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holistic healthcare

Re-imagining healthcare




- The nature–human connection
- Gaian psychology
- Reclaiming nature-based practice
- Goethian science
- Super-resilience
- Ecotherapy for young people
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ISSN 1743-9493

Published by

British Holistic Medical Association
West Barn, Chewton Keynsham
BRISTOL BS31 2SR
journal@bhma.org
www.bhma.org

Reg. Charity No. 289459

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Design

www.karenhobden.com

Cover illustration

The Crossing 2018 (in homage to Alex Hartley's Dropper), edition variable reduction woodcut, 155 x 121 cm
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Printing

Spinnaker Print Ltd

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David Peters
Editor-in-Chief

Editorial

Humankind is hard-wired for nature connection

In the 1970s Roger Ulrich found that patients whose hospital window looked out on green space needed shorter post-op recovery times: they were less anxious and took fewer painkillers. Since then, studies abound exploring how nature-connectedness reduces stress, anxiety and depression and boosts self-esteem. Summers and Vivian (2018) review this research. To pick only a few studies: people dealing with a life-threat often have difficulty concentrating, but women with breast cancer who walked in a park, watched birds, or tended flowers, achieved better focus after surgery; having sight of nature improved self-discipline in inner city girls; children living in rural areas were less stressed by adversity than urban children; viewing natural scenes reduced college examination stress; nurses taking breaks outside in natural settings returned to work more refreshed, relaxed, and energised.

Researchers confirm what common sense tells us: getting outdoors does good things for mental wellbeing – in one survey almost everyone asked to remember a positive childhood experience came up with a moment outside (Dr William Bird, personal communication). But more remarkable is its impact on the body. People forest bathing in Japan and South Korea have decreased levels of the stress hormone cortisol, lower pulse rate and blood pressure, and heart rate variability that indicates rest and recovery (Song *et al*, 2016). Even when adjusted for other health inequalities, people with good access to urban green spaces have better physical health outcomes: reduced cardiovascular morbidity and mortality, obesity and risk of type 2 diabetes, and improved pregnancy outcomes (WHO, 2016).

For five million or so years our human form and physiology evolved close to wild nature. In the embodied operating system that runs our physiology, ‘memories’ of this evolutionary past, encoded in our DNA, run in the background. When we make a nature connection this ecological self triggers cellular messages of belonging and safety. We are not well-adapted to the unrelenting confined urban/industrial environment. It is not our ecological niche, so when thrust into the artificial space and pace of modern life we run too hot. Nature connectedness reboots us out of this low-level stressed state and back to our evolutionary default mode. In short, we human beings seek connection with nature and other forms of life because it calms us down.

The biologist Edward O Wilson calls this innate urge *biophilia*, and the physiology of biophilia might explain why nature-connectedness can enhance healing. We

should be full of gratitude and respect for these gifts, but paradoxically industrialisation, while raising billions of people out of poverty (and therefore good for human wellbeing), has achieved this at an environmental cost that’s more than our planet can afford. In its ever-increasing hunger for food, energy, water, wood and ores, our species is plundering Earth and making it a dumping ground for waste. Humankind has ushered in the Anthropocene age whose feverish global industrial-consumer culture is overheating the planet and unravelling the web of life.

If our biophilic connection with all of life can boost mental health and healing, we ought not to be surprised if, on the other hand, nature deprivation were harmful. Joanna Macy proposes that because of our biophilic interdependence, the life-world’s suffering is mirrored in the human unconscious. Our young people, whose mental wellbeing is on the decline, may be the canaries in the coalmine. If so, their recent rebellion could be the start of a healthy push back, for depression thrives on learned helplessness. And though denial is an understandable defence against unbearable feelings, let’s hope youth’s immune response to ecocide is contagious; otherwise, overwhelmed by the enormity of what we are witnessing, the older generation will be too numbed and paralysed to rebel for life.

The changes in human attitudes and behaviours being demanded by the ecological crisis require a compassionate shift in our relationship to the other than human world. For we are wired to protect what we love. If that is too much to expect of a species so caught up in flight or fight, then at least a utilitarian approach still has merit. For we protect what we value, especially if it pays us back many times over. Nature connection is good for us, and if allowed to, Gaia will continue to clean our air and water, regulate climate, and co-create sustainable food and shelter. It would be disastrous to take for granted these incalculably valuable natural services, and ignore the ancient bonds that tie us into the other than human world.

In this bumper issue of JHH we explore communion with the natural world and its impact on body, mind and spirit. The images and poetry woven through this issue celebrate the art as well as the science of nature connectedness.

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The nature–human connection and health

Alex Laird

Medical herbalist



Humans are nature. We inhabit a rhythmic web of life. We are one of at least 10 million, possibly even a trillion species on Earth. From her megafauna to her vast microbial diversity, modern humans have schemed to re-engineer and exploit the natural world for short-term gain. Yet there is no functional separation between humankind and the rest of life. Nature designed and assembled us, so good health requires us to remember this intimacy, pay attention to how our body and mind naturally function, and co-operate with this evolved wisdom.

Wondering at the perfection of an autumn morning as a child on the shores of Loch Lomond, I had an epiphany – nature was saying something about how to live. This eventually led to my move from television to aromatherapy, working with HIV drug users and hospital staff, then to herbal medicine and founding the charity Living Medicine. Nature, through its extraordinary design within and outside us, is for me the ultimate teacher. In my practice, I love learning about and teaching about how life and our bodies thrive through foods, plants, people and the rest of nature. Exchange between all cultures is central to Living Medicine's self-care courses for patients and public. It's the impetus behind our vision to create Britain's first global medicinal garden as a centre of excellence, co-created with the public and linked to medicinal gardens worldwide.

Nature is not a place to visit.
It is *home*.

Gary Snyder (1990)

Humankind is a young and not-yet wise species who left home and lost its way. Our love story with nature is going through a very rough patch. As the industrial society wreaks destruction on itself and other species through over-consumption, waste and global warming, we may wonder what went wrong and how we might fix it. Our hubris may be taking us down, yet the rest of nature will probably prevail long after we were gone. Yet surely, if nature can survive, we can learn to do so too. As health practitioners, how can we share our knowledge of how life functions to help us recover a healthy relationship with nature?

We are nature

Our shared natural history started some four billion years ago, with the formation of a persistent, tiny single-celled organism. It's thought that all life evolved from this last universal common ancestor, or LUCA. Billions of years ago, bacteria and viruses shared genetic information which transferred to animals and eventually became part of our human genome (Crisp *et al*, 2015). Every individual life-form that

has developed since shares many of the same genes necessary for basic cellular function, such as for replicating DNA, controlling the cell cycle and helping cells divide, and other genes that control the basic metabolism of all plants and animals. It is not surprising to learn that consequently humans share some 75% of their genes with the pumpkin.

So nature embraces all life within our vastly biodiverse system. This common urge for life is reflected in the form and function of all organisms, which have themselves been shaped through evolution by the co-creative and co-operative relationships between organisms and their ever-changing environment. This symbiosis, as first proposed by biologist Lynn Margulis (1967), is recognised as driving evolution onward.

Our human-nature connection; biophilia

These shared genetic codes may explain in part why our connection to nature is in a sense instinctual and why it feels so fundamental. We may feel awe, wonder and love for the exterior natural world, as Stephen Harrod Buhner suggests, 'because the experience of nature and other life

forms is so deeply interwoven into our emergence as a species... human beings possess a genetic predisposition for wild nature and for other life forms - though it must, through specific experiences, be activated' (Margulis, 1967).

Living in natural harmony

*Nature, time and patience are
the three great physicians.*

Chinese proverb

This activation is where herbalists, and indeed anyone with a deep feeling for nature, can have a role in reconnecting us to the life within and beyond us. For herbalists, our medicines are the plants themselves and an understanding of how natural systems function and interrelate. We use plants directly as natural medicine, but they can also act powerfully on our imagination to awaken us and our patients to 'biophilia'. Edward O Wilson coined this term to name humans' innate feeling for and caring about living forms (Wilson, 1984). Biophilia can extend our empathy to encompass the natural environment, all of life, ourselves and other humans.

*'Love the world as your own self;
then you can truly care for all things'.*

Lao Tzu, Tao Te Ching (6th century BC)

Diversity and symbiosis

The human body contains communities of viruses, bacteria and fungi that probably outnumber our own cells. In our gut, trillions of these co-evolved microbial 'old friends' digest fibre, pigments and food particles that our own juices cannot deal with. In return, they produce protective acids and manage potentially harmful viruses and bacteria within the gut's ecosystem. On the surface of the body, microbial species adapted to our skin help maintain its immune barrier by turning sweat, skin cells and sebum into protective acids. Our health depends on our interdependence with other life forms, a living network inside and out. It also rests on social and environmental health – for if they are impaired, so will our health be, albeit indirectly or in the long term.

Reducing stress load and supporting function

These approaches are fundamental to improving health. Ill-health often results from not listening to internal warning signs such as poor sleep, pain, depression and fatigue. So how best are we to allow our evolutionary nature to flourish? We evolved in groups so loneliness and isolation, and disconnection from self and others, can contribute to a sense of dis-ease. Excessive stimulation and busyness has to be counter-balanced by slowing down so we can recover. To practise being in the here and now will more closely mirror nature's timescale: we know from the evidence on mindfulness that this is a healing state. Simply

sitting quietly and opening up to our senses will quicken our appreciation of life.

Circadian rhythms

Cell chemistry functions in lockstep with Earth's day-night cycle, because life evolved over billions of years in constant relation to the planet's rhythms of dark and light. Daylight prompts the morning surge of cortisol that wakes us up; melatonin production builds as light fades and moves us into sleepiness. Growth hormone secretion helps repair us while we sleep. Electric light has artificially lengthened our day, but mild permanent jetlag is the consequence of ignoring the bodyclocks embedded in every cell of the body. Returning to the planetary rhythm of eight-hours sleep, eating and exercising by daylight and fasting overnight matches our true biological tempo, so buffering us against stress and building our ability to adapt to adversity.

“ We use plants directly as natural medicine, but they can also act powerfully on our imagination ”

Real food is medicine

Much more than mere fuel, what and how we eat can nourish us on all levels, body–mind and spirit. Feeding connects us instantly to our bodies; eating together binds us to other people. Food has taste, texture, shape, colour and sound, as well as nutrients. It can link us to where and how it was grown. But an impoverished way of eating cannot do this. Fast industrial food can be cheap but the true price of poor quality, fast-grown, diluted and phytonutrient-poor food will eventually be paid in ill-health.

It's increasingly recognised that there is no single ideal diet. We are beginning to discover there is a basis for individual needs, and this is thanks in part to a better understanding of the role of genomic differences and the ecology and distribution of gut and soil microbes. But there are some key principles to what and how we should eat, and at their heart lie nature's favouring of complexity and diversity. My own approach builds on what food activist Michael Pollan laid down with his 64 rules, summarised as: 'Eat food. Not much. Mostly plants.'

My own approach to dietary advice is:

- mostly plants, with their fibre and phytonutrient-rich edible skin, pith and seeds
- not too much and mostly during the day
- many colours, the darker the better
- some raw
- from a variety of plant families
- a new vegetable or fruit regularly
- something wild every day (for concentrated phytonutrients).

Food provenance matters

What did that animal eat and how was it bred and raised? In what soil and surroundings was that plant grown? Albeit transformed, we are eating what that animal ate or the soil in which that plant grew. Highly-marbled meat is usually due to ‘finishing’ or fattening the cow with an unnatural diet of corn, grain and/or soya bean, high in inflammatory omega 6 fatty acids, rather than anti-inflammatory omega 3s from pasture-fed animals. Science has shown that animals have emotions and can suffer much as humans do. An animal slaughtered so we can eat it should die with as little stress as possible, having been respected in life, herding with its fellows, and eating a natural diet of mixed pasture.

Rediscovering complex food tastes

Having evolved to savour nutrient complexity and to protect us from toxins, our taste and smell can detect at least 100,000 flavours. We are hardwired for a variety of tastes, but we have been seduced by salty and sugary foods to narrow our taste preferences. A food that feels deeply satisfying is likely to be waking up many taste receptors. For example the complex flavour of a wild-grown plant like watercress tells us that it’s full of phytonutrients and vitamins, minerals and soil organisms from a mineral-rich river bed, stimulated to make the kind of defence chemicals that act as plant medicines (such as immune-stimulating bitters). A fast-grown plant molly-coddled in hydroponics and fed a chemical fertiliser mix won’t have had the chance to do this. We can literally taste the difference. The fats, proteins and carbohydrates of a slow-fermented ham from a pig who ate a wild and complex diet get broken down further by microbes specific to each atmosphere from cave to attic, into hundreds of tasty amino acids, fatty acids and sugars (IQWiG, 2011).

Gather, grow, prepare, share and eat food together

Ritual and celebration often revolve around food. The body’s digestion system works best when we slow down. And as we slow down we feel more open and communicative; our thinking brains work better too. When we rest and digest we also like to tend and befriend; with access to others, their ideas and skills we find solutions together (Hari *et al.*, 2015). Loneliness is as damaging to our health as smoking and obesity and shortens our life.

Some stress can build resilience

A little stress is a good thing. Hormesis is an adaptive response to a moderate stressor that stimulates response and so builds resilience. As our muscle and bone build on sensing a load, so a plant threatened by a predator or pathogen makes its own defence chemicals. Merely

knowing that difficulty can strengthen us physically and mentally can change our attitude and behaviour towards what we tend to avoid.

Our state of health is not permanent

Health involves a dynamic adaptation to a constantly changing environment. We are complex creatures and we can adapt and grow. When faced with a challenge we may discover unknown coping capacity and inner resources. Rather than resisting an unfamiliar reality, how can we experience the now as a moment full of possibilities, a feeling of not being fixed in an illness or misery? By holding this acceptance our current state is eligible to change. One theory about the healing power of nature connectedness is that it diffuses our over-focused attention and widens our sense of self.

Finding our way back home to nature as teacher and lover

Long-lived healthy communities do exist. The world’s blue zones – regions of the world where people live much longer than average – (Buettner, 2005) share several key characteristics: regular physical activities like gardening or household tasks; a sense of life’s purpose; a plant-based diet including legumes; strong family and social cohesion especially for the elderly; moderate alcohol intake; reduced stress; and the expression of spirituality or religion. Genetic or other factors must also play a role in their good health, but what is obvious is that these communities’ all live simple, slower and rhythmical lives that involve connection, give and take.

Summary

One way home to our natural selves is through our deep and real relationship with the natural world. We humans co-evolved the other-than human world whose diversity and rhythms encourage us to be more patient with life’s processes. Nature is calling us to tackle the profound ecological and social challenges of the extraordinary time in which we are living. Since humans are the planet’s organs of awareness and conscience we must not ignore the symptoms of planetary illness. Global warming and species loss should prompt us to join together to heal ourselves and the other-than human world.

*The anchor of my purest thoughts, the nurse,
The guide, the guardian of my heart, and soul,
Of all my moral being...*

*A motion and a spirit, that impels
All thinking things, all objects of all thought,
And rolls through all things.*

William Wordsworth

Nature in its beauty and economy models a sacred reciprocity. If we observe closely and patiently how it works, and appreciate the hidden, long-term consequences of our actions, our natural wisdom will guide us home to a healthier balance with each other and the Earth.

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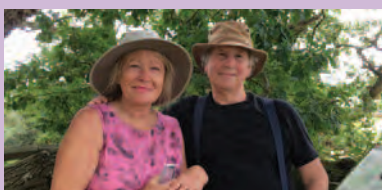
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Gaian psychology in practice

An outcome study of groupwork to address concerns about the world

Chris Johnstone

Resilience specialist, CollegeOfWellbeing.com



I've run workshops designed to help people respond to their concerns for the world with courage, creativity and compassion for more than 30 years. I've worked closely with US author and activist Joanna Macy in this work, and in *Active Hope*, the book we wrote together (2012), we describe the transformative journey the workshops guide people through. The approach we use draws strongly on systems thinking. A central idea is that systems act through their parts – whether a family or team acting through its members, or the planetary system of Gaia acting through us. I've found this idea to be enormously empowering.

