



## Pity the Poor Lab Rat

by Kathy Brown

The Dalai Lama spoke last October at Atlanta's Emory University to a group of scholars, mental health professionals, and others interested in the presentation's topic of *Mindfulness, Compassion and the Treatment of Depression*. The conference was presented jointly by Emory University and the Mind and Life Institute, an organization whose stated mission it is "to establish mutually respectful working collaboration and research partnerships between modern science and Buddhism—two of the world's most fruitful traditions for understanding the nature of reality and promoting human well-being."

This collaboration has resulted in a series of scientific studies that have researched the effects of practices such as meditation, which were formerly embraced primarily by Buddhists. Meditation and other traditional Buddhist practices have been secularized and are now considered more broadly as healthy human habits and attitudes, rather than strictly religious ones.

At the Emory event, the Dalai Lama was joined on the stage by a panel of esteemed experts and researchers in psychiatry and related fields. The scientists presented research findings that show a significant link between feelings of emotional well-being and the regular focus of attention on an attitude of compassion. The Buddhist practice of compassion meditation, in which practitioners hold an ideal of compassion for all beings, including a readiness and desire to help all who suffer, appears to foster protection against depression and to

guard against its relapse.

Panelist Richard J. Davidson, Ph.D., is one scientist who has studied what happens within the meditating brain, as well as within the brains of experienced meditators. Using functional magnetic resonance imaging, he has shown that during the practice of compassion meditation, brain activity increases in the areas that support the generation and maintenance of positive emotions and decreases in the circuits related to anxiety and negativity.

Brain scans have shown that monks who regularly meditate on compassion toward all beings show an increase in gamma wave activity, even when they are not meditating. Gamma waves are a high frequency brain activity characteristic of higher levels of brain function, such as perception and consciousness, and are also connected to feelings of happiness and the development of new insights.

In spite of what seems to be a promising future for the collaboration of scientists and Buddhist monks, there are differences in orientation that may present problems. Participant Thupten Jinpa, Ph.D., translator for the Dalai Lama for over twenty years and a scholar in his own right, has written an interesting article, originally for delivery at a 2006 conference at Columbia University, and now accessible through the Mind and Life Institute web site. Jinpa sounds a cautionary note regarding the Western perspective which tends to lump all forms of meditation together, as if meditation were "some kind of homogeneous mental state, characterized primarily by absence of thought." The benefits noted in Davidson's study were specific to the practice of compassion meditation, which is not to say that other methods of meditating might not also be valuable in the treatment of depression.

Panel member Charles Nemeroff, M.D., Ph.D. has been both frequently honored for his substantial contributions to the field of knowledge about mood disorders and maligned for his failure to reveal conflicts of interest in professional publications. At the Mind and Life Conference, he spoke of the vulnerability that accrues to those who experience trauma in early life and referenced experiments in which baby lab rats separated from their mothers for periods of time during their infancy were chemically altered as a result of experiencing this trauma. When they grew to adulthood, their cerebrospinal fluid continued to contain higher than normal levels of CRF, the chemical that regulates the secretion of the stress hormone ACTH. Rats and humans with high levels of CRF are more vulnerable to symptoms of depression and high levels of CRF are often found in the severely depressed. In regards to the chemical imprint trauma leaves on the brain, Nemeroff continued, more animal studies are needed.

The juxtaposition of this idea—that it is necessary to traumatize living beings in order to learn more, with that of the conference's theme—that compassion is beneficial to the alleviation of depression, was not lost on audience members. Many of them had come to the workshop in part simply to be in the presence of the Dalai Lama, who is well-known for his adherence to a stance of compassion even in the face of exile from his country. Some were disturbed by this casual reference to psychiatry's commonly accepted tolerance of inflicting pain and suffering on animals in the interest of gathering scientific knowledge.

In the traditional Buddhist viewpoint, Jinpa says, there are three stages of understanding. First, there is the intellectual

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understanding of a concept which is often conveyed to students by listening to a teacher or by reading a book. This stage is followed by the understanding derived through reflection, in which a student will think deeply about the new concept. The third stage, understanding derived through meditation, occurs after the student has spent sufficient time and energy reflecting upon the concept to truly internalize it.

A related Buddhist framework is that of “view, meditation, and action.” Again, new learning comes into the awareness of the student, who then deeply reflects on it and holds it as an object of meditation. The new concept will be meditated upon until it is internalized in the psyche and then embodied in the actions of its adherents.

Western scientists can be considered to be in stage one of this important area of learning as long as they can speak lucidly about the positive effects of compassion but are still willing to separate baby animals from their mothers in order to measure emotional distress in chemical terms.

Chemicals have their limits. Nemeroff noted that in spite of all our advances in knowledge about mental disorders and the advances in technology that have resulted in an impressive smorgasbord of pharmaceutical agents, the overall prevalence of depression is increasing at an alarming rate. Moreover, the average age at onset continues to drop. Whereas patients once presented with their initial depressive episode in their fifth decade of life, the average age of onset has now dropped into the twenties.

It’s the trauma of our everyday life, Nemeroff suggested, that accounts for the increase in this debilitating disorder. He asked the audience to consider the present condition of the world, with its wars, its social problems and inequities, the

destruction of the environment and global warming, and to think about the likely effects of this backdrop of trauma to our experience of life.

Add to that the concept of cognitive fusion, a term introduced at the conference by John D. Dunne, Ph.D. Cognitive fusion is that tendency to see our thoughts about the world as being inseparable from the reality of the world. For instance, someone with a high level of cognitive fusion might make a statement such as, “You can’t trust anyone,” instead of a more objective one, such as, “I have trouble trusting people.” The thoughts of depressed people usually run toward the negative and they seem realistic, because as Dunne noted, there is a high level of cognitive fusion in people who are depressed.

Could it be that the same is true of scientists who proclaim that animal studies are a necessity, rather than recognizing that this is their own thought about the value of animal studies, instead of a reality about the world?

Perhaps it is not the actual needs of science, but rather what many scientists *think* regarding the needs of science that leaves us locked in this cycle of thoughtlessly harming out of a professed desire to help. Surely, doing so is in direct opposition to the ideal of compassion toward all beings. And compassion is an ideal that, when held in a person’s consciousness, leads to a happier life for that person as well as for all that go unharmed as a result of that person’s dedication to this ideal.

Our adherence to the cruel and outdated practice of experimentation on animals not only robs us of the development of compassion that could shield us from depression, but adds to the cumulative pain of the world, which then becomes an ever more depressing environment for us all.