



Investigating the Mind

2005 conference in Washington DC

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Mind & Life Dialogues



- Dialogues between the Dalai Lama and western scientists have been progressing since 1987.
- In 2003 these dialogues were opened to public participation at the first “Investigating the Mind” conference in Boston.
- **reinvention®** Directors were gold sponsors at the 2003 and 2005 conferences, having the honour of meeting the Dalai Lama in 2003.
- The 2005 conference was held in Washington DC and attracted over 3,000 participants.
- This presentation outlines the research discussed at that conference.



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- The Mind & Life Dialogues explore the potential for science and contemplative traditions to join forces in uncovering more about the mind, how it works, and how our experiences can be transformed through a growing understanding of the mind.
 - These dialogues have lead to many joint experiments, including examination of the effects of meditation and mindfulness on health, happiness, education and business.

www.mindandlife.org



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- *“These investigations may offer opportunities for understanding the basic unifying mechanisms of the brain, mind and body that underlie awareness and our capacity for effective adaptation to stressful and uncertain conditions.”*

www.investigatingthemind.org

- **reinvention®** believes that an enhanced “capacity for effective adaptation” is one of the most exciting opportunities for businesses as they face complexity, rapid change, and uncertain times.



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Effects of Mind Training



- Modifies neural networks (rewires the brain, removing negative patterns of thinking)
- Synchronises brain waves (enabling memory, learning, creativity, decision-making)
- Modifies neural secretory functions (bringing a healthy balance to the brain's and body's chemical mix)
- Activates the left prefrontal cortex (enhancing positive emotions and engagement)
- Limits the incidence and progression of disease
- Limits suffering from pain

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Health Effects

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Stress



Short term stress produces positive effects in the brain by ceasing non-essential functions and heightening useful ones, such as:

- Sharpness and clarity
- Enhanced memory

Maintaining stress for long periods can overwork and exhaust the heightened functions, and the brain suffers from the overall imbalance of activity. Effects include:

- Impaired decision-making
- Growth of fear and anxiety (this part of the brain actually gets bigger)
- Halt in the development of new neurons (this part of the brain stops functioning)



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Antidote to stress



- Meditation and mindfulness have been shown to activate the areas of the brain that shut down during stress, and modulate the areas of the brain that are overworked during stress.
- A study tracked subjects for three months after they had completed a mindfulness course and found that they reported 46% fewer symptoms than subjects who received only educational materials and references on stress reduction. An extension of this study found that patients required significantly fewer medical visits in the year after a mindfulness course.

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Depression



- Clinical depression is considered by medical professionals as the common cold of mental diseases.
- World Health Organisation (WHO) predict that by 2010 depression will rank 2nd behind cardiovascular disease (in economic and personal costs).

2 studies compared mindfulness-based therapy with drugs:

- After 1 year, likelihood of relapse drops from 60% to 30%
- After 3 years, likelihood of relapse drops from 66% to 22%



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General Health



- People who have only been introduced to mindfulness practices for 8 weeks have shown an increased immunity response to flu vaccines. Subjects given this vaccine immediately after meditating showed 50% more antibodies than the control group.
- A study of sufferers of psoriasis showed that mindfulness practices resulted in healing at 4 times the normal rate.



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Happiness

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Happiness



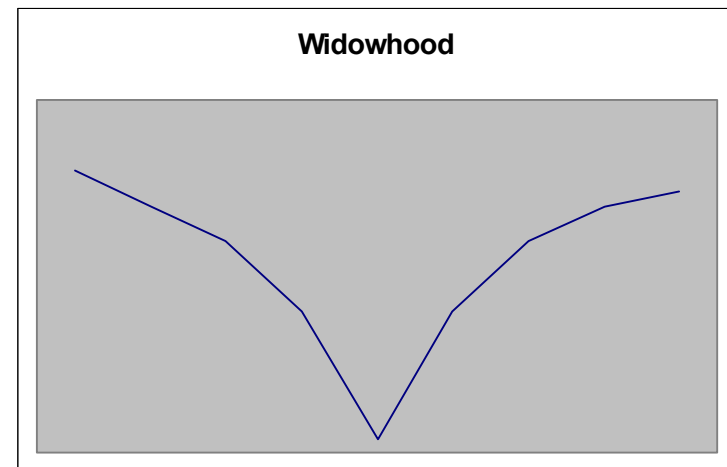
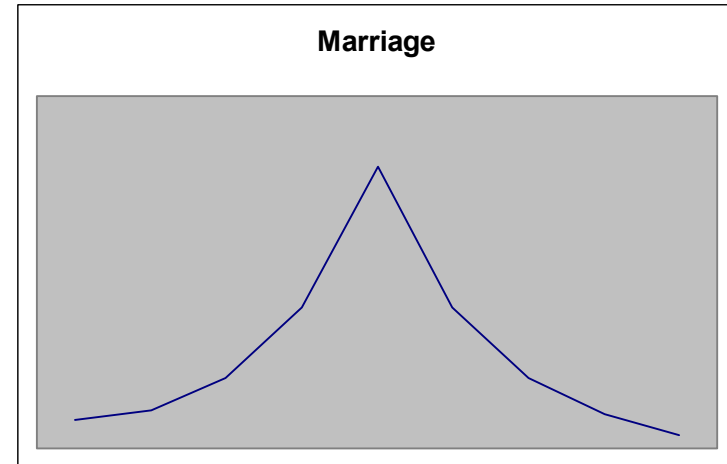
- Research has revealed that we all have a happiness “set point”.
- The happiness set point of long term meditators is notably further to the happiness side than other people (actually, it is off the scale!).
- Meditation activates the pre-frontal cortex which is associated with positive emotions.

