the penetrating use of our intelligence we may inquire and gain insight into the true sources of our suffering. In so doing, we may discover that the origins of suffering are not inherent to our existence as sentient beings either. True freedom is a possibility. Guided by those who have come before us and found such freedom for themselves, we may then discover the path to liberation and spiritual awakening. This is the meaning of existence.

The Buddha has shown us the way to fulfill our innermost potential, to realize our heart's desire for freedom by coming to know reality as it is. The remedy for ignorance is knowledge, and the methods of inquiry known as *vipaśyanā* provide the means to gain such insight through deep, experiential realization. It is not enough to listen to lectures on emptiness and dependent origination or to read profound treatises on the nature of existence. We must meditate in order to internalize these truths. But if *vipaśyanā* is not supported by and integrated with *śamatha*, the insights it yields will not penetrate to the core of our being and cut the roots of ignorance and delusion from their source. Furthermore, many great yogins of the past have attested that it is difficult or impossible to make progress in the "swift" practices of the stage of generation and completion without already being grounded in the firm stability of mind that is *śamatha*. As the great Shabkar Tsokdruk Rangdröl (1781–1851) wrote:

The distance covered by a great ship
pulled on land by a hundred men for a hundred days
can be covered in a day when it is put to sea.
In the same way, a single day of meditation
performed with real stability of mind
brings more progress than a hundred days
practicing generation and completion stages

before stability of mind has been attained.²

Given the indispensable role that the full achievement of śamatha plays in reaching the path to enlightenment, thus bringing about irreversible purification and transformation of the mind, we may well ask: How long does it take to achieve such sustainable mental balance and what are the necessary conditions for doing so? Buddhist contemplatives have found that śamatha is most effectively attained if one devotes oneself to this practice full-time and continuously until it is fully achieved. In addition, one must see that all the inner and outer prerequisites for such an attainment have been acquired.

While the inner prerequisites are of primary importance, particularly for the cultivation of śamatha one must also practice in a conducive, supportive environment. This is one that satisfies the following conditions:

- Your basic necessities, such as food and clothing, are easily obtained.
- There is no danger from predators, enemies, and so on.
- Your retreat setting is pleasant and healthy.
- You share the companionship of other ethical, like-minded people.
- Your environment is well-situated, such that there are few people about during the daytime and little noise at night.

As for the all-important inner prerequisites, the following qualities have been found to be indispensable:

- Having few desires for things you don't have.
- Contentment with what you do have.
- Having few concerns and activities that may distract you from your śamatha practice.
- Maintaining pure ethical discipline.
- Utterly dispensing with rumination involving desire and so on, not only while in formal meditation but also between sessions.

² Shabkar Natshok Randrol, *The Life of Shabkar: The Autobiography of a Tibetan Yogi*, trans. Matthieu Ricard, Jakob Leschley, Erik Schmidt, Marilyn Silverstone, and Lodrö Palmo, ed. Constance Wilkinson, with Michal Abrams and other members of the Padmakara Translation Group (Ithaca, NY: Snow Lion Publications, 2001), 282. Translation slightly modified.

Particularly within the context of Mahāyana practice, the cultivation of bodhicitta and the first four perfections of generosity, ethics, patience, and enthusiasm are necessary preconditions for achieving the perfection of meditative stabilization, the fifth perfection, which is the final preparation for cultivating the perfection of wisdom through the practice of vipaśyanā.³ If one has fulfilled all the outer and inner prerequisites for achieving śamatha, Buddhist contemplatives have found that it may be achieved within one year of full-time practice in a suitable environment. But if such prerequisites have not been met, śamatha may never be achieved, no matter how long or how hard you try, as Atīśa warns in his *Lamp for the Path to Enlightenment*: “As long as the conditions for śamatha are incomplete, samādhi will not be accomplished even if you meditate diligently for a thousand years.”⁴ Finally, since many inner and outer challenges, or “upheavals,” are bound to arise in the course of intensive śamatha practice, it is imperative to know how to transform adversity so that it enriches your practice rather than obstructs it. For this, the Tibetan Buddhist practices of “mind training,”⁵ such as Atīśa’s *Seven-Point Mind Training*, can be wonderfully helpful.⁶

