

Meditation Improves Perception

Scientists seldom quote assistance from the Dalai Lama in a published paper, but Olivia Carter and Prof Jack Pettigrew of the University of Queensland's Vision, Touch and Hearing Research Centre have.

Together with colleagues from the University of California they used 76 Tibetan monks as subjects in a study of how meditation can alter visual perception. Their results were published in *Current Biology*.

The study looked at visual perceptual rivalry, which is most famously seen when we are shown an ambiguous image such as a vase that could also be two faces.

In this case the research used a specific sort of rivalry known as binocular rivalry, where horizontal and vertical lines were presented to different eyes using goggles. The alternating images observed are largely beyond voluntary control, and as such represent an opportunity to test the claim that Buddhist monks are able to use meditation to control their minds to extraordinary degrees.

"Typically, binocular rivalry results in a switching between the two images, but in the case of one type of meditation, the monks reported a perceptual dominance of one of the images," Carter said.

The monks engaged in two forms of meditation. During "compassion" meditation they contemplated the suffering in the world and radiated good will. This had no effect on their experiences of perceptual rivalry.

However, during "one-point" meditation the monks focused their attention on a specific object or thought. As a result there was a dramatic lengthening in the time taken for switches between images observed by the monks.

"Our findings suggest that processes particularly associated with one-point meditation, perhaps involving intense attentional focus and the ability to stabilise the mind, contribute



Young monks at the Namgyal Monastery in Dharamasala familiarise themselves with the binocular rivalry display goggles.

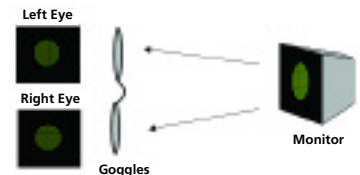
to this ability of the monks," Carter said.

The nature of the experiment presented some challenges for normal scientific methodology. Subjects clicked a computer button when they experienced a change in perception. However, this was impossible during one-point meditation.

Consequently the researchers had to rely on a combination of subjective reporting after the session was over, and data from monks who finished a one-point meditation before using the goggles and computer.

Carter says the reviewers accepted the paper on the basis of consistency of reported experience between different monasteries.

The research may support the claim that meditation improves mental health through better mental focus and control of depressing or stressful thoughts.



Binocular rivalry occurs when different images are presented to the left and right eye at the same time. Instead of seeing both, the brain switches from one to the other.

Orwell Commendation for CSIRO

The Media, Arts and Entertainment Alliance has given CSIRO a special commendation in this year's Orwell Awards for those who have done the most to suppress press freedom.

The commendation read: "A special mention must be given to the CSIRO for blackballing *Australasian Science* journalist, Peter Pockley, for asking too many questions (an average of one per fortnight), and for preparing a commu-

nications strategy that argues for selective release to certain journalists coupled with advertising booked around articles by them".

The Orwells are named after George Orwell, author of *1984*, which described a totalitarian regime that maintained vigilant control over its citizens, suppressed information and revised its own history.

There are only two Orwell Awards.

The International Award went to Russian President Vladimir Putin for shutting down Russian newspapers that criticised the government. The Gold Orwell went to Australia's Foreign Affairs Minister, Alexander Downer, for, among other things, his criticism of SBS journalist John Martinkus when the latter was kidnapped in Iraq.

The awards are entirely honorary, with all proceeds from the awards night going to the International Federation of Journalists Safety Fund.