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Effects of Life Events on Happiness

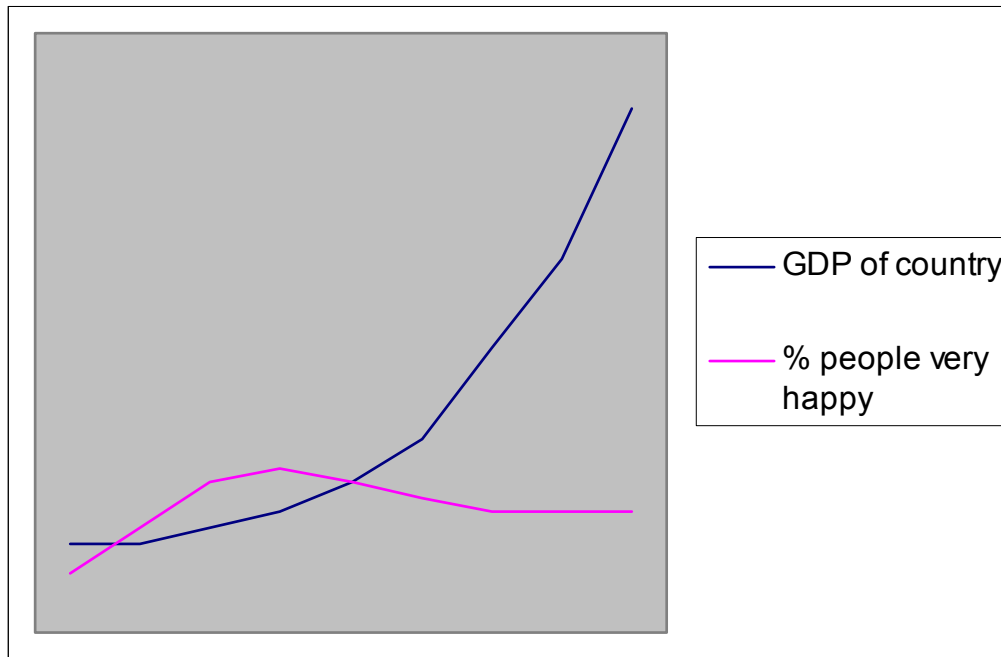
Studies examining the effect of marriage and widowhood on happiness both show that after an initial increase and decrease respectively, both tend to return to roughly their original set-point. The same pattern has been reported in those who suffer major physical disabilities through injury or disease.



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Wealth and Happiness

- Studies over 50 years show that the percentage of people who self report as “very happy” initially climbs, but then starts to decline as the country’s GDP grows.



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Education

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Formal Mindfulness Education



- Mindfulness programs are being introduced into schools in the USA at a rapid rate. Benefits to children include:
 - enhanced learning and academic performance
 - improved social climate
 - emotional balance
 - the development of personal qualities such as love, patience, forgiveness, generosity and compassion
- Teachers comment that their students are calmer and more focused when they begin their day with mindfulness. Teachers of older students report that their students become more aware of their complex thoughts and emotions, and that this awareness enhances their ability to deal with the changes and challenges of growing up.

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Addressing Growing Problems with Mindfulness



- Researchers in the United States found that people who regularly fragment their attention through multitasking begin to show symptoms similar to attention deficit disorder. This has been labelled pseudo-ADD.
- The number of adults ages 20-44 who are taking ADHD medication has doubled in the last four years. And the number of young children and teens has risen from 3% to 4.4% over the same period.
- Mindfulness is producing some positive results in treating conditions such as ADHD in children.