While there is good reason to believe that śamatha has been achieved in one year by traditional Asian Buddhists, is it still feasible for people in today’s world—with its materialism, hedonism, and consumerism—to do so? This is a question that can be answered only through experience and only by people who are deeply dedicated to achieving śamatha and proceeding along the path to enlightenment. While we may have faith in the great contemplatives of the past, to know for ourselves whether this path is viable for us in the present, we must also have faith in ourselves. As William James comments, “In what manner do we espouse and hold fast to visions? By thinking a conception *might* be true somewhere, it *may* be true even here and now; it is *fit* to be true and it *ought* to be true; it *must* be true; it *shall* be true for *me*.”⁷

In my experience over the past forty-five years, it is very difficult to find a genuinely conducive environment in which one can continue practicing for as long as it takes to achieve śamatha. So I have concluded that it is necessary to create facilities that are specifically designed for such long-term practice. Since very few people with intent dedication to practice are financially independent, it is also necessary to provide financial support for them and, if they are in retreat outside their own homeland, they must be able to acquire long-term, renewable visas.

³ Tsongkhapa, *The Great Treatise on the Stages of the Path to Enlightenment (Lam Rim Chen Mo)*, vol. 3, trans. The Lamrim Chenmo Translation Committee (Ithaca, NY: Snow Lion Publications, 2002), 28–30.

⁴ Tib. *Byang chub lam gyi sgron ma*, Skt. *Bodhipathapradīpa*, v. 39.

⁵ Tib. *blo sbyong*, pronounced “lojong.”

⁶ See B. Alan Wallace, *Buddhism with an Attitude: The Tibetan Seven-Point Mind-Training* (Ithaca, NY: Snow Lion Publications, 2001).

⁷ James, *A Pluralistic Universe*, 148.

The creation of a worldwide network of such “contemplative observatories” has therefore become one of my highest priorities.

Just as astronomers need observatories and neuroscientists need laboratories to conduct their research, so do contemplatives need supportive environments, companions, and mentors to optimally develop the contemplative technology of śamatha and the contemplative science of vipaśyanā. For their discoveries to gain scientific recognition and public acceptance, these observatories should provide facilities where professionally trained contemplatives fully collaborate with scientists to explore the nature, origins, and potentials of the human mind. In this way, the first-person methods of contemplatives can be thoroughly integrated with the third-person methods of modern science, thus enriching humanity’s understanding of our inner potentials. As William James wrote in reference to a future science of religions as he envisioned it, such collaboration between contemplatives and science “can offer mediation between different believers, and help to bring about consensus of opinion.”⁸ Such an integral contemplative science could earn public acknowledgment comparable to that presently granted to the physical sciences, such that “even the personally nonreligious might accept its conclusions on trust, much as blind persons now accept the facts of optics—it might appear as foolish to refuse them.”⁹

I consider this interdisciplinary, cross-cultural research to be even more significant for the world than the international Human Genome Project, Europe’s Human Brain Project, and the American Brain Initiative. Such research could be a major step toward discovering the common ground among the world’s great contemplative traditions, for bridging spiritual and scientific views of human nature and the universe at large, and for tapping into the inner resources of the human spirit that are the source of sustainable well-being for all.

⁸ William James, *The Varieties of Religious Experience: A Study in Human Nature* (New York: Penguin, 1902/1985), 456.