When we connect with nature, we may also connect with the pain of a living system in trauma. The range and depth of uncomfortable feelings brought up can sometimes be overwhelming, particularly as we live at a time of a human-induced dying-back of the natural world. This article introduces a form of groupwork known as The Work That Reconnects. Applying a Gaian approach to psychology, it leads to a different way of thinking about pain for the world and our power to make a difference. I also report on an outcome study with follow-up questionnaires a year after workshops based on this approach.

At the time, 2014 was the warmest year on record. Then 2015 was hotter, and 2016 saw higher temperatures still. Alongside these years, 2017 and 2018 were also among the five hottest since records began (https://en.wikipedia.org/wiki/Instrumental_temperature_record). The heating trend on planet Earth has seen each decade over the last half-century warmer than the one before, with record-breaking heat-waves, wildfires, floods and droughts appearing much as climate scientists told us years ago they would. With the disturbing changes happening to our world climate system, and the weather-related disasters linked to these, it is no surprise that terms like 'climate anxiety' are increasingly used (www.resilience.org/stories/2018-09-21/psychologists-explain-our-climate-change-anxiety).

More than 40 years ago, a form of groupwork developed that provided a forum for sharing concerns about global issues. Then, as now, many people felt overwhelmed when facing problems experienced as too huge to address in a meaningful way. Yet being

able to acknowledge and express such feelings about the world within a supportive setting was found to be liberating, especially when people experienced their concerns as shared by others. Some of the hopelessness shifted, leaving participants more energised and empowered. As these workshops aim to help participants strengthen their sense of connection with the larger whole of life on Earth, as well as with their capacity to make a difference and a community of mutual support, the approach is known as *The Work That Reconnects*. It has spread throughout the world, and hundreds of thousands of people have taken part.

The approach was first developed by Joanna Macy, an activist and teacher of world religions in the US. Her doctoral thesis had explored the parallels between systems thinking and Buddhism. This background helped her build a framework for the workshops that integrated systems thinking perspectives from science (like Gaia Theory) with spiritual practices and psychological insights. At the core of The Work That Reconnects

is a reshaping of psychology based on applying a Gaian understanding of who and what we are. In this, the way we deal with our feelings about world events is seen as one of the keys to finding our power to make a difference.

Gaian psychology and pain for the world

Gaia Theory proposes that the living Earth functions as a self-regulating whole. In a striking parallel to the way our bodies control the temperature of our blood, the temperature of the atmosphere appears to have remained relatively stable over the last three-and-a-half billion years, in spite of an estimated 30% increase in the energy coming from the sun over this period (Lovelock, 1979). Atmospheric oxygen levels and the salinity of the oceans also appear to have remained remarkably stable for many millions of years, with evidence growing that these have been actively regulated by life itself. Rather than viewing our planet as a dead lump of rock that we and other species happen to live on, Gaia Theory suggests that Earth is better viewed as a self-regulating living entity that we are part of.

The importance of Gaia Theory psychologically is it challenges the view that we are just separate individuals. It becomes possible to think of ourselves as similar to cells within a larger organism, or as members of a planet-sized community of the whole of life on Earth. Emotional reactions to threat, loss and injury elsewhere on the planet are seen as expressions of this wider and deeper 'ecological self'. Making room for these feelings becomes a way of experiencing and deepening our connectedness with life.

If someone in our family dies, feelings of grief are regarded as normal and healthy. The pain of loss, though uncomfortable, is a product of our relationship with, and belonging to, the larger system of our family. Likewise, if a relative has been attacked, we might feel angry, sad, alarmed or concerned. These 'family feelings' motivate people to act for the wellbeing of the family system they belong to. The family is a self-regulating entity that acts and feels through its members.

Some indigenous tribal cultures have a relationship of closeness to nature where other species are regarded as close relatives. Although that depth of connection has to a large extent been lost in modern industrialised societies, it has not gone completely. When people are given an opportunity to give voice to their feelings for the world, it allows the expression of that part of their being that still feels connected. That brings the world closer, deepening our relationship with it.

When we feel strongly about something, our emotions provide a source of energy that we can tap into. But if we avoid looking at world problems because the feelings they arouse are too painful, we block the motivating signal that might rouse us to respond. That can lead to apathy and disengagement within a culture psychologically alienated from the larger community of life on Earth.

An essential step in the workshops is to offer a different way of understanding the distress we may experience about disturbing events in the world. There is a shift in the meaning we give pain for the world when we value it as evidence that we are connected to a bigger life than just our own. With this view, we can recognise the life-preserving function of uncomfortable emotions as signals that can alert and energise our response to danger.

Building on this understanding, the workshops offer structured processes and a supportive environment for people to hear themselves give voice to their anguish and concerns. Research has shown that having opportunities to talk through feelings of distress about traumatic events can improve health outcomes (Pennebaker and Beall, 1986). Yet even though distress about traumatic world events is common, these feelings often remain as an unspoken unsettledness within us. To give room for their expression, participants are invited to talk in pairs or groups, completing sentences that start with phrases like, 'When I consider the condition of our world, I think things are getting...' and 'Feelings that come up when I think about this include...'

Pain for the world, an umbrella term for the variety of ways we experience distress about upsetting world events, is only one side of the coin. The other side is the depth of our caring and desire to play our part in a constructive response. Within Gaian psychology, the interconnectedness that links these also points to a systems-based understanding of our power to make a difference. Of central importance here are the concepts of synergy and emergence.

Finding our power to make a difference

If you look at a newspaper picture through a magnifying glass, you might only see a collection of tiny dots. It is the way these dots act together – in synergy – that leads to the emergence of the picture. In a similar way, a whole person is so much more than just a collection of cells. Moving up a level, a well-functioning team can achieve things that might seem impossible for less connected individuals. The whole is more than the sum of the parts because the synergy of parts working together allows for the emergence of new abilities.

Just as newspaper pictures happen through dots, so stories happen through people. When we look up close at individuals going about their daily lives, it is difficult to fully appreciate the power – for better or worse – of the larger stories happening through them. We are living at a time of a mass extinction event caused by human activity. In this story, which we can call 'The Great Unravelling', our species is threatened too.

Gaian psychology involves a shift in identification, where we see ourselves not just as individuals, but also as part of a living planet that seeks to heal itself. Systems act through their parts, and just us healing in an individual involves the actions of that person's cells, so the larger

story of our world healing itself could involve us and happen through us. Stories of recovery from life-threatening conditions have turning points where the balance shifts towards recovery. What would a 'Great Turning' story of the recovery of our world look like if it were to happen in and through our lives? Important elements might include the noticing of problems, experiencing the alarm call of emotional distress, and then seeking to play a role that made a difference. The workshops aim to strengthen people's capacity to find and play their role, and the final part focuses on supporting participants to explore what their role might be.

The outcome study

There are times I've felt powerfully connected to this sense of life acting through me. These workshops have strengthened that experience, in ways that have been life-changing. Over 25 years ago, I wondered whether other participants had felt this too, and what difference these workshops made. To find out, I decided to carry out a follow-up study (Johnstone, 2002).

I sent questionnaires to all participants of residential workshops I had run between December 1992 and November 1993. I sent them a year after each event, so that I could get an idea of longer-term outcomes. I asked people to rate their responses to a series of questions on a five-point scale that included the following options: not at all, slightly, moderately, quite a lot, very deeply. I also asked for additional comments. The questions I asked were:

- Did the workshop give you an opportunity to express your feelings about the state of the world?
- Did the workshop help you strengthen or deepen your sense of connection with the Earth/life on Earth?
- Was your experience of the workshop in any way personally healing or beneficial for you?
- Was your experience of the workshop in any way harmful or damaging to you?
- Did your experience of the workshop help strengthen the feeling that you can make a difference to the state of the world?
- Overall, has your experience of the workshop in any way changed your life?

I received 31 replies from 40 questionnaires sent. Everyone replied that the workshop had provided the opportunity to express their feelings about the world, and more than 70% said that this had been 'quite a lot' or 'very deeply'. More than 90% replied that the workshop had helped strengthen both their sense of connection with the world and their feeling that they could make a difference within it. For over half the respondents to both these questions, this had been either 'quite a lot' or 'very deeply'. More than 80% replied that the experience of the workshop had changed their life, and for this, more than 25% had marked the response 'very deeply'.

This small-scale study was carried out more to satisfy personal curiosity than academic rigour. To get a more comprehensive view of outcomes, a much larger sample size would be needed. However, it does support the view that these workshops can offer an empowering experience that deepens participants' feeling of connection with the world. A small proportion – in this case about a quarter of those replying – found the workshop to be an important turning point that very deeply changed their lives.

Personally healing

A striking finding of the questionnaire was the high proportion of people who found the workshop to be personally healing. More than 90% of replies rated this area as 'moderately' or more, and more than 75% marked the responses of either 'quite a lot' or 'very deeply'. This made it the most highly rated positive outcome of the workshop. Several participants wrote in their comments that the workshop had been healing in helping promote a sense of integration with a wider picture, one person writing: 'I remember an uncommon and wonderful sense that I did (do) have a place in the world'.

Other factors described as healing were the experience of not being alone in feeling distress for the world and having this distress validated as an appropriate emotional response to world problems. One participant, listing what she had found beneficial, wrote: 'permission to feel, to grieve, to hate, to rage, to cry – validation that I am not "odd" but responding to an unhealthy situation in a healthy way'.

Are they safe?

I added the question about harmful effects because sometimes people fear that opening to feelings about world problems might be harmful. I wanted to check whether there was any evidence of this. More than 80% replied 'not at all', nearly 10% put 'slightly', 3% (one person) marked 'moderately', 3% 'quite a lot' and 3% marked the response 'very deeply'. Every one of these people also marked that they had found the workshop as much or more personally healing. No one mentioned feeling depressed or traumatised by their feelings about the world. The negative effects people identified fell into two categories: personal issues brought up by the workshop, and factors to do with being in a group.

The one person who had marked 'very deeply' harmful also replied that she had found it 'very deeply' personally healing. In her additional comments she said the workshop had brought up a lot of previously unexpressed personal grief, and that afterwards she had gone into therapy and been able to move forward with this. She had also left the workshop early, and so missed the integrating potential of exercises used towards the end of the workshop. Other people had also commented on personal grief issues being brought to the surface, and they had identified this as a factor in the workshops that was personally healing.

One person commented that they had felt rejected in the group. They also replied that they had found the workshop a moving experience that was personally healing. Other studies have also identified that people feeling rejected by others is a potential adverse effect of intensive groups (Lieberman, Yalom and Miles, 1973). Groups can sometimes painfully recreate earlier difficult life experiences, and as this type of workshop is not a personal therapy group, some of these issues may get missed. However, the solidarity of facing a common threat together can help lift people above their personal issues, while also breaking down some of the barriers that lead to exclusion. One participant listed the positive effects of the workshop as including, 'Increased affection for, understanding and tolerance to other humans, replacing the rejection and hatred and blame I had formerly felt'.

Returning to the question of safety, these findings suggest that rather than it being harmful to open our feelings about world problems, when this is done in a supportive setting it can be a deeply healing.

An assessment of safety also needs to include the question 'is it safe not to do this?' While these workshops are only one of many possible ways of responding to the feelings brought up by global issues, a danger of not listening to our emotional reactions to world events is we might miss an alarm call alerting us to danger.

Choosing what happens through us

Thanks to photos from astronauts, we are among the first generations of humans ever to have seen images of the Earth from the outside: in a way that makes it easier for us to think of it as a whole. The branch of psychology becoming known as Gaian Psychology invites us to see ourselves as part of our world, of Gaia, rather than separate from it. The workshops introduced here apply this new psychology to one of the major challenges of the 21st century – how to face and respond to the problems of our world with courage, creativity and compassion. The results of the study suggest that these workshops not only strengthen our belief that we can make a difference, they are experienced as personally healing. In supporting our capacity to take part in the Great Turning, they help us find our power to shape the flow, and choose the narrative, of the story that happens through us.

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Reclaiming nature-based practice for the modern world

From green care to soulcentric rites of passage

Roger Duncan

Systemic family therapist



Rites of passage of various kinds have been used by indigenous cultures for millennia to expand and alter perception and ground indigenous culture within the deep ecology of the land. This article is a call for action in our time of profound social and ecological disturbance, for practitioners to create nature-based interventions appropriate to mainstream educational and therapeutic settings. It is an invitation for nature-based practitioners to come together and work towards a common language linking the ideas of deep ecology and systemic psychotherapy.

I work in the NHS and in private practice with individuals, families and organisations. I was one of the pioneer tutors of Ruskin Mill Education Trust and had a leadership role in its senior management. I have been involved in the development of outdoor, therapeutic education programmes for adolescents in both woodland and wilderness settings. My intention is to find ways to bring experiential encounters with the imaginal into mainstream education and therapeutic practice.

In Michael Pollan's new book *How to change your mind; the new science of Psychedelics* (2018) Pollan tracks the history of psychedelics and their use in three stages. The first wave he identifies as the indigenous cultural use of psychedelic plant medicines such as peyote cactus in shamanic rituals and initiatory rites of passage. His second wave begins when in the 1950s, LSD and other psychedelics were synthesised and used in clinically effective treatments, by some psychiatrists. Once discovered by the 'counter-culture', their media notoriety grew, culminating with the 1967 'summer of love' and the subsequent ban in the United States and elsewhere that halted psychedelics research internationally. Pollan's third wave is the current resurgence in research and the application of psychedelic drugs such as psilocybin and MDMA, in effective treatment programmes for resistant forms of PTSD, substance addictions and depression. Pollan describes the potential of these plant medicines to facilitate rites of passage out of our current ego-driven, environmentally

destructive, cultural trajectory. He concludes, after his own psychedelic experiences and close study of the research, that these substances can act as powerful agents for bringing about necessary social and cultural change in what Jaded Diamond (2012) calls western, educated, industrialised, rich, democratic (WEIRD) cultures.

Reconnecting with our own indigenous nature-based rites of passage

Rites of passage of various forms have been used by indigenous cultures for millennia to expand and alter perception, and they appeared to ground indigenous culture within the deep ecology of the land. In many of these cultures these traditional nature-based practices have been lost, actively suppressed by the church as 'witchcraft', or latterly dismissed as superstition by WEIRD scientific modernists. Britain, like almost every European country, no longer has an intact lineage to the indigenous wisdom whose rites of passage were

once an essential part of adolescents' psychosocial integration.

WEIRD culture's relationship with indigenous non-drug induced rites of passage mirrors Michael Pollen's interpretation of the psychedelic drug experience. During the first wave, intact rites of passage that flourished within European, Native American and African indigenous cultures gave access to a deep eco-systemic awareness of nature, that provided cultural integrity.

The second wave was the renewed interest in the rites of passage work within WEIRD culture during the 1970s initiated by, among others, Louis Mahdi and founders of The School of Lost Borders Steven Foster and Meredith Little (Mahdi *et al*, 1987). A third wave of interest is now growing, in parallel with declining adolescent mental health, in the field of ecotherapy and research into the therapeutic benefits of time spent in nature. This wave is concerned with creating contemporary nature-based rites of passage as a source of social and psycho-spiritual inspiration: a process that Bill Plotkin calls 'soulcentric initiation' (Plotkin, 2008).

Two ways of seeing the world

A common theme running through old myths and fairytales is the idea that there is a different and mysterious magical fairy world into which the bold who venture seldom return. These worlds are usually depicted as running parallel to the world of men and women, but the passage between the worlds is guarded by a gatekeeper or secret initiation. In one such English story, an old woman is able to see into the fairy world after inadvertently rubbing a magic ointment in one eye; she is able to see into the world of mortals with one eye and into the fairy world through the other.

