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## The Monk in the Lab

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These are times when destructive emotions like anger, fear and hatred are giving rise to devastating problems throughout the world. While the daily news offers grim reminders of the destructive power of such emotions, the question we must ask is this: What can we do, person by person, to overcome them?

Of course such disturbing emotions have always been part of the human condition. Some — those who tend to believe nothing will "cure" our impulses to hate or oppress one another — might say that this is simply the price of being human. But this view can create apathy in the face of destructive emotions, leading us to conclude that destructiveness is beyond our control.

I believe that there are practical ways for us as individuals to curb our dangerous impulses — impulses that collectively can lead to war and mass violence. As evidence I have not only my spiritual practice and the understanding of human existence based on Buddhist teachings, but now also the work of scientists.

For the last 15 years I have engaged in a series of conversations with Western scientists. We have exchanged views on topics ranging from quantum physics and cosmology to compassion and destructive emotions. I have found that while scientific findings offer a deeper understanding of such fields as cosmology, it seems that Buddhist explanations — particularly in the cognitive, biological and brain sciences — can sometimes give Western-trained scientists a new way to look at their own fields.

It may seem odd that a religious leader is so involved with science, but Buddhist teachings stress the importance of understanding reality, and so we should pay attention to what scientists have learned about our world through experimentation and measurement.

Similarly, Buddhists have a 2,500-year history of investigating the workings of the mind. Over the millenniums, many practitioners have carried out what we might call "experiments" in how to overcome our tendencies toward destructive emotions.

I have been encouraging scientists to examine advanced Tibetan spiritual practitioners, to see what benefits these practices might have for others, outside the religious context. The goal here is to increase our understanding of the world of the mind, of consciousness, and of our emotions.

It is for this reason that I visited the neuroscience laboratory of Dr. Richard Davidson at the University of Wisconsin. Using imaging devices that show what occurs in the brain during meditation, Dr. Davidson has been able to study the effects of Buddhist practices for cultivating compassion, equanimity or mindfulness. For centuries Buddhists have believed that pursuing such practices seems to make people calmer, happier and more loving. At the same time they are less and less prone to destructive emotions.

According to Dr. Davidson, there is now science to underscore this belief. Dr. Davidson tells me that the emergence of positive emotions may be due to this: Mindfulness meditation strengthens the neurological circuits that calm a part of the brain that acts as a trigger for fear and anger. This raises the possibility that we have a way to create a kind of buffer between the brain's violent impulses and our actions.

Experiments have already been carried out that show some practitioners can achieve a state of inner peace, even when facing extremely disturbing circumstances. Dr. Paul Ekman of the University of California at San Francisco told me that jarring noises (one as loud as a gunshot) failed to startle the Buddhist monk he was testing. Dr. Ekman said he had never seen anyone stay so calm in the presence of such a disturbance.

Another monk, the abbot of one of our monasteries in India, was tested by Dr. Davidson using electroencephalographs to measure brain waves. According to Dr. Davidson, the abbot had the highest amount of activity in the brain centers associated with positive emotions that had ever been measured by his laboratory.

Of course, the benefits of these practices are not just for monks who spend months at a time in meditation retreat. Dr. Davidson told me about his research with people working in highly stressful jobs. These people — non-Buddhists — were taught mindfulness, a state of alertness in which the mind does not get caught up in thoughts or sensations, but lets them come and go, much like watching a river flow by. After eight weeks, Dr. Davidson found that in these people, the parts of their brains that help to form positive emotions became increasingly active.

The implications of all this are clear: the world today needs citizens and leaders who can work toward ensuring stability and engage in dialogue with the "enemy" — no matter what kind of aggression or assault they may have endured.

It's worth noting that these methods are not just useful, but inexpensive. You don't need a drug or an injection. You don't have to become a Buddhist, or adopt any particular religious faith. Everybody has the potential to lead a peaceful, meaningful life. We must explore as far as we can how that can be brought about.

I try to put these methods into effect in my own life. When I hear bad news, especially the tragic stories I often hear from my fellow Tibetans, naturally my own response is sadness. However, by placing it in context, I find I can cope reasonably well. And feelings of helpless anger, which simply poison the mind and embitter the heart, seldom arise, even following the worst news.

But reflection shows that in our lives much of our suffering is caused not by external causes but by such internal events as the arising of disturbing emotions. The best antidote to this disruption is enhancing our ability to handle these emotions.

If humanity is to survive, happiness and inner balance are crucial. Otherwise the lives of our children and their children are more likely to be unhappy, desperate and short. Material development certainly contributes to happiness — to some extent — and a comfortable way of life. But this is not sufficient. To achieve a deeper level of happiness we cannot neglect our inner development.

The calamity of 9/11 demonstrated that modern technology and human intelligence guided by hatred can lead to immense destruction. Such terrible acts are a violent symptom of an afflicted mental state. To respond wisely and effectively, we need to be guided by more healthy states of mind, not just to avoid feeding the flames of hatred, but to respond skillfully. We would do well to remember that the war against hatred and terror can be waged on this, the internal front, too.

Tenzin Gyatso is the 14th Dalai Lama.