⁹ *Ibid.*

Afterword

New Frontiers in the Collaboration of Buddhism and Science

Over the past thirty years, I have participated in and listened to many conferences and dialogues about the nature of the mind and consciousness held between scientists and Buddhist scholars, primarily from the Tibetan Buddhist tradition. Time and again, experts from diverse fields, including psychology, neuroscience, and philosophy, have presented their cutting-edge research to Buddhists and then invited their response to these advances in modern science. In virtually all such meetings, it is the Western scientists who dominate, speaking for over 90 percent of the time, while His Holiness the Dalai Lama and other Buddhists in attendance have brief opportunities to respond and ask questions of the Western experts. Overall, I have found much greater openness on the part of Buddhists to learn about scientific discoveries in the mind sciences than I have found open-mindedness on the part of scientists eager to learn about Buddhist discoveries. For example, His Holiness has often commented that if scientists present evidence that clearly refutes any Buddhist belief, he would abandon that Buddhist belief. But it is rare to find any scientist who would likewise agree that if Buddhist contemplatives make replicable, intersubjectively validated discoveries that clearly refute certain materialist beliefs, they would abandon those beliefs. When scientists meet eminent Buddhist scholars and contemplatives, they might open such a conversation in a spirit of humility, acknowledging the following points:

- Although the scientific study of the mind has been pursued for more than 135 years, there has been no progress in solving the “hard problem,” or the question of *how* brain activity and conscious experiences are correlated.
- While hundreds of scientific and philosophical books and articles have been published about the nature of consciousness, there is currently no scientific definition of consciousness, no objective means of detecting mental phenomena, the neural correlates of consciousness itself have yet to be discovered, and it is unknown whether organic processes are universally necessary for the generation of all possible states of consciousness.
- Since 1950 tremendous advances have been made in understanding the neural conditions that contribute to mental diseases, a great number and variety of psychopharmaceutical drugs have been developed and have been widely prescribed by medical professionals, especially in wealthy countries, and over two hundred schools of psychotherapy have

been devised to help people with psychological problems. Yet, despite all these advances, during this same period there has been a tenfold increase in depression, which is now the number-one cause of disability worldwide, with the risk of depression 32 percent higher in wealthy countries.

- Since 1950 in the United States, the gross domestic product has increased fiftyfold, but the reported change in well-being has remained unchanged. So, despite the recent advances in positive psychology, there appears to be little or no improvement in humanity's overall mental health and well-being.

So, they might say, in light of the evident limitations of materialist approaches to understanding the mind, consciousness, and mental health and well-being, we scientists are keen to learn about Buddhist theories, methods, and discoveries in these fields. Buddhists might respond in a similar spirit of humility by acknowledging that over the past 2,500 years, Buddhism has not developed any quantitative, scientific study of behavior or the brain, and there is no branch of Buddhist psychology specifically devoted to diagnosing and treating mental illness. However, the Buddhist tradition has developed highly sophisticated means of developing and utilizing attention and introspection in the direct study of consciousness and a broad range of mental states and processes.

I would love to participate in conferences with dialogues between Buddhists and scientists in which they are both given the same time to present their views, and with mutual open-mindedness, which has been exceedingly rare thus far. For example, in numerous such meetings with scientists, when His Holiness has spoken of empirical evidence concerning both children and contemplatives who have expressed clear past-life recollections, the scientists have quickly shifted the topic without giving such evidence any credence or inquiring about Buddhist theories to explain such memories. Such closed-mindedness is frustrating, and it generally pertains to any evidence or reasoning that challenges the unquestioned assumptions of scientific materialism.

While the theories and methods of science in general are largely compatible with, or complementary to, those of Buddhism, the beliefs and methodological constraints of scientific *materialism* are fundamentally incompatible with all schools of Buddhism throughout history. The relationships between proponents of scientific materialism and those of Buddhism are complex, but might nonetheless be characterized by way of the following metaphors, shocking though they may be:

1. Communist regimes, such as the former Soviet Union and the People's Republic of China, which embrace scientific materialism as their state religion, are like wolves in wolves'

clothing, for they have consistently committed genocide against Buddhism, often bent on its total destruction and delegitimization as well as the mass murder and incarceration of its proponents.