Just as in the magic ointment story, systemic family therapy makes a distinction between *first order* linear thinking and *second order* systemic thinking. This implies two different, but connected, ways of encountering the world. We are all familiar with the kind of linear cause and effect style of thinking that underpins the Newtonian world of mechanical causality, the WEIRD worldview and western education. This way of thinking has enabled technologies that can land astronauts on the moon and identify, order and categorise the plants and animals that make up the complex natural world. Nevertheless, it seems something subtle and important gets left out if we approach the world only through linear thinking. According to depth psychologists such as Carl Jung and James Hillman, *first order thinking or directed thinking* is the root of the western world's alienation from both the natural world, and from the deeper and instinctual presence of our own soul.

Systemic thinking and systemic psychotherapy grew out of a growing recognition of the limitations of linear thinking in biology and the medical model of psychiatry. Systemic thinking has helped describe a more complex picture of nature and mental health. It has encouraged

curiosity about different ways of knowing and, together with reflective practice, it can open up a creative *liminal* space of uncertainty and *not knowing*. Systemic thinking is especially valuable in psychotherapy when a complex problem gets stuck or trapped by unhelpful and self-limiting worldviews. It can also be helpful to distinguish two kinds of nature-based work: a more *first order* type of practice, 'green care', can bring about a direct calming and containing experience of nature; another, which we might describe as 'nature-based rites of passage work' is more a *second order* type of work with potential to bring about a more systemic change.

Green care

There is now clear evidence for the beneficial effects of exposure to nature and green environments, and the resulting feeling of wellbeing this can produce. In nature the autonomic nervous system responds by calming down, reducing psychophysiological stress in a number of ways (Bird, 2007). In previous generations access to nature and its benefits were common experiences for children. However, in WEIRD cultures this has become increasingly rare. Too often, both at home and work, we are kept apart from nature, and exposed to high levels of psychological stress with consequent autonomic nervous system over stimulation (Van der Kolk, 2015).

The social and psychological benefits of spending time in nature are now widely recognised, and some recent policy developments aim to make effective use of green care to improve mental health. Highlighting the rapid decline in young people's psychological wellbeing and deteriorating adolescent mental health in schools, a 2018 Department for Environment, Food and Rural Affairs Report (2018, DEFRA) proposed a 25-year government plan for how they might be improved, which included social prescribing of green care interventions such as running, walking and cycling. Communal activities in forest schools, environmental conservation work, community gardening projects, and care farming provide effective opportunities for people to work together in a meaningful ways (Natural England, 2016).

Recently, there has been criticism of a mindset within ecopsychology practice that treats the natural world as though it were just a commodity to be objectified and exploited for the sole benefit of human healthcare. For despite the benefits of green care activities for individual and social wellbeing, first order green care fails to challenge fundamental western beliefs that drive environmental degradation, and western industrial lifestyles whose potentially catastrophic impact on natural ecosystems was the focus of dire warnings in the 2018 Intergovernmental Panel on Climate Change (IPCC) report. For many ecopsychologists, these unchallenged narratives – inherent in WEIRD culture – are at the root of both environmental degradation and the present decline in mental health and wellbeing (Glendenning, 1994). Jones and Seagal (2018) note the consequences of

Soulcentric rites of passage

could bring about second order systemic changes of the kind that Bill Plotkin calls soul initiation. These experiences supported adolescents in leaving behind their feelings of uncertain identity, and moving towards cultural well-springs of young adult inspiration (see Figure 1).

What are we to make of these practices in our time? From a mental health perspective we could see them as ecopsychological interventions; perhaps even as screening tools for determining what kind of support each adolescent might need for transitioning into adulthood. Through the lens of systemic thinking, a rite of passage becomes a facilitated phase change process, bringing about a fundamental shift in a person's sense of self and world. To a neuroscientist, a change in the 'default mode mechanism' of our neocortex (a mechanism Pollan identified in his study of mind-changing drug experiences) might explain how rites of passage disrupt old assumptions and enable new ways of thinking and doing.

Perhaps most importantly, rites of passage can reveal a richer and more relationally complex inter-weaving of

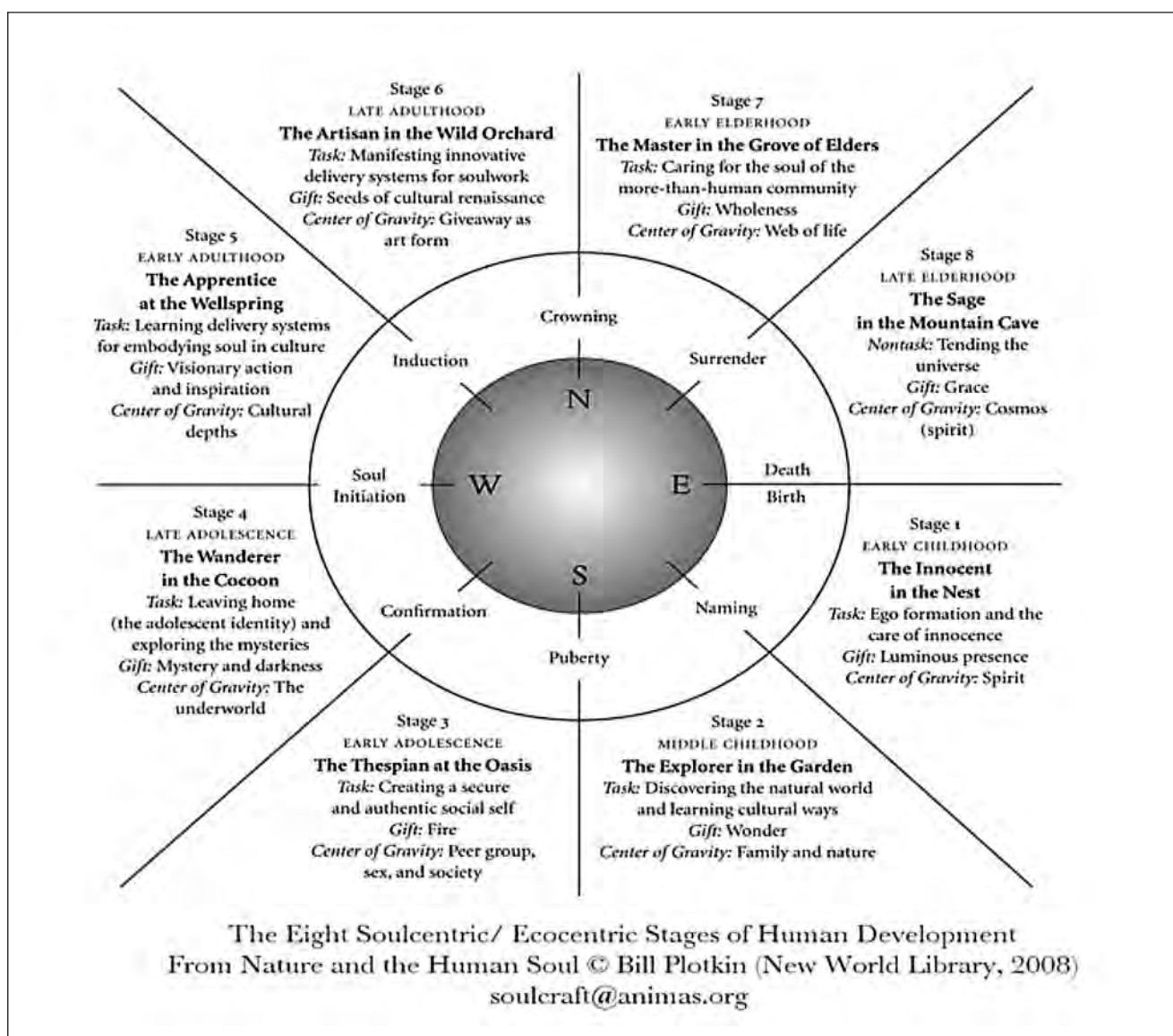


Figure 1: The eight soulcentric/ecocentric stages of human development

nature and human psychology, through a process of deep and long-lasting systemic phase change: a change of heart rather than just a change of mind.

Catching the third wave and reclaiming our nature connection

Having spent more than 30 years working with adolescents and nature-based therapeutic education, I have distilled my experience into my book *Nature in Mind, Systemic Thinking and Imagination in Ecopsychology and Mental Health* (2018). I intended this unique practical and philosophical handbook to be useful for general readers as well as health and social care workers. The essential message of my book, can be summarised as five different stages for reclaiming the indigenous nature connection that WEIRD cultures have lost.

- 1 The recognition of our current alienation from nature within the context of our indigenous ancestors' separation from the land and traditional nature-based practice. My book describes how this legacy may have resulted in cross-generational trauma and disrupted patterns of attachment within WEIRD culture. It explores how this loss of connection influences our modern thinking about nature, which is now so radically different from the perspective of indigenous people. This has left WEIRD culture trapped in a worldview that believes nature and the human mind to be separate, and implicit belief that continues to perpetuate environmental and socially destructive behaviour with no apparent way to change it.
- 2 Once we recognise this implicit separation within WEIRD culture is something Gregory Bateson called an 'epistemological error' (Bateson, 1979), we can begin to create a more systemic, 'imaginal', intersubjective relationship with nature.
- 3 Some imaginal and systemic nature-based developmental languages are described in my book. *The circle of courage, the four shields, and Bill Plotkin's soulcentric developmental wheel* are examples of human development wheels whose origins in non-WEIRD indigenous cultures provide a completely different narrative of human development. These maps can help us rethink our understanding of both nature and the human psyche in ways that go beyond the current limitations of our reductionist and post-colonial paradigms.
- 4 Bill Plotkin's soulcentric/ecocentric eight-stage wheel, which describes imaginal or systemic rather than chronological stages of human development, can be used to devise nature-based programmes for addressing different stages of developmental need. For example: first order programmes to promote a sense of belonging and connection; and second order programmes, such as soulcentric rites of passage, during the later stages of adolescence or early adulthood.

- 5 If nature-based practitioners are to respond effectively to the 2017 Government Green Paper and 2018 DEFRA report it will be essential for us to come together as a network for sharing good practice. It is also important that we recognise the support of indigenous teachers, who are bringing their deep understanding of this work back to the WEIRD cultures whose own traditional lineage has been broken or lost. It is also vital that we begin to build a strong research evidence base to show where and how this work can be most effective.

This article is a call to action for practitioners to come together and create developmentally appropriate nature-based interventions for mainstream educational and therapeutic settings. It is an invitation to work towards a common language that can link the ideas of deep ecology with systemic psychotherapy and so give shape to nature-based practices for addressing the profound social and ecological issues of our time.

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Managing mental health with nature

Paul Brook

Wildlife and wellbeing writer



In the last four or five years, I've noticed a growing number of people talking and writing about the benefits of nature for mental health. I'm one of those people – I've written about this topic many times, and have spoken about it on BBC radio and television.

This article is about how I've benefited from the healing power of nature in managing the symptoms of my mental health problems.

Before I started writing about it, nature was already a passion for me – I've loved animals and particularly birds since a young age. But a few years ago I'd reached a point in my life where I wasn't finding time to do the things I used to enjoy, and had pretty much forgotten what those things were. An ongoing battle with stress in and out of work gave depression the chance to creep into my life, bringing anxiety with it. I discovered the benefits of nature for health and then started writing about it.

How nature benefits my mental health

When we're worn down by stress, anxiety and depression, it's easy to forget the things we used to enjoy doing – or how to enjoy doing anything for that matter.

A few years ago, when I was frazzled and going through an episode of depression, my counsellor encouraged me to find time to do something I enjoyed. I'd always enjoyed bird-watching and walking, and tried to get out more and rediscover the pleasure of my abandoned hobbies.

While nature alone does not cure depression, anxiety or any other mental health problem, it is one part of a toolkit of coping strategies that can help us to manage our well-being.

My own personal mental health battles are with depression and anxiety, and I find that nature does help me in a number of ways.

A positive focus and distraction

Absorbing ourselves in nature can turn a walk – or even just a nice sit down in a park or garden – into a mindful experience that focuses us on the present and takes us away from the churning thoughts that tumble round our heads and the anxiety that chews at our tummies.

Hear the breeze rustling the leaves in the treetops; listen to the birds singing; watch butterflies and bees flitting among your garden flowers... I find that even a few moments being completely distracted by wildlife usually has a calming effect on me and lifts my mood.

As well as the wildlife, experiencing different places – or just retreating to a favourite wild place – can be very therapeutic. I find being in woodland or by water especially soothing.

Being outdoors has other health benefits too – fresh air, sunlight and exercise are good for our physical health as well as our mental well-being.

Discovery, excitement and adventure

One thing I love about nature is that there is always something new to discover – new species to see, new places to visit, new behaviour to observe. I'll never forget the wonder of watching badgers in a woodland clearing after years of waiting for even a passing glance of one. If I'm planning a birding trip, there's that sense of anticipation and excitement at what I might see, and the thrill of seeing a rare bird for the first time.

But a new experience doesn't have to mean a new species – it can mean finding something unexpected in a familiar place. While off work with

depression, I took a short walk from home, and found yellow wagtails – glorious, sunny yellow birds – bobbing about in a field where I'd never seen them before.

One of my nature highlights of last year was seeing my first wild snakes. I'd taken an hour or so to escape to Skipwith Common, a heathland nature reserve, while my son was at a party nearby. The common is known for its adders in the summer months, but I've never managed to see one there – although the odd lizard is always a treat.

I was thinking to myself that I should go for a walk sometime at another local reserve where snakes could be seen, when I was halted in my tracks by an incredible sight – two snakes, basking in the spring sunshine in a gap in an old brick wall. They turned out to be grass snakes, and were so close up and easy to watch that I could take a decent photo with my mobile.

My son is really keen on snakes, so when I picked him up, I told him about my discovery, and we ended up going back with a couple of his friends. Incredibly, the snakes were still exactly where I'd left them. This kind of memory is exactly why nature is the gift that never stops giving.



Basking grass snakes © Paul Brook

Nature is everywhere

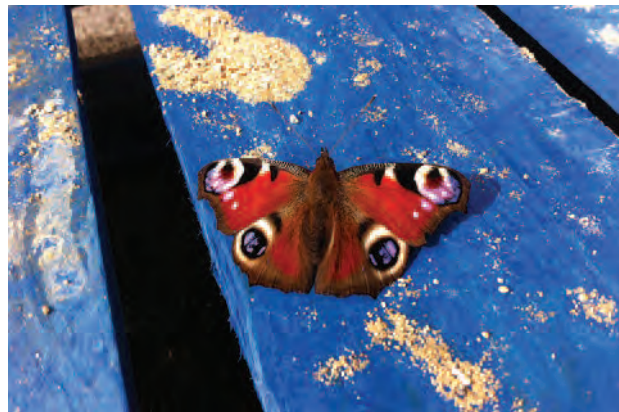
It's an unfortunate truth of depression that the things that are best for us are often the hardest things to do. Even for someone like me, who loves being outdoors, the draining, soul-destroying experience of depression can completely kill off all energy or enthusiasm, making the prospect of going out for a walk feel like the last thing I want to do.

At those times, if we just can't face going out, we can still enjoy nature without venturing out. If you can see the sky or a tree, lawn or plant from where you're sitting, you can still look out for wildlife. It's amazing how many different species you can see in a fairly short space of time.

I feed the birds in my garden and can lose myself watching them – the goldfinches jostling for position on a feeder, the blackbirds fending off rivals, the wren that always follows exactly the same route into our garden and disappears for a moment in a bush...

Accept that it's not going to work every time

Sometimes nature will help you feel better, even if only for a short time. Other times, it will not – but that doesn't mean we should give up.



