

Dandelion Time and the Development of Green Minds

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Dandelion Time is now a leader in showing how agencies can work with children and families fragmented by neglect, abuse and trauma. Three particular strengths in the approaches are central: providing nature-based environments for physical activity, building social engagement into days to learn and develop new relations with others, and craft-based activities for the cognitive and emotional benefits of building, shaping and caring for things.

All three are key features of our new concept of the Green Mind¹. In the Japanese longevity hotspots of Nagano and Okinawa, there are record numbers of happy centenarians, their cultures encouraging healthy and tasty foods, regular physical activity outdoors, social connections and continued cognitive engagement.

Our research centres on green minds, and offers explanation and a manifesto for action. It surely is not too much to demand a sustainable planet *and* contented people. We have now developed a green mind theory to link the human mind with our brains and bodies, and connect bodies through behaviours into natural and social environments. We know this: environments shape bodies, brains and minds; minds in turn drive body behaviours that shape the external environment. Recent discoveries come from neuroscience and hormones, from loneliness to longevity research, from nudge behaviours to choice architecture, and from many spiritual and wisdom traditions.

The green mind theory centres on a simple idea that the brain comprises two parts: one red, one blue. The red brain is ancient, and centres on the bottom brainstem: it is fast acting, involuntary, and driver of fight-and-flight behaviours. The blue brain is more recent: it is slower, voluntary, the centre for learning, and driver of rest-and-digest. The bottom brain reacts before you think and directs the sympathetic nervous system (SNS). The top brain is calming, directing the parasympathetic nervous system (PNS). A mix of blue and red is best for health and happiness.

But beware: natural selection built a negativity bias into your mind and brain. The gatekeepers are the amygdala nuclei, deep within the brain's temporal lobes, and highly responsive to alerts. To miss one tiger in the bushes meant death to an ancestor; to run 99 times out of 100 when there was no tiger meant survival. The brain-mind thus evolved a default mode: fast, automated, fight-flight. There is no moderation in the amygdala: it is on or off, responding before thought. The blue brain contains centres for emotions, memory-forming and bonding. In its cortex are abilities to learn, plan, make choices, and the social abilities of empathy and language.

Our minds are built from experiences, and we use the term 'green mind' to indicate that there is an optimal daily mix of mainly PNS-blue, some mild SNS-red for interest and excitement, and occasional spikes of SNS-red when alarmed. Blue and red is best for health and happiness; too much red is bad for health. In modern affluent economies dominated by material consumption and the manufactured desires for always more, the red mode is over-active. Modern life is lived on simmer, producing non-stop SNS activation. When the wolf knocks on the door, there are consequences. The SNS-red ramps up heart and lung activity, raises blood pressure, switches off the immune and unnecessary memory formation. You run; you need only muscles and oxygen.

¹ Pretty J, Barton J and Rogerson. 2017. Green Mind Theory: How Brain-Body-Behaviour Links into Natural and Social Environments for Healthy Habits. *International Journal of Environmental Research and Public Health* 14, 706; doi:10.3390/ijerph14070706

Except mostly now we do not run. Too much red impacts badly on gastrointestinal (more ulcers and inflammatory bowel syndrome), immune (slower wound healing, more colds and flus), cardiovascular (hardened arteries) and endocrine (more type 2 diabetes) systems. Going red feels bad because it is bad.

Today, most threats come from other people, either real or imagined. Towards the end of his life, Mark Twain said: "I am an old man, and have known many troubles; but most of them never happened."

There are methods to quiet an over-active red brain, all with one principle in common. Immersion and attentiveness improve wellbeing. Activities that are immersive and involve focused attention reduce oxygen consumption, lower heart rate and blood pressure, and increase the release of serotonin and dopamine: we feel better. Green minds are also more pro-social: they build empathy and trust. Oxytocin increases bonding and understanding between individuals. Increasing the circle of us might be a way to encourage greater care for the planet, resulting in the emergence of greener economies. When the green mind is quiet, the self is stilled. You are not those troubling thoughts; they come and go. They are clouds on a still pond at dawn.

Three types of engagement increase regular attentiveness and immersion. These are the three areas I mentioned at the beginning:

- Nature engagement
- Social engagement
- Craft engagement

To make these produce better health and more happiness, each of us needs to develop new habits. This is always hard. It is why we know what should be good for us, but so often fail to implement it. Good habits are difficult to develop, bad ones hard to give up.

We need emphasis on Nature, social and craft engagements in neighbourhoods, schools, care homes and health-care facilities. Charities and care organisations have a vital role to play: promoting healthy engagement with nature as part of their mission. Every child should be outdoors every day; every older person in a care home should sit in a garden. Every economy should be green and pro-social. Now is the time for a new ethic: the economy is the environment. Meanwhile, the green mind manifesto offers routes to wellbeing and a better planet.

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