2. Scientists who embrace materialism as their unquestioned ideology are like wolves disguised as sheepdogs, who have taken on the apparently benign role of leading the Buddhist flock to the slaughterhouse, where Buddhism is butchered and a “filet of Buddhism” is sold to the public, from which all the bones of contention where Buddhism is incompatible with materialism have been carefully removed.

3. Many people posing as “secular Buddhists,” but who in fact unquestioningly adopt the beliefs of scientific materialism, are like wolves in sheep’s clothing, for they try to blend in with the flock of Buddhists, urging everyone around them that their Buddhism is the new, improved version, freed from all the superstitions of religion, including the Buddha’s own account of his enlightenment and the myriad accounts of later Buddhist adepts who have fathomed the nature of the mind and from that perspective reveal materialism to be intellectually and morally bankrupt.

4. Buddhists who fail to challenge these assaults on Buddhism are like neutered sheep who keep their heads down and their eyes closed as they passively witness the integrity of their own tradition being sacrificed on the altar of materialism, nihilism, consumerism, and hedonism.

As the Harvard psychologist Jerome Kagan remarked during the Mind and Life conference at MIT in 2003, “Humans do not like being wolves,” and I might add, we don’t like being led to the slaughter by them, either. At the conclusion of this meeting, the MIT geneticist Eric Lander commented:

What are the foundations for any kind of dialogue between different traditions? The first foundation is a commitment to openness, to debate, to evidence, to a nondogmatic approach, and to respect. What does it really mean to be open? It means to be willing to change your mind and say you might be wrong.... It’s not enough for the Buddhists to be open to rethinking. Science also must be open to rethinking. At its best, science is about constantly being in doubt and maintaining a constant humility about how little we know. In practice, day to day, that humility doesn’t always emerge....

[Buddhists] bring traditional practices that have been worked out through experimentation and careful thought over some 2,500 years. How should we regard such traditional practices? One way is to regard them as something like folk wisdom, the way that pharmaceutical companies might regard a folk remedy: They’re on to something and now we’ll work out what the real basis of it is. I don’t think that’s the right way to regard it. I am persuaded that we have every reason to regard it as a refined technology that could play a critical role in science....

Lastly, what can the world gain? Several things: specific knowledge about the mind and the brain. The questions are very challenging and we need all the help we can get. But there are some other things the world can gain. I'll speak now as a scientist concerned about our society. We live in a world where science is a very powerful and effective paradigm, and yet we know it does not contain all the answers to all human needs. Like any one-dimensional diet, consuming only science leads to malnutrition. The fact that science does not contain the answer to all human needs has produced in many people, in our country at least, what some have called a flight from reason: a rejection of science and the appeal of fantastical things.... This debate is remarkably different from this. It is not about any flight from reason, or flight from science. It is possible for science and Buddhism to recognize happily that science is only one way of understanding the world. It can be incorporated; it can be worked with; it need not be rejected. I think that is really important. Our world would be much better with debates that are based on respect and an attempt to understand. Science very much needs to be willing to participate in those debates because it has much, but not everything, to offer the world.¹⁰

Jerome Kagan then offered his own reflections, including the following:

The primary purpose of this meeting was to consider whether individuals trained in the Buddhist form of introspection could discover significant facts about the human mind that no other method could reveal; and secondly, whether those facts had a special or privileged access to what was true.... Although the Buddhists contend that specially trained introspection can reveal deep truths about the human mind that Richard Davidson's EEG or fMRI scanner could never discover, I remind you that Niels Bohr, the great Danish physicist who's a hero for me, suggested that no method has a uniquely privileged power to reveal the true nature of the human mind or the true nature of anything. It does not matter whether we record neuronal activity, behavior, latencies in a priming experiment, or the products of trained introspection. Each method reveals something different about the whole, and we need a variety of procedures to come closer to answers that, of course, we will never possess....