Peacock butterfly © Paul Brook

There are occasions where my mood has been too dark – my thoughts too destructive and intrusive – for me to be able to get lost in the sights and sounds around me. There have been other times where I've felt crushing disappointment because I've 'failed' to see what I went out to look for (I'm trying to learn to manage my own expectations), or I've felt defeated and demoralised by the weather spoiling a day out.

One such day that stands out in my mind is when I took a day off work to go to Flamborough Head, one of my favourite places on the Yorkshire coast, on a mission to see some particular birds. I can't remember what birds they were, but I can remember that I didn't see them, and that I couldn't even enjoy the beautiful scenery because of thick fog. I genuinely considered giving up on bird-watching that day – not only had I not seen what I'd wanted to see, the weather was manky, there was barely a bird of any kind to be found all day, and I was sick of dragging my telescope and rucksack around.

The bird that saved the day was an unlikely one. At the point of my greatest frustration, the movement of a small bird in the hedge up ahead caught my eye. I followed it, hoping it would reveal its identity, and it did. It was a male



Grey seal at Filey © Paul Brook



Male chaffinch © Paul Brook

chaffinch – a very common bird, but a colourful one – and for some reason that splash of colour and the chaffinch's perky character were enough to bring me back out of my brain fog. The actual fog lifted soon after that too, and I remember sitting on a bench, and discovering that a cup of tea tastes even better by the sea.

Turning to nature

Now, if I feel stressed or anxious, or if I can feel my mood darkening – even if I just feel stuck in a rut – I make time to get outdoors, and it helps to distract me and give me something positive to do. I find it relaxing but also exciting, because the wonder of birding is that you never know what you will see next. That sense of anticipation – something to look forward to and get excited about – is a feeling that can get lost in the spirit-crushing mire of depression.

Life is busy, and it's not always easy to find time, but I've learned to look out for opportunities here and there – lunchtimes, those spare hours in between dropping off and picking up children at parties, maybe an hour at the start or end of a day... Part of finding this precious time is recognising the good it does me, and realising that this is part of helping me to manage my depression and anxiety. Self-care should not be optional – it's vital in helping us to recover and stay well.

Five tips for how to enjoy nature if you're experiencing depression:

- A good birding trip – or any kind of nature-related outing – is a great way to lift your mood, but it can also be too demanding if you're not feeling well, so don't try to do too much. I had a heavy cold while off work with depression, but one day heard that common gulls (a bird I'd always struggled to see) could easily be seen at a site across town. I dragged myself out, got blown about by a strong, cold wind, joylessly saw the common gulls and wheezed all the way home, feeling thoroughly miserable. It really wasn't worth it.
- Try to keep your trips short until you feel stronger and more able to try travelling further. I enjoyed some very satisfying and rewarding local birding, and my slower pace actually helped me to see more on familiar

patches, such as the discovery of yellow wagtails in a field close to home and some lovely views of yellowhammers and golden plovers.



Puffin, Northumberland © Paul Brook

- While you're restricted in what you can manage, enjoy what you can see and hear, rather than worrying about what you might be missing or can't identify – there's no point adding to your stress levels. You can learn songs, behaviour and subtleties of plumage that you might never have noticed before if you hadn't stopped and savoured the moment. Taking time to appreciate the colours of a male chaffinch or the song of a dunnoek while you're walking down the road can be as rewarding as something harder earned.
- Do some of your nature-watching alone and some with other people whose company you enjoy. Complete solitude isn't always good for you if you're suffering from depression. A friend took me out birding to one of our favourite local wetland reserves one weekend and an obliging water rail strolled out close to the hide where we were sitting – literally seconds after I'd mentioned that I'd never seen one – before sloping off into the reeds again. If I'd stayed at home and not made the effort to go out, I wouldn't have this happy memory to recall.
- Depression doesn't have to stop you getting out and about. The combination of exercise, fresh air, a change of scenery and doing something you enjoy means birding can be very beneficial. Keep it simple, do what you feel able to do, and quit while you're ahead



Grey heron © Paul Brook

The Earth Says (after Hokusai Says)

Larry Butler

The earth says
keep still
stay put & listen to the roar of silence
hold on & root deep for treasure
feel the sap rising through your bones
wait & see what happens

The river says
keep flowing
into the lochs swirling & swelling & swishing
keep floating down down & down
falling & carving the mountains
down to the beautiful sea

The trees say
keep rooting
rooting & rising into sky –
spread out your arms to embrace everything
breathe deep deeper with each falling leaf
gather fruit & nuts for winter

The sky says
keep looking
sniff the air & notice the small
changes moment by moment
breath by breath cloud by cloud
watching your thoughts float by

The birds say
keep singing sing from your heart
fly from branch to branch
stay curious stay light start fresh
each year with a new nest then be patient
& sit on your eggs till they hatch

The sun says
keep smiling
smile at your reflection on still water
from dawn to dusk go outside
out to play with light & shadow
in the day long dazzle leaping through thin air

The compost heap says
keep rotting
decomposing turning burning
digest everything that comes your way
keep returning to the earth
& the earth returns tenfold to you

The earth says keep still stay put
wait & see what happens next

Larry Butler was born in Illinois, grew up in northern California, and has lived in Glasgow since 1981, where he teaches Tai-Chi movement and leads improvisation workshops. He co-founded the Poetry Healing Project out of which he founded and developed Survivors' Poetry Scotland and Lapidus.
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Sunset linocut by Theo Peters <https://theopeters.co.uk>



Maiden Castle, Dorset (top), Gatmore Copse, Wiltshire (bottom), from South Land, West Wind, by Michael Newgass (Arnison Newgass, 2019)

Learning super-resilience from nature:

systemic responses to systemic overload

Alan Heeks

Chair, Hazel Hill Trust



Picture this scene: deep in a Wiltshire wood, a group of hospital doctors are sitting around a campfire. It's dark, and there's profound silence in the forest around them, broken by owls calling nearby. Slowly, the doctors take the risky step of opening up in front of colleagues: talking about feelings of overwhelm, exhaustion, the pressure to be superhuman that they put on themselves, and that they sense from patients. It's tempting to be heroic, but where is the place for emotions and uncertainty?

After a successful business management career, I created two residential centres where people can deepen their contact with nature. I am chair of the charity which runs one of these, Hazel Hill Wood in Wiltshire. In recent years, my main work passion is around building resilience for the major challenges we all face in the future. I have realised that a resilient, cultivated ecosystem is a powerful model for human resilience, and it has been very satisfying to see how this approach can help health professionals.

My definition of resilience is the capacity to thrive and grow in the face of challenges, rather than merely coping or surviving. The seeds of this creativity often grow from adversity. Overstress and burnout are so severe in many parts of our health service that they simply have to be talked about. There's some hope in this new openness, and a willingness to find new ways to address the issues. Perhaps resilience issues in the health sector are an indicator of wider distress, for we now face huge ecological and economic problems, and the resources to address them are too few. Similarly though sweeping systemic changes are now needed in healthcare, short-term mitigation is a necessary focus. Systemic solutions may follow, as I believe will be apparent not just in healthcare but for the whole population within the next 5 to 10 years.

Super-resilience: what and how

I coined the term super-resilience to highlight the radical step-up in resilience skills that people need if they are to adapt and thrive in the face of the overwhelming pressures we can

expect to face in the years ahead. Systematic approaches to personal super-resilience will need to be easily understood and applicable in everyday life and work. They will have to be readily accessible and not over-dependent on megabuck funding from government or other magical sources.

We are piloting woodland resilience immersives for health professionals at Hazel Hill Wood. These programmes have been jointly created by David Peters of Westminster Centre for Resilience, Daghni Rajasingam of Guys and St Thomas', and myself and the team at Hazel Hill Trust, the charity which owns and runs Hazel Hill Wood. Although it is early days, we hope they may become a catalyst for growing super-resilience.

David and Daghni have been leading resilience programmes in the health sector for many years. Having realised the need for more powerful, catalytic interventions than could be achieved by a few hours in a hospital training room. Suspecting that a radical change of venue would inspire new perspectives, they sought out knowhow and our off-grid residential venue as a place to explore a nature immersion resilience retreat.



The Forest Ark at Hazel Hill Wood

Hazel Hill Wood: the back story

In my 20s and 30s, I had a successful business management career in the building materials sector. With the capital it gave me I set up two educational charities, which laid the foundations for our recent work in the health sector. Through the 1990s, I led the creation of a 130-acre organic farm and education centre in Dorset (www.magdalenfarm.org.uk). As I slowly awoke to the analogies between organic cultivation and human sustainability, I applied these ideas to development work in other organisations. You can learn more in my first book, *The Natural Advantage: renewing yourself*.

More recently, I have used these analogies in resilience programmes at Hazel Hill Wood, a 70-acre conservation woodland and residential centre near Salisbury. One major focus has been our Nourishing the Front Line programme. Participants have included GPs, hospice and private care staff, local authority and charity managers, plus counsellors and trainers.

Does nature immersion have credentials?

However inspired you might be about a woodland immersive, there's probably going to be a sceptical counterweight somewhere in your organisation, who will ask, 'So you seriously want to spend two days and £X of my budget to sit in a wood, round a campfire?' I can offer two good responses to the sceptics. The first is the substantial body of mainstream research into the benefits of nature contact. There is a good overview in the book *Your Brain on Nature*, by physician Eva Selhub and naturopath Alan Logan (2014). While much of this research covers benefits to the general population, it also highlights some issues especially relevant for medics, for example directed attention fatigue (DAF). One of the biggest changes many medics have described to me is the relentlessness of their work: though working under intense pressure at times, they have virtually no opportunities for recovery.

The best antidote to DAF and long hours spent at screens is more experiences of *involuntary* attention.

Researchers describe a key benefit of exposure to nature as its 'intrinsic fascination', the way it relaxes our usual intensely directed focus. And time in nature is also proven to induce positive feelings which can offset the impact stress and anxiety.

The second response to sceptics is more by way of a cogent argument whose premises establish probable (even if not definitive) support for the conclusion. Medics easily grasp that people are far more subtle and complex than machines or computers; that over-work and burnout are serious system-wide problems; that they have something to do with how we think about and organise healthcare, and therefore that these difficulties won't be resolved using the sorts of thinking that gave rise to them. This establishes a reasonable case for looking 'outside the box'. In which case, if we are seeking new non-mechanistic analogies for human wellbeing, what can we learn by looking at resilient ecosystems?

Early evidence accruing from our pilot groups with hospital doctors has been captured in an interim evaluation by the Westminster Centre for Resilience. This showed statistically significant improvements in mood overall and for a range of feelings including fatigue and confusion, as well as a rise in esteem-related effects.

Here are three quotes from the qualitative section of this evaluation:

'Most doctors went into the experience with their eyes fairly closed to the benefits of nature, which contrasted dramatically to the final evaluation where accessing nature was seen as "an absolute essential".'

'There was a real sense of collaborative action, with doctors all wanting to create systems at work which would reinforce their experiences at Hazel Hill Wood.'

'In conclusion, this report has found the intervention to be effective, feasible, appropriate, and accepted by the doctors.'

And some quotes from the doctors:

'I'm taking away recharge, vulnerability, warmth and connection and sharing. I've found my inspiration again, I hope to come back again.'

'This was the best mental spa I've ever been to.'

'What was good was that you didn't tell us what to do, you gave us multiple ways to choose our own. We are not used to training like that.'

So what happens in a woodland resilience intensive?

We can tailor these programmes to the needs of participants. For the pilots, the structure we pre-planned worked well, and can be treated as indicative of the overall content.

1 Arrival and orientation

Some participants may be uneasy coming to a residential in a wood. We helped them to settle by showing them their room, giving them a tasty lunch, and briefing them on practicalities.

2 Introductory session

This includes the aims of the whole workshop, agreeing ground rules like confidentiality, and time enough for short personal introductions. The key part of this session is a consult with the group on the proposed elements of the programme, with scope for participants to set their priorities.

3 Conservation session

By three o'clock we get everyone outside, doing simple physical tasks that help sustain the ecosystem of the wood. This has proved a highly valuable element in the whole process. It creates a deep re-orientation away from working with ailing humans. Working together even if only for an hour or so in a resilient, healthy natural system, on physical tasks with low mental demands and a clear, immediate outcome seems to help doctors drop many layers of stress. And the scope for informal conversation during the tasks start the process of reflection.

4 Free time/play time

The aim of this late afternoon slot was further decompression. We gave participants an hour of free time to use as they wished. Some wanted to sit quietly among the trees, or have a walk and a chat with a colleague. Some chose to play vigorous games like hide and seek, or the evolution game. I have realised that games can be a very time-efficient way to de-stress, and I encourage more doctors to enjoy them!

5 Evening campfire

Having had time for showers and supper together around our huge table, the group gathers around a fire in the heart of the wood. The combination of the natural setting, the time of day, and the previous processes, enables some deep personal sharing and reflection. It was striking how many doctors at this point said they had nowhere to go with difficult stressful feelings, doubts over a patient decision, or a conflict with a colleague or boss; or who felt

that admitting about such feelings to other medics would undermine their credibility and erode their confidence. Family and friends on the other hand would be burdened by being unloaded on, or as 'non-medics they wouldn't understand'. As our evening around the fire unfolded, the sense of mutual understanding and support was palpable. There was great relief in having difficult feelings witnessed in a group of professional peers, and in realising that others felt the same.

6 Morning session one

After breakfast, we began with a check-in, which showed that the catalytic effect we aimed for with day one had happened. The prevailing mood when the doctors arrived at the wood was one of tensing up and barely getting by. Now, there was a shared sense that positive change was possible, and a thirst for fresh approaches. This teed up the main part of this session: a guided walk round the wood, to experience how analogies with this resilient ecosystem could help in daily work (see more below).

7 Morning session two

The aim here was to learn more simple resilience tools, and to practice applying them to typical stresses at work. These tools were drawn from mindfulness, and from our frontline programmes at Hazel Hill. We ended the morning with some free time for reflection, solo or with others.

8 Concluding session

After lunch, and formal evaluation questionnaires, we gathered round a campfire for a debrief and discussion on how to take this forward. Participants were enthusiastic and creative about finding ways to root nature-based resilience in their own work and their team's. These topics are covered further below.

The seven seeds of natural happiness

In the guided walk around the wood, we usually explore three of the seven principles in the model I have evolved from 20 years of nature-based wellbeing and resilience programmes. You can find a summary of the whole model at www.naturalhappiness.net, and it is the basis for my first book *The Natural Advantage: renewing yourself*.

In the limited space available here, I will describe one of the seven principles: composting. In a cultivated organic ecosystem (such as a farm or market garden), waste is recycled to provide the main source of future growth. By contrast, on mainstream farms, growth is driven by artificial fertilisers which deplete the soil's vitality and resilience, and build up polluting residues. All this has parallels for human ways of working.

To demonstrate this principle, I take people to an area of conifers. As we stand on a carpet of rotting pine needles, I explain how composting transforms plant and animal waste into the fuel for future growth. I ask, 'what could you do with the waste matter of negative feelings,



A group of junior hospital doctors on a pilot workshop at Hazel Hill Wood

anxious thoughts, unresolved conflicts?’ And I demonstrate a couple of five-minute ways to start this composting process, such as deep continuous breathing, or ‘angry walking’. Bigger issues need more time, and maybe professional help, but the principle of ‘compost the crap’ still applies.

Participants and organisers of these intensives know there’s a large gap between a good workshop, and sustained change. As our time at the wood neared its close this gap prompted lively conversations. This is still work in progress, but here are some of the promising threads:

Nature contact: readers may know of various studies showing that some form of nature contact helps patient recovery rates. A view of outdoor greenery has benefits, or a pot plant or even a picture. It’s surely logical that medical staff will also benefit, and this is a pretty easy step to take.

Green moments: the lack of time for any kind of self-care is a major challenge, but neurobiology supports the view that even brief interventions help. A few deep breaths can reduce stress, and a few moments of mindful centering can mitigate an upsetting episode. But when? Three suggestions were while walking along a corridor, or scrubbing up before an operation, even when using the loo.

