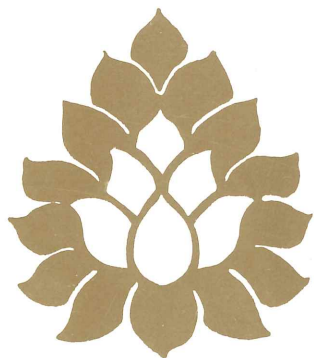


MIND AND LIFE II



DIALOGUES BETWEEN
BUDDHISM
AND THE
NEUROSCIENCES

WITH
HIS HOLINESS
THE XIVTH DALAI LAMA

NEWPORT BEACH, CALIFORNIA
OCTOBER 5th & 6th, 1989

MIND AND LIFE II

DIALOGUES BETWEEN BUDDHISM AND THE NEUROSCIENCES

This gathering is inspired by a shared interest in developing constructive comparisons between Buddhists' and neuroscientists' ways of comprehending mind and consciousness. Such comparisons can contribute multidimensionally to both of these rich, yet remarkably dissimilar and traditionally separate, cultural approaches to mind and life.

Buddhism and neuroscience have parallel but quite distinct traditions for examining consciousness and its relation to the body. These traditions go back at least 2500 years to the Buddha and Hippocrates. While both disciplines place great emphasis on experience and reason, their methods of research and verification are radically different. While neuroscience examines mind-brain processes largely objectively, using increasingly sophisticated technology; Buddhism pursues its research chiefly by enhancing stability and clarity of subjective awareness, and directs that awareness toward the exploration of cognitive events and other phenomena. Each discipline has its own clearly prescribed techniques for testing hypotheses. However, due to their radically different methodologies and isolation from one another, their views have remained quite disparate and incommensurable all these centuries.

These dialogues on mind and life confront the questions: Are these disciplines simply incompatible, or might they rather be regarded as complementary? Are there scientific ways of testing Buddhist theories and Buddhist ways of testing western science? This meeting will enable experts in philosophy, psychology, psychiatry, neurology, neuroscience, and Buddhist theory and practice to clarify key concepts in neuroscience and Buddhism for the purpose of improving cross-cultural understanding among Buddhist scholars and western scientists.

These dialogues are the second in a series of discussions carried out in the atmosphere of a living room conversation. Each session will involve presentations followed by a discussion among the participants. The event will be transcribed and videotaped in full; copies of the tapes and transcripts will be provided to the Tibetan Government for use in their schools and monasteries, and to the western public to improve cross-cultural understanding. Edited versions may be prepared for books or articles, more abbreviated viewing, and perhaps for broadcast.

PARTICIPANTS



Tenzin Gyatso, His Holiness, the XIVth Dalai Lama of Tibet.

Patricia Smith Churchland, B. Phil., [Oxon.] Professor of Philosophy, University of California, San Diego.

Antonio R. Damasio, M.D., Professor of Neurology, University of Iowa, College of Medicine.

J. Allan Hobson, M.D., Professor of Psychiatry, Harvard Medical School.

Lewis L. Judd, M.D., Director of the National Institute of Mental Health.

Robert B. Livingston, M.D., Professor of Neurosciences *Emeritus*, University of California, San Diego.

Larry R. Squire, Ph.D., Professor of Psychiatry, University of California, San Diego.

INTERPRETERS



Geshe Thubten Jinpa, Kings College, Cambridge University, England.

B. Alan Wallace, B.A., Spiritual Director, Dharma Friendship Foundation, Seattle, Washington.

PROGRAM

Thursday, October 5

Morning Session: 9:30 a.m. - 12:00 p.m.

INTRODUCTION: Dr. Robert Livingston

Presentation on: **ISSUES CONCERNING MIND AND BRAIN**
Dr. Patricia Smith Churchland

We have mental states such as perceptions, memories, thoughts and intentions. We also have a physical body that has mass, grows, gets bruised and so forth. A traditional question has focused on the relation between mental states and states of the physical brain. Are there really two kinds of things, or only one, but one whose organization is very complex? Can consciousness and memory exist independently of a nervous system or are they features of the nervous system and die with it? Are other primates conscious, and is it possible that someday a machine might see and be conscious? Evolutionary biology, neuroscience and computer modeling suggest that mental states are things in the brain - that they are actually states of the physical brain. This has important implications for how we understand mental states, how we understand ourselves and how we plan technology.

Discussion theme: **MINDS AND BRAINS**

What kinds of techniques might be used to discover the nature of minds and brains?

Afternoon Session: 1:30 p.m. - 4:00 p.m.

**Presentation on: HOW BRAIN DAMAGE IN SPECIFIC BRAIN
REGIONS AFFECTS PERCEPTION,
RECOGNITION AND LANGUAGE**
Dr. Antonio R. Damasio

Damage to specific brain regions can alter the experience of color, the recognition of faces, and the ability to translate thoughts into language or vice-versa. The cognitive and neural study of patients with such disorders, reveals new aspects of brain organization and indicates that complex psychological functions depend on relatively separate collections of interacting brain regions.

