



The neuroscience of resilience

By John Hendry OAM

“Resilience is the restoration of hope.”
(John Hendry)

Hope is restored only when one regains or feels a sense of control of the “existing moment plus a belief of possible control of future moments”. Hope is the foundation of resilience and “there is a Hope Circuit in the brain.” (Martin Seligman p379 The Hope Circuit)

The neuroscience of helplessness has been discovered by Steve Maier. He describes that when shock is inescapable the concentration of the neurotransmitter serotonin (5-HT) in the dorsal raphe nucleus (DRN) of the medial prefrontal cortex (MPFC) produces a loss of hope, of control, which produces the feeling of helplessness. Resilience is inhibited.

Culture and the environment can produce this inescapable feeling of helplessness, of being “out of control”, and this produces the ancient brain response of freezing.

This is really what steers compliance for when one is compliant one gives up on making a contribution or change, and on having control.

Culture and the environment become and are coercive influences upon behaviour in these moments.

Steve Maier proved this. Helplessness is the default response in the brain to prolonged shock or the overbearing negative power of culture. Helpfulness can also be created by a positive culture, but helpfulness seems not to be a default response in the brain.

Helpfulness needs to be learned and practiced for it to become habitual and then a mindset that can direct brain activity. To turn off the helplessness default mechanism control must be returned. This reduces the concentration of serotonin (5-HT) in the DRN and amygdala. This turning off of serotonin “gives hope” and this makes resilience possible for it inhibits the overbearing power of culture.

The management of error, harm, conflict and doubt, is determined by culture more than anything else. Culture nurtures either hopefulness or hopelessness, helpfulness or helplessness, for it is omnipresent.

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Culture directs and can overwhelm individual resilience in most cases if the culture is less accommodating or unkind.

Reference:

The Hope Circuit (A Psychologist's Journey from Helplessness to Optimism) Martin Seligman, 2018, Chapter 28 (p369-379).

Notes:

Martin Seligman and Steve Maier researched together in the 1960s producing a theory on learned helplessness which both now declare was wrong. It is the loss of control (of hope) not helplessness, that determines mental health and resilience.

(Martin Seligman makes a compelling and deeply personal case in this book for the importance of virtues like hope, meaning and positive emotion for mental health, ("and resilience"- my addition-).

I am indebted to Martin Seligman and all other scholars and colleagues who have worked with me in these past 20 years.

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John Hendry OAM has been an educator for more than 50 years. He has been an Acting Principal, Assistant Principal, Boarding House Master and Director of Student Welfare. He is a consultant to many agencies including the UNESCO Committee on Bullying and Violence and a RYA Advisory Committee Member.