Quality interactions: a recurring theme was the erosion of settled work teams, and a loss of rapport and support. One benefit of the woodland intensives was to spark proactive responses in place of mere coping. If one individual, even a junior in the team, starts a habit of positive appreciation for colleagues, it creates an upward spiral. Analogies between ecosystems and work teams can help: for example, valuing symbiosis, diversity, and wild margins.

Systemic view: it’s clearly easy for medics to be overloaded by responding to the many immediate demands they face. To switch into a mindset of systemic initiatives, cultivating improvement, will need time, ideally in a non-corporate venue, and fresh stimuli. Our woodland immersions by ticking all these boxes, clearly have generated motivation and a range of practical ideas which hopefully will take root in the work setting.

Whatever next?

The early signs are encouraging. Our overall aim in 2019 is to explore ways to build on this start and to propagate it. The main elements envisaged for this year are:

- **Further pilot programmes:** we aim to run several intensives this year, including one for GPs in June, and hopefully one or two for the mental health sector.
- **Link to ongoing processes:** ideally there would be some regular follow-up and support process in the workplace, for example a monthly two-hour session. So far, this has proved hard to organise.
- **Longitudinal evaluation:** Westminster Centre for Resilience aims to assess the benefits of these programmes after three and six months.

- **Funding:** so far, funding has come from an improvised range of sources. During 2019, we hope to find more stable funding which could help expand the programme in 2020.
- **Propagation partners:** Hazel Hill Trust is a small charity which has so far only run programmes at its own venue. However, one aim of the Trust is to share its expertise and encourage other venues to develop nature-based programmes. During 2019, we hope to find partners who can roll out similar short immersive resilience retreats in 2020.

Innovations often look bizarre until the needs they meet become overwhelming. We may be close to that tipping point. Woodland resilience intensives have grown from long years of development by two sound organisations, and like a tree, the roots have to establish before there can be outward growth.

Reference

Selhub EM, Logan AC (2014) *Your brain on nature: the science of nature's influence on your health, happiness and vitality*. Mississauga, Canada: John Wiley.

For info on Woodland Resilience Intensives, including the June programme for GPs, see www.hazelhill.org

To receive occasional email updates on this work, or to contact Alan, use data@workingvision.com

For more on Alan’s Seven Seeds model, see www.naturalhappiness.net

Woodland resilience immersions for health professionals

Hazel Hill Wood, near Salisbury

These programmes are jointly created by Hazel Hill Trust, a charity specialising in learning resilience in and through nature, and Westminster Centre for Resilience, (Professor David Peters), who have many years’ experience of working with health professionals. Our venue is a magical 70-acre woodland with off-grid residential facilities.

In 2019 we are offering:

- Open event for GPs: 10–11 June
- Open event for mental health professionals: 25–26 September
- Tailored events: contact us if you would like a residential or one-day programme for your team or professional group

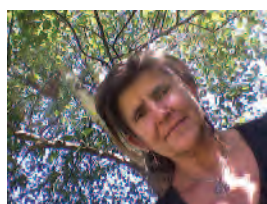


For more information see www.hazelhill.org.uk, contact Marcos Frangos, general manager, 07881 425804, manager@hazelhill.org.uk

Ecotherapy: the benefits for young people

Jess Bayley

Founder and project manager, Centre for Ecotherapy



An increasing sense of disconnection from nature is impacting on sensitive young people, yet the school curriculum barely takes account of young humans' need for real-time nature connection. Ecotherapy uses nature consciously to support wellbeing and recovery. Although most ecotherapy interventions and research have been focused on adults, a growing body of evidence suggests it also has a positive impact on the mental health of young people. The Centre for Ecotherapy in Brighton is now expanding its programme with the aim of providing a strong youth service to the community.

For the most part when I was young and unhappy, there was safety in the mountains and woods, and I had an implicit recognition that I would not be 'bothered', challenged or obstructed in my self-healing by the animal inhabitants and certainly not by my geological surroundings. Removing myself from 'regular' society for that short period of three/four weeks gave my own thoughts space to flow into my mind and on out the other side, instead of lodging there weightily, clogging up the thought processes, preventing clarity and flow. But most of all it was trust and a sense of safety. Inexplicably, I felt the wilderness was a place of safety for me.

An ordinary 1970s childhood

My attention to nature began with what was at the time a fairly normal childhood of the 70s: first being born into a walking, camping, family; later the freedom to roam, the freedom to connect with the environment around me. Trees and swings; meeting with friends in the green lane between the village and the Downs. The woods were our playground, the backdrop against which we played out our childhood and teenage stories. I don't feel my friends and I were special: our village was three miles from a fairly sizeable town, we weren't particularly blessed with idyllic scenery and certainly none of our families were out of the ordinary, but what we had was the freedom of the times: television was still black and white, with only three channels; few of us had video players and handheld gaming was a thing of the future. Our parents worked hard and when we had no school we were expected to entertain ourselves, with books, indoor creative projects, or the outdoors. Perhaps they were boring times, perhaps we were deprived, but we weren't conscious of these factors, we simply did what came naturally and when there was no homework or the evenings were summertime long, we grouped up on the playing field or by

the monkey puzzle tree and explored the physical and emotional landscapes of our lives.

Growing up in the green

Nature never receded into the distance for me. Horse riding, then mountain biking, took me alone into the natural landscape filling me with awe and challenging my abilities to cope with the respective risks and accidents those sports often entail. My love of wild camping and cross-country rambling gave me a sense of freedom and of pilgrimage as I traversed this and other countries on foot and by bike. When my mental health deteriorated at the age of 24, the wild natural world was where I turned for help. I had an inbred distrust of doctors and the medication they would inevitably have doled out had I taken my depression to them. Instead I took a route that was natural and straightforward to me – that others might not have chosen and certainly not a route that would have been medically prescribed at that time – a tent, a rucksack and an adventure into the beckoning mountains of western Ireland. I felt with all my animal senses, my intellectual logic having shut down completely, that I would rediscover my mental health in

the wilderness of this familiar but unknown country. And I did – to some extent.

What was it about the act of disappearing into that wilderness that ‘sorted my head out’? What I found, which I did not know I was seeking, was the peace and the space, free from time and social constraints, to unwind years of personal emotional and academic stress; an opportunity to unravel what was, at that time, a tightly knotted skein of jumbled experiences, successes and failures, whose complexities I could no longer keep up with. I found freedom from care and from other people’s concerns; freedom from the guilt of failing and the pressure of my own and others’ expectations.

When my mental health deteriorated, the wild natural world was where I turned for help

What interests me from an objective point of view is that, inexplicably but implicitly, I knew that in nature I would be safe. In taking myself alone into the wilderness of course I opened myself up to dangers, but natural dangers I knew I could mitigate with innate, common sense, actions that didn’t take thinking about. More importantly I felt I would be safe, liberated almost, from other people’s responses to me, safe from questioning and concern; safe to simply be me, in my desolation and despair, for as long as it lasted.

Perhaps I am unusual in my response to personal crisis, but I think the roots of this response are in many of



Coming together to share... at your own pace

us. Think of the millions of people who own a dog: in the UK alone, according to the PDSA (People’s Dispensary for Sick Animals), 24% of the population own a dog (PDSA, 2019). While dog owners walk for the benefit of their canine companion, for many the partnership is the veiled recognition that the presence of the dog gives legitimacy and purpose to their walk. They feel comfortable walking abroad, at any time of the day or night, as long as their four-legged friend is beside them, something they would not feel comfortable doing were the dog not there. Thousands of people every day take themselves and their dogs to spaces where the human partner is free to think, or not think; to unravel or to plan; where there is peace, or a wonderful view, wildlife or changing colours. The dog is the gateway to respectably losing ourselves in our natural surroundings.

Ecopsychology

So what of nature therapy – ecotherapy as it is becoming known – the conscious use of nature as an essential factor in a process of recovery from ill-health, be it mental or physical. In the mid 1990s a few psychologists and environmentalists began to link rising levels of mental illness with the increasing degradation of our planet. If the planet is ‘unwell’, they theorised – being mistreated in fact – then inevitably it would contribute to our species’ unwellness, since humans can never feel truly healthy while the planet that gives us life is being systematically destroyed. Ecopsychology is the name for the blend of those two disciplines and ecotherapy is the resulting discipline’s practical therapeutic response.

Environmental consciousness has proliferated over the last 20 years and ecotherapy has gathered momentum. Too late some would argue. Nevertheless, for many people the experience that being more involved with nature supports and improves their mental and physical health is undeniable. Research is plentiful, evidence is available. Craig Chalquist (2009) gives a fascinating summary of ecotherapy in different settings. Chalquist concludes that ‘reconnection to the natural world... brings a larger capacity for health, self-esteem, self-relatedness, social connection, and joy.’ Another study on ecotherapy in the UK, commissioned by Mind, followed the work of 130 ecotherapy projects across the UK. The concluding report ‘Feel better outside, feel better inside: Ecotherapy for mental wellbeing, resilience and recovery’ (Mind, 2013) states conclusively that ecotherapy ‘can improve physical health and mental wellbeing’ and advises health and wellbeing boards, and public health and social care commissioning services to make sure it is available to people seeking support.

At this point in time, ecotherapy interventions and associated research is predominantly focused on adults. The Scouting movement (scouts.org.uk) maintains its affiliation with the outdoors, and the forest school movement that took root in the UK in the mid 1990s champions the needs of young children to learn through play in outdoor settings (www.forestschoollassociation.org).

However, researchers seem less curious about the impact of nature on children and young people, and though schools have incorporated environmental issues for discussion as learning topics, the curriculum has been slow to recognise the young human's need for actual real-time nature connection. Chalquist called this inherent disregard for young people's developmental need for nature connection 'an old cultural blindspot' (Chalquist, 2009, p3). Ten years since these words were written, and it is more widely understood that children's mental health is intricately affected by their early social and emotional landscapes, there is still too little institutional awareness of how – arguably even more so than in 2009 – disconnection from nature is impacting on sensitive young people. More than ever I believe the mental health of our young people is now clearly affecting our education system (and vice versa), yet in secondary schools the academic curriculum remains paramount, and the performance tables imposed by government policy demand ever more quantitative rather than qualitative results.

Loneliness in the 21st century

'In recent years youth loneliness and isolation have been increasingly identified as a matter of significant public concern' (Batsleer *et al*, 2018). Many people, not just the young, turn inwards when faced with tough situations. This is a natural response to feeling vulnerable, but for a young person it can be incredibly hard in times of stress to find someone to trust. Uncertainty may be exacerbated by puberty, sexual orientation, 'tribal' affiliation, family break-down, and emergence into independence financially and domestically. All these immediate frames of reference are likely to be changing just as they are trying to decipher who they actually are.

Many people, not just the young, turn inwards when faced with tough situations

These stresses have been the same for centuries of course. To greater or lesser extent, puberty, independence and growing responsibilities have exerted pressure on all individuals as they move from child to adulthood. Today, however, there are considerations for our young persons that were not present even 20 years ago. On an hourly, certainly daily basis, the social and popular media makes much of climate change, climate destruction and humanity's primary role in our planet's downfall. The truth of these claims is debated the world over, but the implication for our youth remains the same: this planet, that is our home, is dying and it is your parent's and your grandparent's fault.

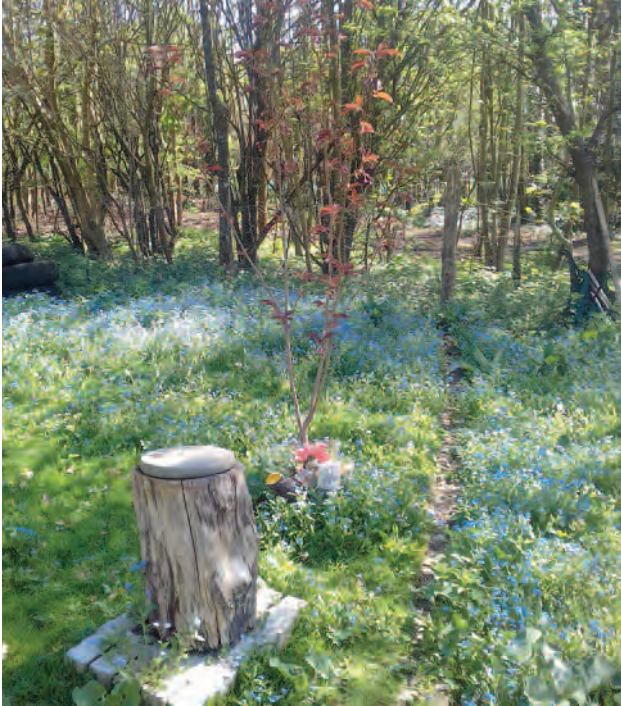


Fire from a spark: fundamental learning that goes beyond the physical

Living with Doomsday

Is this the same crisis of fear that US citizens lived with when convinced of the scale of the 'Communist threat' in the 1950s? Or perhaps more pertinently, is the distress similar to that experienced during the increased nuclear threat in the 1970s and 1980s, in the face of button-happy presidents on opposing continents? Many people remember the sense of impending disaster that motivated protest marches, with flags and banners demanding disarmament. But how much did impending doom affect the everyday personal lives of young people in the 1950s, 1970s and 1980s, given that our generation grew up during these 'crises', in a world that in the end was not destroyed by megalomaniacs. How then might we relate our experience to what our children are going through?

Children and young people are more sensitive today to the needs of the environment and our fellow creatures than generations of children before them. Over the last 10 to 15 years, many young people have been brought up on a diet of television, social media, and in-school or home-driven education that stresses personal consciousness of recycling, purchasing, environmental and animal issues in the name of 'saving the planet'. With the never-sleeping 'eye-in-the-sky' voyeurism available, they have a window into the lives of our incredible planet's animal, vegetable and mineral worlds. It is possible that children and young people understand the lives of a lion pride in the Serengeti better than the lives of the family across the street. They have fingertip access to information the older generations only dreamt of and are supremely aware that, for instance, their choice of peanut butter will have a direct impact on the lives of orangutans in Borneo; from a harmless breakfast ingredient to wholesale species extinction in one fell swoop! Do adults – with the benefit



A place for peace, remembrance, contemplation

of longevity and experiences that gives us the ability to deny, rationalise or ignore these facts, and who have the resilience to keep on keeping on – cope with the emotional implications? The answer to that is contentious. But how is a young person, with all the idealism and excitement of youth and without appropriate means to self-soothe, able to manage the destabilising dread that seeps into a juvenile heart when faced with these intimations of inevitable doom? At the time of writing, following the publication of a report by the International Panel on Climate Change, media everywhere are asserting that we have ‘12 years left’ (IPCC, 2018). What does it mean? At 47 I find it hard to take this in and move forward while staying emotionally in touch with a world which schedules somehow to self-destruct when I am 60. How then would I move forward emotionally if I were 14 or 18?

Children and young people are more sensitive today to the needs of the environment

The small but compelling body of research into the impact of nature on young people suggests there are valuable positive outcomes to be gained. One study, into the benefits of a rural residential week for urban young persons, showed that following the stay ‘teachers report that: 83% of children have reduced truancy; 94% of children show increased motivation at school; and 90% of children show improved engagement at school’ (Feilden and Carney, 2010). Another study looks at the stress reduction and increased social and academic resilience

achieved when children have access to a ‘green school-yard’ (Chawla *et al*, 2014). A third that looked at the change in young person’s behaviour and mood when in a forest school setting compared with a conventional school setting found ‘greater positive change in the forest school setting.’ Importantly the findings suggest that the greatest change is observed in young people who initially show the most challenging behaviour (Roe *et al*, 2011).

