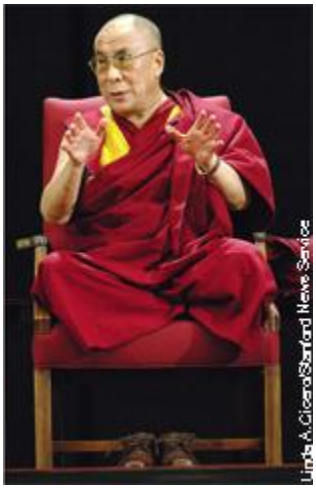
SCIENCE&SPIRIT
exploring things that matter

critical mass

Craving a Discourse

A longtime supporter of the science and religion dialogue, the Dalai Lama is attracting large audiences—and a little bit of controversy

by Dean Nelson



As Tenzin Gyatso sat cross-legged in a straightbacked chair in Palo Alto, California, in November, comfortably discussing states of mind with an all-star panel of scientists, conference organizers in Washington, D.C., were fretting over protests and worrying about the reception the fourteenth Dalai Lama would receive a week later when he gave the keynote address at the annual gathering of the Society for Neuroscience, or SfN.

Stanford University's Neuroscience Institute was focused on synergies between neuroscience and Buddhism; the SfN organizers were concerned about the perceived conflict between science and religion. The gathering in Palo Alto took advantage of the opportunity to explore the ways in which reason and faith can enrich one another; the coming event in the nation's capital was riddled with opposition born of a protest aimed at disinviting the Dalai Lama, one of religion's most outspoken supporters of modern science.

More than 700 scientists signed the ultimately unsuccessful petition demanding SfN rescind its invitation and prevent the Dalai Lama from addressing more than 20,000-plus attendees.

Because many of the signatories were of Chinese descent, some people speculated that politics played a role, but the explicit reason for the protest was that incorporating a religious leader's ideas into the proceedings would threaten the credibility of the scientific community.

"We are witnessing an anti-science movement in this country, in part from Washington, but all across the land," said Doctor Philip Pizzo, the dean of Stanford's Medical School. "But there is also an antireligion movement that is coming from the science community. We have a chance to study the brain in a broad, interdisciplinary manner. We are not about to apply the scientific method to faith or apply faith to science. But we do acknowledge that they are part of the same dimension." Noting the protest in Washington, D.C., served only to illuminate the present polarization of discourse in the United States, Pizzo said it was more necessary than ever to respectfully integrate faith and science.

Those willing to embrace Pizzo's assessment were able to benefit from Gyatso's participation in "Craving, Suffering, and Choice: Spiritual and Scientific Explorations of Human Experience," a weekend event in which science and religion shared the stage in an open and honest exchange of ideas.

While one discipline uses methods developed in recent years to track activity in specific parts of the brain, and the other uses 2,500- year-old practices to develop introspective inquiry of the mind, both neuroscience and Buddhism address the same issue: suffering.

This shared purpose, according to Doctor William Mobley, director of the Neuroscience Institute at Stanford, is the reason he recently gathered experts in both fields, as well as His Holiness the Dalai Lama, for a public

discussion on the ground they share. “Both pursue knowledge about the brain and mind,” he said. “They just go about it differently. I think we have something to learn from each other.”

The Stanford conference explored scientific and Buddhist definitions of craving and suffering, along with a possible response to those conditions—the choice of altruism and compassion.

Craving, according to Buddhist thought and explained by Alan Wallace of the Santa Barbara Institute for Consciousness Studies, is “a kind of desire in which one falsely superimposes agreeable qualities upon an object, cognitively screens out its disagreeable qualities, and then desires the object as a true source of pleasure and well-being.” Things commonly craved are wealth, sensual objects, praise, and the esteem of others, he said.

“None of these objects are actual sources of genuine well-being, nor does the experience of such objects

have an invariable correlation with the experience of pleasure of any kind,” Wallace explained. True well-being does not come from an outside stimulus, but from “a healthy and balanced mind,” he said. The challenge lies in cultivating desires that lead to genuine well-being for oneself and others while minimizing craving, which is based on a misconception of reality.

The neuroscientific definition of craving focuses on what happens in brain cells when there is a motivation to reach a goal, countered Doctor Howard Fields, the director of the Wheeler Center for the Neurobiology of Addiction at the University of California, San Francisco. “The goal could be something needed to maintain a state that is necessary for individual survival, including food, drink, warmth, or rest,” he said. But in addition to instinctive goals, individuals can develop motivation for actions that are unhealthy, such as overeating, drinking alcohol, or using tobacco or addictive drugs.

“Whatever the goal,” Fields said, “the neurobiological view is that cravings arise from chemical changes in the brain that lead to activity in neurons that are connected to the sense organs and muscles. The activity of specific groups of these neurons leads to the unhealthy actions and to the subjective experience of strong craving.”

In the Tibetan language, the Dalai Lama said, the translation for craving is “an afflicted state of desire.” Desire is not in itself wrong, he said, nor is it a form of affliction. “It can be a neutral state of mind—even a virtuous state,” he said. All participants agreed that a desire to alleviate suffering, for example, is a virtuous desire.

