

Neuroplasticity And Pragmatic Compassion

by Dave Edwards

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The evidence is now overwhelming that the human brain continually changes as a result of experience. In his book, *Destructive Emotions*, psychologist Daniel Goleman notes that this 'neuroplasticity' has been observed using magnetic resonance imaging (MRI), for example, in musicians:

"MRI studies find that in a violinist... the areas of the brain that control finger movement in the hand that does the fingering grow in size. Those who start their training earlier in life and practice longer show bigger changes in the brain." (Goleman, *Disturbing Emotions*, Bloomsbury, 2003, p.21)

Studies of top performers in a wide range of skills - from chess masters to Olympic athletes - have shown pronounced changes in the relevant muscle fibres and cognitive abilities. But there is much more.

Research conducted by Richard Davidson at the University of Wisconsin recently studied brain activity in a European-born Buddhist monk, Oser, who had spent three decades meditating on compassion in the Himalayas.

Davidson's research had previously found that people who have high levels of brain activity in the left prefrontal cortex of the brain simultaneously report positive, happy states of mind, such as zeal, enthusiasm, joy, vigour and mental buoyancy. Oser was asked to meditate intensively on compassion and then to relax after sixty seconds while being monitored by an fMRI magnetic imaging machine. Goleman describes the results:

"While Oser was generating a state of compassion during meditation, he showed a remarkable leftward shift in this parameter of prefrontal function... In short, Oser's brain shift during compassion seemed to reflect an +extremely+ pleasant mood. The very act of concern for others' well-being, it seems, creates a greater sense of well-being within oneself." (Goleman, *ibid*, p.12)

In another experiment, Davidson monitored the base-line state of left prefrontal cortex activity indicating normal everyday mood in 175 American individuals. Subsequently, he also monitored the base-line state of a 'geshe', an abbot, from one of the leading Buddhist monasteries in India. Davidson reports:

"Something very interesting and exciting emerged from this. We recorded the brain activity of the geshe and were able to compare his brain activity to the other individuals who participated in experiments in my laboratory over the last couple of years... The geshe had the most extreme positive value out of the entire hundred and seventy-five that we had ever tested at that point." (Goleman, *ibid*, p.339)

Davidson describes the geshe as "an outlier" on the graph - his reading was "three standard deviations to the left", far beyond the rest of the bell curve for positive emotion.

These findings support claims made by meditators over hundreds of years that compassion and concern for others are in fact the basis of human happiness. They also support

the claim that human emotions such as compassion, love, anger and jealousy arise more intensively and more often, the more often we generate them.

It is important to understand the fundamental nature of the meditation in which Oser had been engaging. In Buddhist psychology, the word meditation has a very specific meaning. Here, the Dalai Lama explains:

"Meditation means creating a continual familiarity with a virtuous object [idea] in order to transform your mind. Merely understanding some point does not transform your mind. You may intellectually see the advantages of an altruistic awakening mind, but that does not actually affect your self-centred attitude. Your self-centredness will be dispelled only through constantly familiarising yourself with that understanding. That is what is meant by meditation." (The Dalai Lama, *Awakening The Mind, Lightening The Heart*, Thorsons, 1997, p.51)

In other words, repeatedly familiarising the mind with the suffering of others, and acting to remedy that suffering, has the effect of increasing the intensity and frequency of compassionate thoughts. The implications, as Buddhists have long claimed, and as science is beginning to confirm, are remarkable:

"If everything you do with your body, speech, and mind is done for the benefit of others, there is no need to do anything more for your own benefit because the one is included in the other." (Gampopa)

If it is true that concern for others is a source of personal happiness, then the implications for our relationships are also remarkable.

Every time we give time, energy, money, friendliness; every time we campaign, march, protest, send emails to journalists out of compassion for human and animal suffering; every time we do +anything+ out of a kindly motivation, we are strengthening these positive traits. And we do not need to be, indeed surely cannot be, faultless in our efforts - it is impossible to live without harming someone or something through our actions. The issue is not whether we are hypocrites, but that we should sincerely aspire to become less self-centred and destructive.

The ultimate rationale for defending animal and human rights, for working to reduce suffering and increase happiness, is that this motivation benefits us even as it benefits those we are seeking to help.

Compassionate individuals are happier, and a society of compassionate individuals is a happier, more peaceful, more sane society.