The Centre for Ecoterapy

Based on the high probability that young people will benefit from ecoterapy, the Centre for Ecoterapy has over the last two years determinedly grown its youth programme, with the aim of providing a strong youth service to the community. Initially we offered opportunities for youth offenders to work off their community hours. The accompanying restorative justice support worker told us:

‘Ecoterapy engages the young offenders in nature and the community simultaneously... (It) works particularly well at engaging young people who are failing to attend school, or who display extremely challenging behaviour in the classroom. The young people learn and stay focused doing the practical work and keep calm and relaxed in the open, outdoors environment.’

Note the similar response to the research paper looking at forest schools versus conventional schools (Roe *et al*, 2011).

We have now extended our provision to offer weekly sessions for groups with particular educational needs from local colleges and pupil referral units. They usually come with education, health and care plans (EHCPs) stipulating that the individual needs special attention in a particular area of their life, be it with learning, emotional or behavioural difficulties. For us, however, the reason these young people have an EHCP is less relevant than simply getting them to attend, because once on site, the effects of being in an open, green, tree-filled environment with a practical, easygoing programme designed to stimulate conversation and learning, are so undeniably positive that they speak for themselves. One 16-year-old gave this feedback:

‘Being at [the Centre for Ecoterapy] puts me in my safe zone. It lets me be open-minded and try new things. It’s a place where I can speak my mind and listen to others, and talk about my problems in a safe place... Now I come to ecoterapy, it feels like nothing can get in my way.’

This young man has picked up on that same feeling I had during my breakdown...that being in nature, far from being frightening or threatening, actually gives him a feeling of ‘safety’. It must be acknowledged that not *all* young people take to the work, but in my experience it is the majority.

Why does ecotherapy offer such 'safety'? More to the point, why does nature itself offer this sense of safety? First, I suggest it is the freedom of being in an open space, without the confining walls of the conventional class or therapy room: you can run away if need be. Most creatures when cornered will come at you all teeth and claws, but given room will flee. Similarly a threatened or stressed human has the option of walking or running away from the perceived threat. And this is what we see, for as they grow accustomed to the space, they take advantage of it, moving into it, using it to protect themselves. One young person spoke specifically about the appeal of sitting by the pond, where other people's voices were distant but still audible. It was important to him because it made him feel 'at ease, not isolated... I can sit here and hear people's chat, hear people talking in the background'.



Nature teaches us – 'See no evil, hear no evil, speak no evil'

A young person who feels isolated or out of place in society, or socially uneasy, who might be under pressure at school or insecure at home, may lack the emotional resilience they need to manage the confrontational style so often present in schools, whether at the hands of other young people or sadly overstretched staff members. Spending some curriculum time in an open, depressuring environment that offers respite from overwhelming emotions, and release from turbulent thoughts, can nurture a growing inner sense of self, out of which balance and strength may emerge. A parent of one young man commented:

'My son really liked the calm atmosphere of being in the woods and learning outside the classroom, taking pressure and stress away from him, therefore enabling him to learn more. He liked the course sessions because it showed him how to do things differently with things around him, so I believe this helped him to "think outside the box" and could be used in different situations and would give him confidence to try other new things and believe in himself.'

Something as simple as cooking over a fire affords opportunities for many positive interactions that activate and affirm a young person's capacity for 'good' behaviour: appropriate discussion, generosity and helpfulness, learning and doing together, giving and sharing. When skills and attention are developed in this natural setting they can be taken up cleanly as practical and emotional lessons received without distraction.

Conclusion

Young people are sensitive and passionate creatures. They are driven instinctually, by the newness of existence and the determination to survive and thrive. When their world is darkened by stressful times, the opportunity to reconnect with something inexpressible can be deeply attractive. Ecotherapy offers this reward, a feeling of comfort and 'rightness'. It works on a level that young people are still unconsciously in touch with. My strong impression is that the benefits I have seen positively affect a young person's ability to tolerate and regulate emotions, and to choose how to behave. This of course is fundamental at a stage of life when schools, parents and society are demanding self-discipline, focus, engagement and academic achievement; a time when external forces and emotions are dragging their attention elsewhere, and even an emotionally secure and well-balanced young person may be finding it hard to focus. My hope would be that further funded research could substantiate these benefits, to provide nationally accessible ecotherapy services to many more young people who are facing almost incomprehensible insecurity and threat to their physical and emotional lives.

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Nurturing wellbeing through nature

Melanie Vincent

Wellbeing Programme Support Officer,
Wiltshire Wildlife Trust



Wiltshire Wildlife Trust's Wellbeing Programme provides nature-based activities – such as conservation work, wildlife walks and nature crafts. Our service is used by people with mental health issues such as depression, anxiety and panic disorder, as well as more complex issues like psychosis, multiple personality disorder and schizophrenia. Evaluations suggest that the programme can improve their overall wellbeing and that afterwards most participants move on to other meaningful activities such as volunteering, education, further training and employment. This article describes the history of the programme, how it works and some of its achievements.

I have always had a keen interest in the links between the environment and people's health and wellbeing. This is something I focused on for my first degree in biology, and then for my Masters in Environmental Science. Later I worked for various health and environmental charities, and recently for my local NHS mental health service. There, I gained a greater appreciation and understanding of mental health issues. When the position of wellbeing programme support officer at Wiltshire Wildlife Trust was advertised, I jumped at the chance. Having worked for the trust when the programme first launched, it was the perfect opportunity for me to work on a project I felt – and still feel – so passionately about.

Supporting mental and emotional wellbeing through nature

Wiltshire Wildlife Trust has a long history of delivering a county-wide wellbeing programme that offers nature-based activities for people who are struggling with mental health issues. The activities range from conservation work to wildlife walks and nature-based crafts. The programme launched in Wiltshire in 2008, with funding from Wiltshire Council for people living in the county, and in Swindon in 2017, with funding from The Big Lottery for people who live in Swindon or who access services there.

Over the years the programme has helped hundreds of participants improve their mental wellbeing and, on exiting the programme, helped them move on to other activities, whether it be further volunteering, education, training or employment.

It may seem surprising that a wildlife trust should offer such a service, but one of the core aims of the trust is to inspire and support people to live more sustainably; working to improve the health and wellbeing of people can clearly help achieve this important social goal.

The Trust's people- and community-focused work is one of the

largest sections of the organisation covering a range of projects.

- Building Bridges – supporting people into work and education by helping them to develop new skills.
- Milestones – connecting vulnerable and marginalised young people to their natural environment, offering them opportunities to widen their knowledge on the natural world.
- Repair Academy – a social enterprise dedicated to reducing waste and refurbishing goods, while at the same time providing skills and training for young people and affordable goods to low-income households.
- Wild Connections – enabling people of all ages from different backgrounds to enjoy and connect with nature.
- Youth Wellbeing – providing forest schools, and targeted work with young people facing challenges in their lives.

The Wellbeing Programme – and our other people-focused projects – has the view that by engaging people in meaningful and purposeful activities outdoors, not only is their wellbeing improved, but also their connection to nature itself, and the desire to look after it. This is not just for the individual personally, but also on a larger scale,

for the benefit of others, their local environment and the planet as a whole.

Connecting with nature and the 'six ways to wellbeing'

Our work on the Wellbeing Programme originally took inspiration from Edward O. Wilson's biophilia hypothesis, published in 1984, in which Wilson suggests that humans have an innate tendency to seek connections with nature (Wilson, 1984).

In recent years we have applied the Wheel of Wellbeing to guide our range of nature-based activities. The Wheel of Wellbeing, which features six ways to wellbeing, is a variant on the New Economics Foundation's original Five Ways to Wellbeing (New Economics Foundation, 2008). This was devised as a mental health equivalent to the advice that people should eat five portions of fruit and vegetables a day.

The Wheel of Wellbeing was developed by the mental health promotion team at South London and Maudsley NHS Foundation Trust to promote positive mental health and wellbeing across London (www.wheelofwellbeing.org). It features six areas in our lives – body, mind, spirit, people, place and planet – where improvements are possible and can help people live more fulfilling lives emotionally, mentally and physically.

As an environmental and wildlife organisation, it made sense for us to use the 'six ways', rather than the 'five ways', as the additional sixth embraces taking care of the planet. This framework and the activities offered give participants opportunities to learn about and appreciate wildlife and the natural environment, and how living more sustainably can help them, others and the planet.

The activities offered on our Wellbeing Programme feed into the six different areas:

Body – be active: all the activities on the programme, whether a conservation task, a nature walk or a nature-based craft, keep participants physically active.

Mind – keep learning: participants learn new skills, such as coppicing, and knowledge about why coppicing

matters. They may also learn a new craft like whittling or charcoal-making, or learn about wildlife on a nature walk.

Spirit – give: on the programme participants give their time to nature and to each other, carrying out work as a team that will ultimately benefit the local wildlife and local communities.

People – connect: participants come together in a safe and supportive environment where they can build relationships and develop friendships.

Place – take notice: all activities on the programme change with the seasons, encouraging participants to take notice of their surroundings and the changes that are taking place throughout the year.

Activities give participants the opportunity to learn about and gain an appreciation of wildlife and the natural environment, and how living more sustainably can help them, others and the planet

Planet – care: all activities on the programme involve taking care of the local environment and wildlife, and learning about why the work carried out in each session is important and valuable.

There is a growing wealth of information and published research to show that actively engaging with nature is beneficial to a person's wellbeing. Miles Richardson is well known in this field, and in 2017 he, Ryan Lumber and David Sheffield jointly published a research paper that identified five pathways for helping 'develop a meaningful and emotional relationship with nature' (Lumber *et al*, 2017; Richardson, 2017).

The pathways, like the 'six ways', are another useful framework to guide and inspire nature-based activities. It's interesting to note how the activities we offer, and have been offering for years, feed into these pathways.

Contact: during walks, mindfulness sessions, or down-time, participants are encouraged to use their senses and listen to the sounds of nature, breathe in the fragrance of a wildflower meadow in summer or a damp woodland in autumn, feel the bark of trees, and look out for and observe different species.

Emotion: revisiting sites throughout the year gives participants an opportunity to see how habitats change with the seasons, and what effect the work they have carried out – like coppicing or hedgelaying – has had on the local habitats.

Beauty: beauty in nature can be found in all forms, from the sweeping vastness of chalk downland or wildflower meadows, to the minutest of details in a dying leaf, with its incendiary range of colours and crisp curling edges or the fascinating behaviour of courting grebes...



Wheel of Wellbeing. Credit: South London and Maudsley NHS Foundation Trust



Allotment group members (in lime green T-shirts) and guests take part in activities during an open day in August 2018. Credit: Wiltshire Wildlife Trust

participants are encouraged to take in and appreciate these moments.

Meaning: participants gain an understanding of the value of our natural world, what it means to them, how it makes them feel, how wonderfully varied and rich it is; it gives them an incentive to protect it, to look after it, for their own benefit and for the benefit of others and the environment.

Compassion: through the work of the programme, participants are more invested in looking after their local environment. They gain an understanding of the issues that can affect local habitats, and are keen to look after them, whether by taking part in conservation tasks, building a bug hotel or picking up litter.

How the programme works

The Wellbeing Programme helps people who are struggling with mental health issues. Over the years we have engaged with participants who are living with a range of conditions: depression, anxiety, panic, stress and post-traumatic stress disorder (PTSD), and more complex conditions like paranoid schizophrenia, multiple personality disorder and psychosis. Participants can self-refer, though most are engaged with mental health services and the referrals have come via their care co-ordinators, or recovery and/or support workers. Other referrals come via GPs, housing associations, drug and alcohol services, and the probation service.

Before joining the programme, participants meet with a member of staff for an informal assessment meeting. Staff on the programme are not mental health professionals but come from diverse backgrounds that include conservation work, youth work, social services and management. All staff members have received training on mental health issues, including mental health awareness, mental health first aid and applied suicide intervention skills training.

The assessment meeting gives both parties the opportunity to find out more about each other and go through risk assessments and care plans. Following the meeting, a taster day is offered so the participant can

experience what a typical day on the programme is like, and then decide if they wish to continue.

Once on the programme, participants are assigned to a group that meets on a weekly basis. They are picked up and dropped off at a central meeting point. Bus and train fares to the meeting point can be reimbursed to prevent financial constraints from being a barrier to participation. Likewise, purchasing essential items – a decent raincoat or boots – may also be reimbursed.

Activities usually take place on trust nature reserves, or on other local green spaces. All the work carried out is on essential tasks that feeds into the management plan for each nature reserve or site. This is an important aspect of the Wellbeing Programme as it gives the groups an added sense of genuine purpose and achievement.

Not all activities are physically demanding – some are more leisurely, like a nature walk or a whittling session. But whatever participants are doing, they gain an appreciation of the natural world and how they can help look after it.



Activities include installing bird feeders. Credit: Wiltshire Wildlife Trust

The groups are very relaxed and informal: participants know they can do as much or as little as they feel able to on the day. They are not there to talk about, or share details of their issues, unless they wish to, but rather to come together within a supportive environment and engage in purposeful and meaningful activities whilst enjoying the outdoors. Simply being aware that others in the group are also going through difficult times can give participants and their group a unique sense of belonging.

When participants come to the end of their involvement on the programme, they are helped to move on to other activities and opportunities with local organisations, including the trust. Sometimes programme staff will help participants with paperwork such as providing references, advice on CV writing or filling in

“Simply being aware that others in the group are also going through difficult times gives each participant and group a unique sense of belonging”



Groups are relaxed and supportive. Credit: Sam Frost/Wiltshire Wildlife Trust

applications forms for education, training, volunteering or employment opportunities.

In Swindon, the team has an allotment plot and some gardening equipment for a follow-on group for participants. On this site, previous participants can meet up and continue with the friendships they have formed on the programme and also continue to engage in meaningful and productive outdoor work where they can see first-hand the fruit of their labour. Throughout the year, this group has worked together to build and decorate a shed, assemble and install benches and bird feeders, and tend to their own individual plots.

Plans are in place to provide a similar follow-on group in Wiltshire.

Monitoring wellbeing and programme's impact

Participants' wellbeing is measured and monitored using the Warwick Edinburgh Mental Well-being Scale (WEMWBS). This is a scale of 14 positively worded statements used to assess a population's wellbeing. The scale is widely used to assess wellbeing interventions.

A participant's first WEMWBS score, taken during their assessment meeting, becomes their baseline score from which progress is measured. Participants are then asked to fill in a form every other week they are on the programme. This is optional, and although it is encouraged, participants are aware it's not compulsory. Last year, of the participants who took part in both Wiltshire and Swindon programmes and who filled in the WEMWBS forms (n.129), 75% reported the same or an increased sense of wellbeing.

WEMWBS is a useful tool to measure a participant's progress, but it's important to note that it's not the only way to measure the success of individual participants or the programme as whole. In addition to the WEMWBS data, we also record what participants move on to when they leave the programme – for example, of those who left last year, 60% went on to education, training, employment or further volunteering.

We also record what participants tell us about how the programme is helping them and its effect on their lives.

These comments and case studies (see boxes below) can be more powerful and meaningful than WEMWBS scores which can be attributed to and/or affected by a number of other factors in a participant's life.

Future direction and sustainability

The Swindon Wellbeing Programme has funding until 2020, and work is already under way to ensure the trust can continue to provide this service after the funding period comes to an end. In Wiltshire, the team has been trialling a condensed eight-week wellbeing programme and is currently looking for funding to continue delivering this service in 2019 and beyond.

If you would like to find out more about the Wellbeing Programme, our work and funding situation, or find out more about our other people-focused projects, please get in touch.



Conservation work.
Credit: Wiltshire Wildlife Trust

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What our participants say

'I really benefit from being outside in the natural environment. Good people and supportive staff.'

'Once again I say this group is a "priceless" part of my week helping me maintain positive mental health. Thank you!!'

'Great help with my general wellbeing.'

'Working together and sharing our thoughts and feelings.'

'I really enjoyed seeing the progress of the work we were doing.'

'...nice spending time with different group of people and connecting and working as a team. Feeling valued and opinions listened to.'