I do believe, however, that trained introspection can reveal subtleties of perception and feeling that no other current scientific method can discover. That's why I came to this meeting, and therefore this information is useful. And I agree with

¹⁰ Arthur Zajonc and Anne Harrington, eds., *Investigating the Mind: The Dalai Lama at MIT* (Cambridge: Harvard University Press, 2006), 181–89.

Eric Lander and the consensus in this meeting that that evidence should be incorporated into our studies of human psychology. I welcome the contribution of Buddhist scholars to this mission. They have something important to tell us about mind and perhaps brain. Although their insights are not more valid, or, if you prefer, more true than any other corpus, trained introspection is a valuable source of evidence, another instrument to be added to those of the geneticist, the cell biologist, the neuroscientist, the historian, the psychologist, the sociologist, the anthropologist, the novelist, the poet, and all others who wish to be wiser observers of the phenomena that we can never know completely.¹¹

Finally, Eric Lander offered this wonderful challenge to Buddhists:

I'd like to emphasize the importance of the point that the Buddhists may be better able to tell us what kinds of psychological and psychophysical tests one would apply to capture whether someone has or hasn't attained an ability to attend or to control emotion. I would like to push the point because some of those tests can be done without the MRIs in Wisconsin. They could be done by Buddhists in Dharamsala. For a meaningful research collaboration to go on, it must go on in India and Tibet as well. It's just good science. We must both actually be engaged in designing experiments to have the best conversation. A great outcome would be Tibetan Buddhists doing and publishing experiments there with colleagues in the next few years. That's something demonstrable one could try to accomplish. I think they would be different experiments and very interesting. The experiments would get picked up and then tried in the West.¹²

His Holiness the Dalai Lama's response to the above comments was clear and succinct:

As I listened to the presentations of Eric Lander and Jerome Kagan, who made a beautiful summation of some of the salient points that were raised in the conversations, I felt deeply impressed and the only thing I could say is, yes, I agree with you.... We human beings have a physical body, but we also have this mind. To have a happy, meaningful life, we have to take care of our body as well as our mind.

¹¹ Ibid., 194–98.

¹² Ibid., 211–12. The reference to “MRIs in Wisconsin” pertains to studies at the University of Wisconsin, Madison.

So I think spiritual traditions and material progress should go together in combination.¹³

Unfortunately, since that historic meeting, very little has been done by either the scientific or Buddhist communities to implement these provocative, groundbreaking suggestions from Lander and Kagan, enthusiastically endorsed by H. H. the Dalai Lama. It is high time to start organizing conferences on Buddhism and science to which are invited truly open-minded scientists, philosophers, and Buddhists who are willing to question their beliefs and the limitations of their respective modes of inquiry. These would be true dialogues, where both sides are given equal time to share the discoveries and insights of their traditions, in contrast to the current approach in which scientists provide tutorials for Buddhists and invite them to respond. Genuine cross-cultural, interdisciplinary collaboration must be based on mutual respect, in which all participants are not only willing but eager to question even their most cherished assumptions, which are to be examined and appraised in the light of compelling evidence and sound reasoning. This is the common ideal of both Buddhism and science.

It is also high time for Buddhists to establish our own centers for contemplative research, based primarily on the contemplative technology of “higher training in samādhi”¹⁴ and the contemplative science of “higher training in wisdom,”¹⁵ with both of these rooted in “higher training in ethics.”¹⁶ Since śamatha and vipaśyanā are widely regarded as the essential practices of Buddhist meditation, their cultivation and achievement should be central to all Buddhist contemplative training and inquiry. While virtually all scientific research on meditation thus far has entailed scientists studying the brains and behavior of meditators as subjects of scientific inquiry, true collaborative research must entail the *integration* of the third-person methods of science and the first-person methods of contemplation.