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The Importance of Parental Mindfulness



- Research suggests that children’s lives are increasingly stressful, and the greatest source of stress for children is parental stress.
- A recent study shows how we can “infect” others with our state. A Buddhist monk and a “difficult” scientist entered a debate. Both were attached to heart rate and other monitors. The scientist’s agitated state gradually matched the calm levels of the monk’s state without prompting and without being told the purpose of the experiment.



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Business

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Benefits of Mindfulness in Business



- Studies on brain wave patterns show that an attentive state generates synchronised and resonating brain waves. These patterns are associated with heightened memory, learning, decision-making, and creativity. In a non-attentive state, there is no resonance and no synchrony.
- Advanced meditators score more highly than other people in a test to recognise emotion in facial expressions. Buddhist monk Matthieu Ricard scored highest out of 5,000 participants.

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Emotional Intelligence comes from Mindfulness



- Experienced and novice meditators were assessed to identify how accurately their self-reported state correlated with 3rd person measures. Experienced meditators showed a high correlation, while novices were not particularly accurate. This means people who have some level of practice at mindfulness are more accurately aware of their emotional and physical states in real time, and hence in a better position to self-monitor and self-manage those states.



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Adaptability & Resilience



- In Western societies, studies have shown that there is a sharp rise in depression, heart attacks and premature death following natural disasters or life changing circumstances. The Tibetan people have faced exile, torture and upheaval, but there is no evidence of the symptoms of Post Traumatic Stress Disorder (PTSD) in their communities. What does this mean for the effect of mind training on adaptability and resilience?



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Engagement & Mindsets



- In sadness there is an increase in limbic activity and a decrease in frontal cortex activity. A decrease in frontal cortex activity is associated with disengagement. We know that mind training activates the frontal cortex so mind training can increase employee engagement.
- Various studies have found that placebos can be as effective as medication in treating various physical and mental illnesses. In the first 6 weeks of a recent study on depression, those patients given a placebo showed the same changes in brain activity as those given medication. What does this mean for the notion that a mindset or belief can create reality?

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Brain Changes



- A recently released study found that regular meditation appears to produce structural changes in areas of the brain associated with attention and sensory processing. The thickness of the cortex correlated with the amount of mindfulness practice that a person had undertaken, so even people with just a short period of practice have a “larger” brain in that area than those without.
- Similarly, people with long term stress show an increase in the size of the amygdala, the part of the brain associated with fear and anxiety.



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Readiness & Willingness



- The motor part of the brain is activated by meditation (more in long term meditators than novices) and people report a heightened state of being ready to act.
- Activation of the part of the brain associated with self identity is reduced during meditation.
- These two findings suggest that mindful people are more ready and more willing to respond to needs that are arising around them.



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Where is this heading?



- There has been exponential growth in the publication of **meditation and mindfulness research** between 1990-2005.
- There has been exponential growth in the publication of **leadership** books since the mid 1980s.
- These paralleling searches are coinciding as more research shows that mindfulness enhances essential leadership skills such as:
 - Engagement and sensitivity to others
 - Resilience and adaptiveness
 - Focus on ethical behaviour
 - Greater attention, clarity and focus
 - Balance and wellness

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Vision for the future



- "The U.S. surgeon general advises at least 60 minutes of physical exercise five times a week. It's not inconceivable that 10 or 20 years from now the U.S. surgeon general might recommend 60 minutes of mental exercise five or six times a week."

Eric Lander, molecular biologist

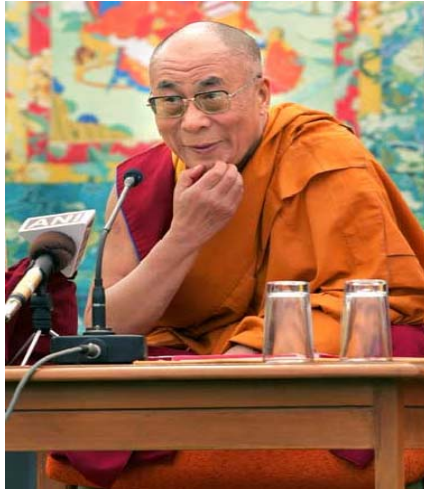
- "As well as having subjects such as PE (physical education) on their curriculums, we may also see ME (mental education) in schools."

Richard Davidson, research scientist



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Collaboration: science, ancient wisdom and business



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