'I felt nervous and unsure on the first day... but being on the programme is helping me. Now, I'm going out more – even if it's just me. I find being in nature is beneficial, it helps.'

'The best bit about the programme is getting back to being a child; being outdoors, getting back in contact with nature. Every day we're doing something different. I have stopped taking medication for anxiety... I think joining the programme has been a contributing factor to reducing my medication. I would definitely recommend the programme.'

Tim's case study

Tim (not his real name) joined the Wellbeing Programme following a recommendation by the local mental health service. He was suffering with post-traumatic stress disorder (PTSD) following the sudden accidental deaths of his mother and son several years ago; both died within months of each other making that year a particularly difficult one. Tim was left feeling suicidal and at risk of self-harm.

With the help of mental health professionals at Avon and Wiltshire Mental Health Partnership NHS Trust (AWP), Tim was able to start dealing with the stress, which he discovered stemmed further back as a result of years of abuse he had endured during childhood. He says: 'I hadn't sorted out my childhood issues, and it all came out when I was dealing with the more recent issues of losing my mother and son'. He is full of praise for the mental health service and for how they have supported him, saying, 'They have been brilliant'.

AWP suggested he might benefit from the Wellbeing Programme, and he hasn't looked back.

'Since joining the programme, my confidence is coming back and is growing. I am also communicating with people now, something I hadn't done for a while. Being involved with the group has made me more socially active.

'I find being out in nature very therapeutic; I like the wildlife that surrounds me; it puts me at peace and reduces my stress levels.

'Since being on the programme I feel that mentally and physically my wellbeing has improved. I would like to return to work next year – I used to be a counsellor, but gave that up due to the PTSD. I don't think I would return to the same line of work though, and think I would prefer to work outdoors, in agriculture or gardening.'

Tim is feeling the benefits of being on the Wellbeing Programme and says to anyone considering joining, 'Don't be frightened to come out with Wiltshire Wildlife Trust. The people on the programme are very open and warm, and very welcoming. You're not judged; you're taken as an individual and treated with respect'.

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Linocut, *Wilds*, Theo Peters <https://theopeters.co.uk>

Health and wellbeing in nature

Ewan Hamnett

Retired GP



Just before I retired from general practice five years ago, I was asked by Birmingham City Council to promote activity across the city. Our health service is drowning in the consequences of the terrible triad of inactivity, obesity and unhappiness, all of which are arguably caused by increasing isolation, particularly in our most deprived citizens. We must reconnect people and allow them to become resilient rather than reliant. If we fail to do this then the consequences for both the individual, the NHS and the planet will be disastrous.

Ewan Hamnett

Gareth Morgan

Head of Education and Engagement, Wildlife Trust for Birmingham and the Black Country



The education and engagement team at the Wildlife Trust for Birmingham and the Black Country aims to connect people with nature. The incredible and beautiful natural resources of our urban areas are rich in wildlife, on the doorsteps of 2 million people, and freely accessible. We need nature and nature needs us – but unless people have those inspiring experiences in our wild spaces, they will miss the opportunity to embed this in their life.

Gareth Morgan

The evolutionary health messages are clear: walk more and drive less, get together with others ideally in nature (and on nature's behalf), eat real food, not too much and mostly plants. The Wildlife Trust for Birmingham and the Black Country was founded to protect and improve wild spaces, and make them more accessible to urban Midlanders. The Trust's wide-ranging courses mix talks, walks and hands-on practical activities that get people of all ages out into nature, to make the most of wild spaces and feel the mental and physical health benefits.

The problem

It is a sad fact that we find ourselves in the midst of our planet's sixth period of mass extinctions, called the Anthropocene extinction because it is due primarily to human activities. Globally, as populations of people and livestock overwhelm our other-than-human cousins, we have already lost 83% of all wild mammals and half of our plants (Bar-On *et al*, 2018).

Just as our ancestor hunters once eradicated the megafauna of the New World, the aggregated impacts of industrial agriculture and overfishing, rising human consumption and climate change now threaten to extinguish half of the world's remaining biodiversity by the end of the century.

Are humans living well in this brief apex of planetary dominance? In the UK we spend 92% of our time indoors, watching TV for eight times as long as we exercise; our children fail to recognise 50% of common species (while identifying 80% of Pokémon characters); those that have the least

access to nature also have the worst levels of physical health and mental wellbeing. Something is going wrong here, and clearly we need to make urgent changes to the way we live. But what will it take for us to collectively change course? Here are three facts that might help.

The first should make us sit up and be truly alarmed. The Intergovernmental Panel on Climate Change says that in order to avert catastrophe, we have 12 years to reduce our carbon emissions by 45%. If we don't then within the lifetime of our children, life on Earth could become unsustainable. This is not some distant event and though even two degrees of warming would spell disaster in south east Asia and Africa, several forecasts show likely rises in excess of 3° by 2200. The global impact would be a devastating build-up of today's already intensifying forest fires, floods, fighting and famine, accompanied by mass migration and dire conflict over dwindling resources.

The prospects

But the second and third facts should give us hope. **The second** is that rather than exponentially increasing, until the hungry population of the world has stripped out the last of Earth's natural resources, the evidence is that birth rates will continue to slow down. If so, by the end of the century the world's population will be levelling off at around 11 billion.

The third is that many of the changes needed for sustainability and good planetary husbandry will also be good for human health: spending more time outside, getting active, exploring the natural environment, ditching the car, observing and learning from nature, enjoying more plant-based diets, and connecting with others in communal wild spaces. These are prescriptions for health and happiness.

The wild perspective on wellbeing

There's a good argument that when wildlife does well, we all do well. At the Wildlife Trust for Birmingham and the Black Country, this simple observation underlies our fight to protect and improve the wild spaces that are accessible to people who live in the conurbation. It also underpins our range of programmes that help people deepen their connection with their local natural environment. We believe that everyone deserves to live in a healthy, wildlife-rich natural world and to experience the joy of wildlife every day. This is why we tailor our people and wildlife activities to help people of all ages experience our wild spaces through a lifecycle of engagement.

- Nature tots programmes for 2 to 5-year-olds help embed a love of wildlife that lasts a lifetime. A Wildlife Trust survey found 92% of parents think access to nature and wildlife is important for children but 78% of parents worry their children don't spend enough time in nature. The earlier the connection is made, the easier it is to maintain.
- Environmental education activities for primary school children include our river rangers programmes, visits to our reserves and the new Wild Schools Roadshow we take into schools.
- Family activities are run at weekends and during every holiday, allowing children to experience and enjoy wildlife alongside their parents.
- John Muir Awards and Duke of Edinburgh volunteering enable secondary school-age children to discover, explore and conserve their local wild spaces.
- Our Wild Future provides a platform for young people aged 16–25 to train and develop their own ideas to improve our urban environment.
- All kinds of walks, talks and volunteering opportunities can be found by searching at www.bbcwildlife.org.uk/whats-on
- Health and wellbeing courses aim to inspire people to connect with nature where they live and to enjoy the benefits of their local natural environment.

These courses include a mix of talks, walks and hands-on practical activities that highlight the many mental and physical health benefits of getting out into nature. Based on the Five Ways to Wellbeing (see also Melanie Vincent's article on page 29), the courses include:

- Learn – hands on learning about different environments including woodlands, meadows, canals and ponds
- Give – protecting local wild space by volunteering and practical conservation activity
- Take notice – how to be mindful in nature
- Be active – fitness through the walks and volunteering activity
- Connect – how to stay connected with nature and ways to join other groups locally
- Introduction to the health and well-being benefits of connecting with nature in the city, wherever you live
- How to build nature into your everyday life
- Where to find the wild spaces across Birmingham and the Black Country
- Explore – through wildlife walks, discovering locally accessible spaces to encounter the natural world.

“There's a good argument that when wildlife does well, we all do well”

We have provided these courses for different groups, including young people at risk of becoming NEET (Not in Employment, Education or Training), people with mild to moderate mental health issues, adults with learning disabilities and young refugees and asylum seekers. We measure their impact using the Warwick Edinburgh Mental Wellbeing Scale (WEMWEBS) before and after these courses. The average impact for our courses was a significant plus 11.6 difference, with the highest reported impact being on 'confidence' (+1.4) and feeling good about yourself' (+1.6).

Loneliness among older people is proven to be even more harmful than inactivity, obesity and smoking 15 cigarettes a day, so this spring we are launching our first health and wellbeing in nature courses for isolated older people in Walsall. We will include those living with dementia in the Making Connections programme which is being funded by Walsall Public Health and Protection. Time spent positively engaging with nature boosts health and wellbeing whatever our stage of life. Contact with nature is good for all ages, from the sensory and physical development of small children to the improved sleep, vitamin D levels and immune functioning of the elderly.

Diet, activity, obesity and sustainability

The carbon footprint of beef is massive. According to the BBC online climate change food calculator eating beef three times a week for a year is equivalent to driving a car 6,500 kilometres or heating an average house for 225 days, or taking five return flights from London to Malaga, and uses 4,625m² of land, equal to the space of 17 tennis courts. Even organically and locally produced beef has a carbon footprint at least 10 times that of most pulses, nuts and vegetables (www.bbc.co.uk/news/science-environment-46459714).

With type 2 diabetes now affecting around 9% of the UK population, treating it consumes around £9 billion of the NHS budget of £128 billion

If you are slim your chances of getting type 2 Diabetes are tiny but once BMI rises to over 35 the chances are 88 times higher. So obesity and type 2 diabetes go hand in hand, and only 30% of adult males in this country have a normal body weight. There's more to the diet-sustainability link than this though. With type 2 diabetes now affecting around 9% of the UK population, treating it consumes around £9 billion of the NHS budget of £128 billion. The ecological and social impact of obesity and type 2 diabetes are huge: a GP practice with 10,000 patients will spend £1.5 million on diabetic care alone, and those visits to clinics, drug production and hospital treatments for diabetes-related diseases have their own carbon footprint.

A landmark study in *The Lancet* (Lean *et al*, 2017) showed that major weight reduction could put diabetes into remission. Of those who lost more than 15kg, 84% ceased medication and their blood sugar normalised.

Another hot tip for a longer life is eat more fibre. In a huge population study looking at 135 million patient/years of data, the people who ate more fibre-rich foods (such as lentils, beans and seasonal vegetables) had a reduction in 'all-cause mortality' (due to diseases like diabetes, heart disease, stroke and bowel cancer) of between 15% and 30% (Reynolds *et al*, 2019).

Nature, diet, activity and evolution

Our ability to break down starches into glucose and to store it as fat under the action of insulin has enabled the human race to flourish. It's a gift of human evolution that lets us store fat for survival through droughts, famines, wars and diseases and so pass these resilient genes on. However, this talent and the accompanying 'better feast just in case of famine' instinct is counter-productive if the

feast is permanently available, which is what has happened. Since the 1950s UK diets (with subsequent help from a burgeoning food industry) have become richer in carbohydrate, and the population's overall activity levels started to fall as manual and household labour tailed off in the wake of mechanisation.

Though inactivity is partly to blame for our current health crisis, there is relatively less focus on it than there is on obesity. The latter is easily measured, whereas activity levels are more subjective, so its benefits are harder to prove except in large population studies like the enormous international European Prospective Investigation into Cancer and Nutrition Study (EPIC) study. This research actually showed that inactivity is twice as likely as obesity to shorten life (Ekelund *et al*, 2015). The study estimated that 676,000 deaths of European men and women in 2008 may have been attributable to physical inactivity whereas only 337,000 deaths were due to obesity (BMI >30). The activity effect was across the board and could not simply be explained by obese people being less active. Unsurprisingly, groups with higher levels of physical activity showed bigger impacts on all-cause mortality, but even moderate activity had a real impact: in fact the greatest reduction in risk was when the moderately active group was compared with those who were inactive.

Our conclusion

Healthcare is moving on from dealing with the time when its main target was infectious diseases, to dealing with the consequences of our modern day lives. Yet doctors are still kept busy medicating the long-term results of our unnatural lifestyles, even though all the evidence clearly shows that doctors and drugs are not the main determinants of health outcomes. It's where you live, how you live and whether your education, wealth and early life allow you to have some say in these matters that make the real difference. With these limitations in mind what can each of us do for our own and others' wellbeing, that at the same time enriches the planet we inhabit? The evolutionary messages seem clear: walk more and drive less, get together with others ideally in nature (and on nature's behalf), eat less meat, more vegetables and more pulses.

Good for people; good for the planet.

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The Crossing 2018 (in homage to Alex Hartley's Dropper), edition variable reduction woodcut, 155 x 121cm,
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Illuminations of nature

Fiona Hamilton

Poet



I am a poet with a fascination for oral traditions as well as words on the page. Giving voice to our lives, choices and perplexities, and allowing for quiet, can enhance our personal ecosystems and, by extension, environments around us. I devise and deliver projects with this aim: recently with Page Park Wellbeing Project, Penny Brohn UK, Freedom from Torture and Knowle West Healthy Living Centre. The poems in *Fractures* (2016, Gomer Press) concern farmland and medieval buildings the Brecon Beacons. I continued my exploration of the earth and human interactions with it in a piece on clay and brick in *Cornerstones* (2018, Little Toller Press) and for BBC Radio 3. I describe writing about nature and themes of habitations in the journal *Axon: Creative Explorations* (2019).

www.fionahamilton.org

What can 'nature poetry' offer in the face of climate crisis? What can a fossil-fuel-dependent human in a post-industrial society say about hills, trees, insects, verdant slopes and babbling streams? In 2019, how can poetry avoid sentimental pseudo-romanticism or mere rant? How can a poem truthfully and wholeheartedly speak of a fragmented world afflicted with pollution, confronting the depletion of many species? Poems can soothe, uplift, remind us of beauty – but can they speak of healthy relationships between humans and our environment?

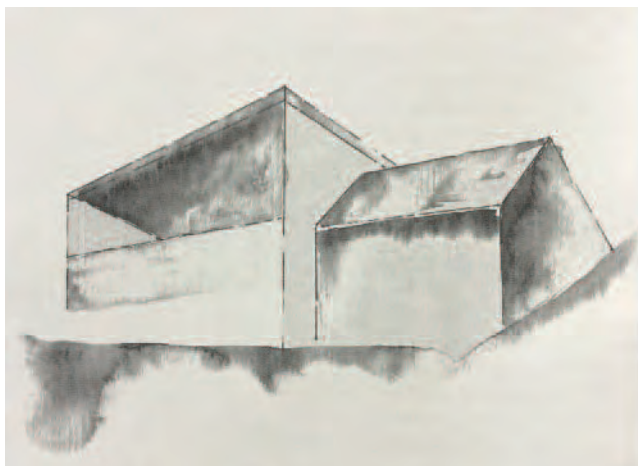
I recently wrote some poems on the site of a medieval farm in Wales called *Llwyn Celyn* (see www.landmarktrust.org.uk/get-involved/llwyn-celyn-restoration). It sits at the gateway to one of the narrow eastern valleys of the Black Mountains. The writing was part of a project responding to the changing state of the buildings. I worked alongside other artists to enable local people to experience the farm and its surroundings afresh before refurbishment by the Landmark Trust. The poems are published in a book, *Fractures*, and there were two participatory events on the site.

As I got to know *Llwyn Celyn*, I became interested in the gaps and transitional states of the buildings. Weathered by wind and rain over centuries, they used to be a working farm and home. They carry historical stories associated with the neighbouring Llanthony estate and priory. There are also innumerable stories that didn't make it into the history books that had to be inferred, sensed, imagined. I had camped in the local fields with my family before I ever knew of *Llwyn Celyn*, had slept on its earth and gazed at its night skies. I felt connected, but did I belong? I was interested in what it takes to 'belong' to a place, and what it means to be passing through.