Discussion Theme: THE NEURAL BASIS OF CONSCIOUS STATES

What can knowledge about the brain structure and function tell us about consciousness?

Presentation on: MEMORY AND BRAIN
Dr. Larry R. Squire

How is experience stored in the brain? What happens to the record of experience when specific brain structures are damaged? Is there one kind of memory or many? Newly developed technology and new experimental findings are providing the beginnings of a sketch of how the brain accomplishes learning and memory.

Friday, October 6

Morning Session: 9:30 a.m. - 12:00 p.m.

Presentation on: **BRAIN CONTROL OF CONSCIOUSNESS STATES**
Dr. J. Allan Hobson

The current knowledge of the control of the states of waking, sleeping and dreaming by the brain stem will be reviewed. The way the brain is activated and how the source of information processed is switched will be detailed. The neurobiological data will be related to details of the experience such as dream visions, dream thinking, and dream feeling. Techniques for dream collection incubation, lucidity, and control will be reviewed as will some of the history of these techniques in western science and religion.

Discussion theme: **RELATIONSHIP OF THE THEORIES OF STATE CONTROL IN WESTERN SCIENCE AND TIBETAN TRADITION**

In what ways can Tibetan understanding about state control be measured by western science? How can western methods of state control be incorporated into Tibetan practices?

Afternoon Session: 1:30 p.m. - 4:00 p.m.

Presentation on: **NEW CONCEPTS OF MENTAL ILLNESSES
BASED ON NEW INFORMATION FROM THE
NUEROSCIENCES**
Dr. Lewis L. Judd

During the last 25 years, Western concepts and practices for diagnosis and treatment of mental illnesses have changed radically. Many once-mysterious mental disorders, such as

alternating high and low moods and schizophrenia ("split personality"), are now perceived as psychobiological processes which result from complex interactions of constitutional and environmental factors. Developments in neuropsychopharmacology have helped establish a broad and expanding array of medicines with proven effectiveness for treatment of specific mental disorders. Clinical management strategies for specific mental disorders now combine psychotherapy and medications. These advances have given rise to increasingly systematic and effective treatments for mental disorders throughout the Western world, and they should have beneficial applications in other cultural settings as well. Many aspects of mental illnesses still elude our understanding and control. These shortcomings appear to reflect both the lack of sufficient empirical research and the limitations of Western theories of mental illnesses. Thus, an exploration of commonalities and differences between Tibetan Medicine and Western mental health approaches will be mutually beneficial.

Discussion theme: **EXPLORATION OF THE COMMONALITY BETWEEN TIBETAN BUDDHISM AND WESTERN NEUROSCIENCE WITH RELATION TO UNDERSTANDING MENTAL DISORDERS AND THEIR TREATMENT.**

Does Tibetan Buddhism, which underpins Tibetan medicine, conceptualize mental disorders as having biological roots as related to dysfunctional brain mechanisms? Can clinical practices in both traditions benefit from a thorough exchange of theories and empirical research findings?

ABOUT THE PARTICIPANTS

His Holiness the Dalai Lama

His Holiness the XIVth Dalai Lama, Tenzin Gyatso, is the spiritual and temporal leader of the Tibetan people. He was born on July 6, 1935 in a small village called Taktser in northeastern Tibet. Born to a peasant family, His Holiness was recognized at the age of two, in accordance with Tibetan tradition, as the reincarnation of his predecessor, the 13th Dalai Lama. The Dalai Lamas are manifestations of the Buddha of Compassion, who chose to reincarnate for the purpose of serving human beings. His Holiness had traveled extensively, speaking on subjects including universal responsibility, love compassion and kindness.

Patricia Smith Churchland

Patricia Smith Churchland is Professor of Philosophy at the University of California San Diego. She received her Bachelor's degree (with Honors), at the University of British Columbia, a Master's degree at the University of Pittsburg, and a B.Phil at Oxford University. She taught at the University of Manitoba, becoming a full Professor there in 1983, following a year as visiting member, Institute for Advanced Study, Princeton University. She has received a conspicuous number of distinguished awards and fellowships, has been the past President of the Society for Philosophy and Psychology, and is the author of *Neurophilosophy: Toward a Unified Science of the Mind/Brain*, published by MIT Press.

Antonio R. Damasio

Antonio R. Damasio is Van Allen Professor and Head of the Department of Neurology, at the University of Iowa College of Medicine, and Adjunct Professor at the Salk Institute. He received both his MD and his doctorate from the University of Lisbon, and began his research in behavioral neuroscience with the late Norman Geschwind, Putnam Professor of Neurology at Harvard Medical

School. He joined the faculty at the University of Iowa in 1976, where he has been Chief of the Division of Behavioral Neurology and Cognitive Neuroscience, and Director of the Alzheimer's Disease Research Center. Dr. Damasio's bibliography lists more than 200 titles, devoted to the understanding of the cerebral basis of vision, memory, and language, and the elucidation of diseases such as Alzheimer's. His new model of neural architecture subserving cognitive processes is being published this year in the journals of *Neural Computation* and *Cognition*. He is a member of the American Neurological Association, a Fellow of the American Academy of Neurology, and is a Past President of the Academy of Aphasia and of the Behavioral Neurology Society.