In short, what is needed in these modern times, in which humanity and the ecosphere at large are beset with so many human-made crises, is a true revolution in the mind sciences and a true renaissance in contemplative inquiry. If these two great transitions are achieved, we may be able to restore balance and harmony where it has been lost in the lives of individuals and our global community as a whole. These ideals may be achieved through close collaboration between scientific and contemplative researchers, which has the potential to open vast new horizons of knowledge that will transcend the current boundaries between science and religion.

¹³ Ibid., 214–15.

¹⁴ Skt. *adhisamādhiśikṣa*.

¹⁵ Skt. *adhiprajñāśikṣa*.

¹⁶ Skt. *adhiśtlaśikṣa*.

As a step toward realizing these ideals and carrying through with the suggestions of Kagan and Lander, the Center for Contemplative Research (CCR) is currently being developed on the site previously known as the Nada Hermitage in Crestone, Colorado. It will provide an environment for exploring the inner potentials of the human mind and the nature and origins of consciousness, integrating the first-person methodologies of contemplative inquiry with the third-person methodologies of scientific inquiry. It is a branch of the Santa Barbara Institute for Consciousness Studies, which I founded in Santa Barbara, California, in 2003 as a nonprofit organization dedicated to research and education in the field of cross-cultural and interdisciplinary studies on the nature and potential of the mind.

Over the past few decades, world-class scientists have begun to explore the benefits of meditation and are eager to work with contemplative traditions. This center will be the first facility in the world that is dedicated to research into the nature of the mind and consciousness by contemplatives and scientists working hand-in-hand in a spirit of open-minded mutual respect and appreciation. There is already enthusiastic interest on the part of international experts in these fields of study, and the only missing link so far has been the creation of such a center designed to provide the optimal environment for such long-term, in-depth research. The center, located on 110 acres of land graced with piñon pines, nestled at the base of the towering Sangre de Cristo mountain range, includes a chapel, meeting hall, maintenance buildings, and eleven serviceable retreat cabins for contemplatives to receive long-term, professional training in meditation in collaboration with scientists working closely with them.

While great progress in the mind sciences have been made over the past century, the nature and origins of consciousness remain as much a mystery now as ever, and no significant breakthroughs have been made regarding the so-called mind-body problem, or the way in which the mind interacts with the body. Likewise, in quantum physics, the “measurement problem,” which pertains to the role of the observer in making quantum measurements, remains unsolved. A working hypothesis for research in the CCR is that the lack of progress on these two fronts is because the radical empiricism that has been the hallmark of the great scientific revolutions of the past has been neglected when it comes to the scientific study of the mind. Galileo applied such a radically empirical approach to the study of astronomy and physics, Lavoisier adopted this approach for chemistry, and Darwin applied it to the study of biological organisms. In short, it entails the rigorous, open-minded, direct observation of the natural phenomena one seeks to understand. While the mind sciences have developed a sophisticated array of methods for studying the mind indirectly through the investigation of the neural correlates of mental activity and its behavioral expressions, they have failed to develop any rigorous methods for observing and investigating the mind firsthand. This can be done only through introspection, which has been largely neglected in the mind sciences for over a century.

Such radically empirical methods of observing and exploring the nature and origins of the mind have been developed over many centuries in the East and West, mostly notably by Buddhist, Hindu, Jain, Taoist, Jewish, Christian, and Sufi contemplatives. But these methods have never been integrated with those of modern science, and in today's world they have commonly been marginalized by the traditions in which they were originally developed. The core mission of the CCR is to help catalyze the first, true revolution in the mind sciences and a renaissance in contemplative inquiry.

The CCR will provide facilities for qualified individuals to engage in extensive, professional training in meditative practices, beginning with the cultivation and achievement of *śamatha* and *vipaśyanā*, and then moving on to more advanced contemplative practices, especially those taught in the Dzokchen tradition. By dedicating oneself to these practices over years of full-time training, levels of expertise can be achieved that are virtually unknown in the modern world. With the close collaboration between such highly trained contemplatives and psychologists, neuroscientists, physicists, and philosophers, our core mission is to unveil the deepest mysteries of consciousness and the role of the mind in nature for the benefit of humanity.