Both the scientists and the Buddhists also agreed that the type of craving that leads to an unhealthy life is a misapprehension of reality— desire taken to a destructive level. Buddhist practice holds that the correct view of reality comes through contemplation, while neuroscience focuses on localizing the brain activity associated with craving and then treating that specific brain function. It is not entirely as simple as meditation versus medication, but those are the respective constructs from which each group begins.

Mathieu Ricard, a Buddhist monk and the Dalai Lama’s private secretary and French translator (and the son of French philosopher Jean-François Revel), explained that suffering has many causes—some of which we can control and some we cannot—and that, ultimately, unhappiness is the way in which we experience suffering.

“Being born with a handicap, falling ill, losing a loved one, or being caught up in war or in a natural disaster are all beyond our control,” Ricard said. “Unhappiness may indeed be associated with physical or moral pain inflicted by exterior conditions, but it is not essentially linked to it. Just as it is the mind that translated suffering into unhappiness, it is the mind’s responsibility to master its perception.”

In contrast, David Spiegel, of Stanford Medical School’s psychiatry department, explained the neuroscientific view of suffering as “an activation of neural subsystems that trigger emotions associated with distress: pain, fear, sadness, depression, anxiety.”

These neural subsystems, he said, can be stimulated by external sensory stimuli and exacerbated by reverberating circuits involving internal stimuli, such as anxiety and depression. “Western scientific notions of suffering, including pain, depression, and anxiety, treat suffering as a problem to be eliminated by reducing noxious input or the brain mechanisms that perpetuate it,” Spiegel concluded.

While their approaches to suffering may sound different, what neuroscience and Buddhism share, Mobley said, is the acknowledgement of the Four Noble Truths regarding suffering: There is the *fact* of suffering, the *cause* of suffering, the *end* of suffering, and the *path* to end suffering.

“The traditional Western approach to end suffering is to block the inputs” that cause it, said Spiegel. “But that’s not the whole answer.” Spiegel noted that there are more neuronal connections in one person’s brain than there are stars in the universe, and that by focusing on compassion, for instance, it is possible for those connections to “reset” the brain. “Reverberating circuits can amplify or dismiss pain and depression,” he said.

How those circuits get reset is where Buddhism can inform science, said Ricard. “It is possible to change the content of the mental construct,” he said. “Practicing altruism and compassion can alleviate your own pain.” Reaching higher mental and spiritual dimensions, though, doesn’t come easily. “In illness,” for example, said Doctor Helen Mayberg, a professor of psychiatry and neurology at Emory University, “the brain is hijacked and the cortex is enslaved. So, we attempt to bring balance to the person suffering. But why is it so difficult to get to these higher states?”

The Dalai Lama thought for a moment, then pointed to a flower. “All things have to go according to nature,” he said. “They take time. But an advanced meditator can manipulate energy and change the response to it.”

The Dalai Lama inherited a rich legacy of scientific observation. His predecessor spent hours using a telescope to observe the night sky, and Gyatso followed suit, eventually concluding that the moon reflected the light of the sun rather than having its own light source, as had been the traditional Buddhist teaching. “There was some kind of awareness,” the Dalai Lama said of his moment of discovery, “a realization that the traditional description was not true.”

Gyatso truly appreciates how science can inform belief and why religion must be open to scientific discovery. “One fundamental attitude shared by Buddhism and science is the commitment to keep searching for reality by empirical means and to be willing to discard accepted or long-held positions if our search finds that the truth is different,” he writes in his 2005 book, *The Universe in a Single Atom: The Convergence of Science and Spirituality*.

“We have tried to understand the mind for the last 2,500 years, but compared to modern science, we are a bit backward,” the Dalai Lama said at the Stanford conference. “Modern science is much more advanced than Buddhism. We have much to learn from scientists.”

Western science, he added, teaches people how to investigate and ask questions, which Buddhism values. “Questions bring about investigation, and investigation brings better understanding of reality,” he said.

For years, the Dalai Lama has written eloquently on the relationship between science and religion. In his 2003 book, *Destructive Emotions: How Can We Overcome Them?* he writes: “Buddhism and science are not conflicting perspectives on the world, but rather, differing approaches to the same end: seeking the truth. In Buddhist training, it is essential to investigate reality, and science offers its own ways to go about this investigation. While the purposes of science may differ from those of Buddhism, both ways of searching for truth expand our knowledge and understanding.

“If science proves facts that conflict with Buddhist understanding, Buddhism must change accordingly. We should always adopt a view that accords with the facts.”

Similarly, Mobley said, Buddhists have methods for introspective inquiry of the mind that might inform science— provided science is willing to listen.

"Sometimes, when scientists concentrate on their own narrow fields, their keen focus obscures the larger effect their work might have," the Dalai Lama wrote in an op-ed for *The New York Times* last summer. "I try to remind them of the larger goal behind what they do in their daily work."

Site and magazine supported by a generous grant from the John Templeton Foundation.

.