J. Allan Hobson

Dr. Allan Hobson is interested in the relationship of mind and brain with special reference to conscious states, including dreaming. He studies human sleep and dreaming and performs experiments on animals in the Laboratory of Neurophysiology at the Harvard Medical School where he is a Professor of Psychiatry. He is the author of *The Dreaming Brain* (1988) and *Sleep* (1989). He recently won the prestigious von Humboldt award of the Max Planck Society. He is a lucid dreamer.

Lewis L. Judd

Lewis L. Judd, M.D. has been the Director of the National Institute of Mental Health (NIMH), since January, 1988. He received his Bachelor's degree in Psychology from the University of Utah and his medical degree with honors from UCLA. Prior to joining NIMH, Dr. Judd served 11 years as Professor and Chairman of the Department of Psychiatry at the UCSD School of Medicine, and as Chief of the Psychiatry Services at the UCSD Medical Center. Previously, he was a member of the faculty and Director of Education in Child and Adolescent psychiatry at UCLA. Dr. Judd serves on the Scientific Council of the National Alliance for Research in Schizophrenia and Depression and is a member of numerous professional and scientific societies. He is a Fellow of the American College of Neuropsychopharmacology and of the American Psychiatric Association, and he was recently elected to the Institute of Medicine

(National Academy of Sciences). Dr. Judd has been a prolific contributor to the world's scientific literature, and has served on editorial boards of scientific journals, including the *American Journal of Psychiatry*, *Journal of Clinical Psychiatry*, *Psychiatry*, and *Journal of Neuropsychiatry* and *Clinical Neurosciences*. He also edited the recently published book *The Basic Science Foundations of Clinical Psychiatry*.

Robert B. Livingston

Robert Livingston is Professor of Neurosciences *Emeritus* at UCSD. He received his undergraduate and medical degrees from Stanford University. Prior to founding the world's first Department of Neurosciences, the first department in the new School of Medicine at UCSD in 1965; he taught Neuropathology at Stanford, Neurophysiology at Yale, Psychiatry at Harvard, and Physiology and Anatomy at the UCLA Medical School. He also served as Executive Assistant to the President of the National Academy of Sciences and Chairman of the National Research Council; and as Scientific Director for both the National Institute of Mental Health and the National Institute of Neurological Diseases and Blindness. Livingston has held research and teaching fellowships at the Université de Genève, Collège de France, Oxford University, Göteborg University, University of Hawaii, and University of Zürich. He is active in Physicians for Social Responsibility, International Physicians for the Prevention of Nuclear War, and Beyond War. He participated in the founding of the Council for a Livable World, the Institute for Policy Studies and the Elmwood Institute.

Larry R. Squire

Larry Squire received his Ph.D. in 1968 from the Department of Psychology at the Massachusetts Institute of Technology. After postdoctoral training at the Albert Einstein College of Medicine, he joined the faculty of the Department of Psychiatry at the University of California School of Medicine, San Diego (UCSD). Currently, he is Professor of Psychiatry at UCSD and Research Career Scientist at the Veterans Administration Medical Center in San Diego. His interests are in the organization of memory and its neurological foundations. He and his research group study neurological disorders

of human memory and the anatomy of memory in monkeys. He has published 150 scientific articles and a book *Memory and Brain*. He is Secretary of the Society for Neuroscience and Editor of the journal *Behavioural Neuroscience*.

ABOUT THE INTERPRETERS

Thubten Jinpa

Born in Zonghar, Tibet in 1959, Thubten Jinpa received his initial monastic training at Zonghar Chode Monastery, India. In 1978, he joined Shartse College of Ganden University where he engaged in intensive study of Buddhist Philosophy, Epistemology and Logic. He received his Geshe degree in 1989, and is presently studying at Cambridge University in England. He has taught logic and philosophy and is one of the principal interpreters for His Holiness the Dalai Lama.

B. Alan Wallace

Born in California in 1950, Alan Wallace began his studies of Tibetan Buddhism and the Tibetan language at the university of Göttingen, West Germany in 1970. He continued his studies for three years at the Library of Tibetan Works and Archives and the Buddhist School of Dialects in Dharamsala, India. For a period of four years, he studied, taught and interpreted for numerous Tibetan lamas at the Tibet Institute and the Centre for Higher Tibetan Studies, both in Switzerland. After a thirteen year absence from western academia, he earned his Bachelors Degree from Amherst College, *summa cum laude*, where, as an Independent Scholar, he researched the philosophical foundation of modern physics in light of Buddhist philosophy. This research resulted in his book, *Choosing Reality: a Contemplative View of Physics and the Mind.*, published in 1989. He has translated and published several other books on Tibetan Buddhism, language and medicine and is currently the Spiritual Director of Dharma Friendship Foundation in Seattle, Washington, and a graduate student of Religious Studies at Stanford University.

CO-ORDINATION COMMITTEE

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Universal Education Association and Vajrapani Institute

Robert B. Livingston, Scientific Co-ordinator
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