In the spring of 2017 the Santa Barbara Institute began offering an annual series of intensive, eight-week contemplative training programs focusing on the five visionary Dzokchen treatises revealed by Dūdjom Lingpa. During this first retreat, I gave the oral transmission and commentary to Dūdjom Lingpa's *Foolish Dharma of an Idiot Clothed in Mud and Feathers* and *Buddhahood without Meditation*. In 2018 we turned to the *Sharp Vajra of Conscious Awareness Tantra* and Dūdjom Lingpa's commentary, entitled the *Essence of Clear Meaning*, the following year we focused on *The Enlightened View of Samantabhadra*, and in the spring of 2020 we held an online retreat, during which we focused on the first three phases of *The Vajra Essence*, which will be continued over the coming years. These retreats are personally attended by scores of people, with hundreds more participating from around the world by listening to podcasts of the oral transmissions and commentaries. In 2017, 2018, and 2019, participants in the eight-week retreat collaborated with an international team of scientists to explore the effects of such training from first-person and third-person perspectives. We anticipate further studies of this kind throughout the entire series of these retreats.

The scientific study of the effects of meditation is still in an early phase of development, and until now it has been limited to scientists conducting their studies on meditators, who are simply subjects—not true collaborators—in such research. The CCR will explore unprecedented ways of supporting mutually respectful, truly collaborative research between contemplatives and scientists, each drawing on the unique strengths of their respective traditions. Graduates from these eight-week programs, and especially from much longer, solitary retreats, will be prepared

to bring the benefits from such contemplative training into all aspects of modern society, including education, business, healthcare, government, the arts, and athletics.

The CCR will explore methods to improve attention, memory skills, mindfulness, and emotional balance. Such research will explore the potential benefits of meditation as an alternative to drugs for the prevention and treatment of mental disorders, including depression, attention deficit/hyperactivity disorder (ADHD), general anxiety disorder (GAD), and post-traumatic stress disorder (PTSD). An additional field will be the study of the value of different types of meditation to develop high levels of mental health and well-being. These studies will focus on the cultivation of genuine well-being that arises from the realization of inner peace and mental balance, without dependence on external conditions. To achieve this, we hypothesize that it is necessary to develop and sustain four kinds of mental balance: (1) conative, entailing the cultivation of intelligent desires and intentions, (2) attentional, entailing the ability to focus one's attention with stability and clarity, (3) cognitive, entailing discerning mindfulness, and (4) emotional, entailing the development of emotional intelligence. In my forty-two years of experience as a teacher of meditation, I have found that exceptional mental health and well-being is the natural result of such training in these four aspects of mental balance. Now we will have the opportunity to put such hypotheses to the test of rigorous scientific study.

The contemplatives and scientists dedicated to the creation of CCR envision this center becoming the hub of an international network of such centers belonging to the Association for Research in Contemplative Science (ARCS). Great interest in such an interdisciplinary, cross-cultural network has already been expressed by individuals and institutions in countries throughout the world, including India, Singapore, Mongolia, Brazil, Mexico, the United States, Australia, the United Kingdom, Spain, Italy, Austria, and Russia. The vision is to model this association after the Human Genome Project, with multiple research centers collaborating to make fundamental discoveries about the mind and its role in nature.

The idea of creating this research facility has aroused a high level of international enthusiasm, in part because it has been inspired and fully supported by His Holiness the Dalai Lama. The Santa Barbara Institute for Consciousness Studies has already conducted such research at multiple campuses of the University of California, at Emory University, the University of Arizona, and at the University of Vienna, and it has collaborated with many scientists around the world. In the future we anticipate working with other contemplative centers and scientific institutions worldwide, thus beginning the formation of a network of international, spiritual, cultural, and scientific collaboration known as the Association for Research in Contemplative Science.