The house had grown out of the land and it was now slipping back into it. Apertures had opened in walls, cracks letting in light and air. Water had flowed off the side of the hill and over the floors. Curling wallpaper peeled back to reveal hidden layers representing different eras. Nature was inside as well as outside. Birds nested in the rafters. Mice and insects had cosy nooks in barns and the former pigsty. There were bats in the roof whose mating seasons would determine when the builders could

start work and would influence the architects' drawings – they would need to preserve a space for this endangered species.

The buildings were on a threshold between disintegration and reconstruction. Particles of stone and dust were in motion on a microscopic level, effecting changes in an other-than-human timeframe. Writing the poems became about body as well as mind and emotions. It was also about lateral connections – between me and the other artists, and the local people who came to participate and listen, and all of us with the land around. I moved around the site, using all my senses to get to know it. There was awareness of smallness and impermanence, as well as presence and substance. This was a form of geopoetics, an attempt 'to express that sensitive and intelligent contact with the world by means of ... a language drawn from a way of being which attempts to express reality in different ways eg oral expression, writing, visual arts, music, and in combinations of different art forms' (White, 1989). The place was alive and changing, and the creative process was collaborative and multifaceted, a conversation with the land, its constructs, flora and fauna, in



A drawing from *Fractures*

a state of flux, not attempting to fix or make permanent any one version of the story.

The artists I worked with, James Lake and Will Carter, paid attention to gaps in walls, fissures where mortar had slipped or softened in rain, snow and wind, forcing stones to crack apart slowly, hinting at potential further erosions. They inserted lights into these spaces. The illuminated fissures made jagged lines visible from far off or nearby, and changed the appearance of the walls. These thresholds between inside and out were not constructed places in themselves, and not habitations, or at least not intentionally. They were potent spaces. By attending to absences and gaps we started from unknowing, anything that emerged in words or visual forms felt humble rather than awed or sentimental.

Writing about the farm buildings brought us into contact with solid materials, with spaces between them, and with ideas and feelings about space, time, mutability. Somehow the physical forms retained enough presence to ground the themes and prevent them from becoming mere abstractions. *Llwyn Celyn*'s 'soluble landscape' provided ways to explore concepts of trust, belonging,

and transience, and raised questions about how our constructed worlds, and we, emerge from the land, and return to it, offering an image of the cycle of life which holds recognition of a holistic interaction that we can at least aspire to or be inspired by.

Trust

*look into the cracks
instead of papering them over*

*hold up a candle
to free-fall fragments*

*refuse to overlook
what's in the shadows*

*give up relying
on the sticky mortar of reasoning*

*for nothing binds fast against
the buffeting caress of rain and wind*

*and it is in the gaps
cracks and crevices*

*that particles dance
wildly trusting*

*the substantiality
of air*

from *Fractures* (Gomer Press, 2016)

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Fiona Hamilton's recent published writing includes *Clay Bricks in Cornerstones* (Little Toller Press, 2018) which was broadcast on BBC Radio 3, and *Structures and Spaces: Poetry of Buildings for Axon: Creative Explorations* (University of Canberra).

BHMA student essay competition

We are listening to the voice of the next generation of healthcare professionals.

The BHMA runs an annual student essay competition to broadcast the voice of the best and most innovative thinking from those about to embark on a career in healthcare. We want your fresh insight and opinion on how to transform the health service into a more compassionate and caring version of its current self. This is also a good opportunity to enhance your CV.

In this, the 13th year of the competition, we invite healthcare students to submit an essay with the title:

'Is food the foundation for good health?'

Use this essay to radically and critically consider the role of nutrition in healthcare. Please use examples to illustrate your arguments. Please submit your essay with your name, address, email, university or college, course attending and year of study, and send by e-mail to: **thuli@bhma.org**

CLOSING DATE: 30 MAY 2019

Welcome inspiration – the vitality of natural inclusion in human wellness

Alan Rayner

Naturalist



I am an evolutionary ecologist, writer and artist and was a Reader in biological sciences at the University of Bath from 1985 to 2011. Since 2000, I have been pioneering awareness of 'natural inclusion', the evolutionary source of all forms of life in receptive-responsive spatial and energetic relationship. My most recent book is *The Origin of Life Patterns in the Natural Inclusion of Space in Flux*. I love helping people become more aware of the diversity of wildlife in their local neighbourhood.

Awareness of our animal bodies as dynamic inclusions and expressions of nature, not exceptions from nature, offers us a new source of inspiration to help us understand and care for ourselves, other life forms and our environment. This awareness helps ease away the needless suffering, misunderstanding and strife that arises through estranging nature from human nature. It comes with an appreciation of space and boundaries as natural sources of receptive continuity and dynamic distinction. We can thence live more passionately, compassionately and sustainably.

Introduction

Is it consistent with your experience and does it make consistent (non-paradoxical) sense to isolate or conflate yourself from or with your natural surroundings? If not, why not?

This was the combination of questions I asked myself, which enabled me to become aware of myself as a dynamic inclusion and expression of nature, not an exception from nature.

Here I am, in my element. I have included myself within the embrace of an apple tree and climbed into its canopy. In the process, I have become aware of the life of the tree and its inhabitants in a way that simply isn't possible when viewing the tree from a distant standpoint. I feel inspired and uplifted in the same way that I did as a child, climbing trees in an African garden. I know what William Blake meant when he said:



Alan in an apple tree

‘The tree which moves some to tears of joy is in the eyes of others only a green thing which stands in the way. Some see nature as all ridicule and deformity...and some scarce see nature at all. But by the eyes of a man of imagination, nature is imagination itself’.

This brings out the contrast between two distinctive attitudes of mind:

Objectivistic perception places the observer as ‘subject’ at odds with what is observed as an ‘object’.

Empathic perception appreciates both the observer and what is observed as inhabitants of each other’s worlds.

For thousands of years, a great many of us human beings have been persuading ourselves to think and act in an objectivistic way that contradicts our everyday experience of living as we naturally are in the world as it naturally is. We have imagined ourselves individually and collectively to be a race apart from, and superior to, our natural neighbours and neighbourhood, over which we seek to impose control in order both to enrich our lives and to free ourselves from ill-fortune.

“I only have to ‘behold’ a tree, with the receptive cavity of my heart wide open, to feel its charge”

We have embedded this estrangement of nature from human nature in our theory and practice of governance, education, theology, science, mathematics, language, medicine and environmental management. In the process, we have caused great bodily, psychological, social and environmental injury to ourselves and our neighbourhood. Yet we find it hard to resist or relinquish.

We can’t honestly escape this estrangement by imagining that we and everything else are all one and the same interconnected thing. For that is simply and paradoxically to ignore the reality of natural boundaries, gaps, distinctions and evolutionary processes.

But, as I will explain here, we can escape it by using our capacity to be feelingly *aware* of circumstances within and around our living bodies, and to *reason* consistently from this awareness rather than from some abstract premise that cuts us off from reality. This is what I call using ‘*natural sense*’.

Questions

Let me begin by asking some questions about how you may or may not perceive nature.

When someone speaks to you of ‘nature’, what comes into your mind?

Is nature set apart from yourself?

Is nature some kind of rural idyll – a ‘Garden of Eden’ where all is peace and harmony?

Is nature some kind of hostile, uncontrollable wildness, ‘red in tooth and claw’, in which we struggle to exist?

Is nature something that you can, at will, connect to or disconnect from?

Is nature none of the above? In which case, what, where and who is nature?

Let’s ask a different question. If you were nature, how would you perceive nature and how would you perceive your human body? Does that question tax your imagination? How might your answer depend on how you perceive nature? And how would this depend on your perception of natural space and boundaries?

Perhaps we could try answering an easier question: how do you perceive your individual body and internal organs? What place, for example, do your heart, brain, gut and sex organs have in your life and feelings?

Are they somewhere set apart from yourself?

Are they somewhere full of peace and harmony?

Are they something with a life of their own, that you struggle to control in order to stay alive?

Are they something you can wilfully connect to or disconnect from?

Are they none of the above, and if so what are they and where are they?

What have you *imagined* in order to address these questions?

Have you imagined yourself situated outside your body? You bet you have! But, in reality, how could you possibly be somewhere outside of your body? And, by the same token, how could nature possibly be situated somewhere outside of nature?

Cultivating our sense of natural inclusion – empathic sensibility

My *natural sense* comes from a feeling of being in empathic rapport with whatever and whoever is present in my vicinity. This goes far deeper than the purely material connection and interaction of discrete objects envisaged by atomistic physics or the unification into oneness of philosophical monism. Instead I have a *heartfelt* sense of simultaneously welcoming and being welcomed into the other’s world, accompanied by a reciprocal flux of energy betwixt us. It is both exhilarating and calming, as in the meeting and opening of lips in a kiss, X, with a loved one or the coalescence of two adjacent water droplets on a water-repellent surface as they simultaneously release their individual boundary tension and flow into each other’s worlds. I feel the pulse and circulation of the other within my own pulse and circulation and my self-identity is lit up, not annihilated, by it, as illustrated in this delightful image overleaf, prepared by my friend, Roy Reynolds.

I have this feeling of empathic rapport often when I am in the diverse, unpretentious company of natural wildlife, landscape and waterscape. I don’t even have to be in direct physical contact with the other to get it: I only have to ‘behold’ a tree, with the receptive cavity of my heart wide open, to feel its charge. But I find this feeling



Pulse, circulation and flame, Roy Reynolds, 2018

dissipates all too readily when in human company, organisations and structures that either ignore me or treat me as an object that is required either to fit in with their prescriptive requirements or be outcast. Does this sound familiar to you or am I alone in feeling this way?

What difference can this natural sense make to the way we understand and live our lives, compared with objectivistic perception, and how can it transcend and transform the latter? To answer these questions it's important first to understand why objectivistic perception has gained such a powerful grip on our human imagination. What could appear to be its benefits and what could actually be its hidden cost?

“ I often have this feeling of empathic rapport when I am in the diverse, unpretentious company of natural wildlife, landscape and waterscape ”

Objectivistic perception provides you with a 'third person' or 'outsider' perception of your own and other material bodies as nature might perceive them from the space beyond those bodies, like a modern-day satnav. It provides a source of self-reference and a view of reality that you can share and compare with others to ascertain whether you are in agreement with each other. This is how much of the process of scientific enquiry works, in order to establish and validate a generalisable consensus of 'objective truth', independent from the uniqueness of personal locality.

This kind of perception becomes a problem, however, when it disregards rather than incorporates your individual

local experience of how it is to be a sentient presence within your uniquely situated body amidst others in your neighbourhood (ie your relational vicinity). It then becomes rather like trying to understand a football match solely from the viewpoint of spectators in the stand and with no empathy or consideration for how it feels to participate in the thick of the game. This has a deadening effect on your sense both of your self and of other bodies: you begin to see and treat them merely as inert mechanical objects pushed and pulled around by internal or external driving forces.

The natural sense needed to overcome this problem actually requires a fundamental and radical departure from the way most of us have become accustomed, through dependency on the 'outsider' viewpoint, to perceive nature. This departure can be made through awareness of what I call 'natural inclusion' – the receptive-responsive relationship between space and energy in all material form.

'Natural inclusion' is to my mind a fundamental principle of nature. To understand this principle requires a shift from the abstract perception of space, time and material boundaries as sources of definitive separation between independent *objects*, to recognising them instead as *mutually inclusive* sources of natural continuity and dynamic distinction. In effect this represents a move from rigidly static to fluidly dynamic framing of reality: from abstract 'freeze-framed geometry' to natural 'flow geometry'.

At this point you might find it helpful to get a sheet of plain paper and a sharp pencil. Place the point of the pencil onto the paper. Now try to outline a figure, such as a circle. Notice that you have to *move the pencil point around* in order in order to form the shape, and that this shape *dynamically incorporates* the space of the paper within its outline.

As a further aid, try to imagine the form of a whirlwind. Without circulatory motion around a receptive spatial centre, the form disappears.

What you have just illustrated and imagined is both how and why, in nature, space and form are distinct yet mutually inclusive presences. Space without movement would be void, lifeless stillness. Form devoid of space would be dimensionless. Material bodies are flow-forms, the co-creation of a relationship between space as a presence of receptive, inviting stillness and energetic movement as responsive circulation around a local, intangible cavity. We are dynamically embodied receptive holes, not isolated wholes. All natural bodily forms, from sub-atomic to galactic in scale, are intrinsically dynamic – mutually inclusive combinations of spatial stillness and energetic flux.

My painting and accompanying poem, *Swallow Hole*, based on a vertical section through the body of an apple, expresses this dynamic reality, which applies equally well to our own living bodies.



Swallow Hole, Alan Rayner, 2019

From superficial surface
To cavernous interior
To endless ocean
To superficial surface
Life flows in cycles and spirals

Immersing us
Buoying us
Soothing us
Exciting us
Scaring us
As we live its adventurous
Path

Between pools and rapids
Paddling our own canoes
Imagining we hold our destiny
In our own hands
When, quite clearly,
We don't

Swallowing life hole
Makes us well
Opposing life's current
Makes it a bitter pill
To swallow

Notice how far this simple account of the dynamic natural origin of bodily form has departed from objectivistic perceptions of measurable distance, duration and definitive limits. As my friend, Phil Innes, has put it, 'time doesn't

stop to have an "event" and space doesn't stop to have an "object".

*Space is what makes natural forms possible,
not what isolates them*

*Boundaries are what make natural forms
distinguishable, not what define them*

Space is hence understood in essence as a truly infinite, continuous, intangible presence. Time in essence is understood as intangible energetic flux or 'current'. Bodily boundaries are understood to be formed, from subatomic scale upwards, from current circulating around unique localities of space, not rigid demarcation.

'Clock-time' and 'ruler-distance', on the other hand, are scale-independent, abstract quantitative derivations from natural space and time as continuous qualities of nature. Useful as these measurements may be for mapping reality, they are not the reality itself, as is evident, for example, from the findings underlying quantum and relativity theory.

From abstract exclusion to natural inclusion as a guiding principle

Objectivistic thought simply ignores the presence of infinite receptive space, intrinsic energetic flux and the natural inclusion of each of these presences in the other to co-create material form. By so doing, it seeks to capture the infinite receptive expanse of space within a three-dimensional frame, and to construct all form from dimensionless points into breadthless lines, depthless planes and solid figures. This has the effect of mentally isolating the identity of 'self' and 'other' from one another and their surroundings, causing conflict, misunderstanding and distress.

“ We find solace and joy in the
natural companionship of loving
and helping each other ”

To regain our natural sense of reality, all that is fundamentally needed is the feeling and imaginative awareness that our bodies are dynamic inclusions and expressions of nature, not definitively set apart from nature. Quite simply, we can recognise that no bodily content can actually be abstracted from its spatial and energetic context – its natural neighbourhood – and continue to exist.

This awareness of natural inclusion provides us with a compassionate navigational aid, using our cavity at heart as compass, which helps us to recognise and avoid the problems and falsehoods that arise from abstract perception. Our understanding and appreciation of one another and our surroundings shifts profoundly from subjective or objective isolation to naturally inclusive

communion. We can no longer envisage or treat ourselves as individually or collectively estranged from one another and our environmental surroundings.

Gone now is the acute sense of loneliness and responsibility that comes with belief in individual or group autonomy, desirous of and exulting in competitive success, while fearful of and despairing in failure. Knowing ourselves to be as we truly are – vulnerable, needful, diverse manifestations of natural energy flow, not purpose-built mechanical objects – compassion can flourish in place of strife and the vain quest for perfection and hierarchical supremacy.

We find solace and joy in the natural companionship of loving and helping each other, even and especially when we fall foul of ‘human error’. Recognising the powerful combined influence of genetic variation and environmental circumstance on our bodily composition and perceptions, we are quick to forgive, slow to condemn and willing to admit, learn from and make allowances for our mistakes and disabilities. Rather than seeking conformity in group belonging, we deeply recognise the truth that it ‘takes all kinds to make a world’.

We recognise that individual and collective identity are not incompatible but vital to the life and love of each. We value the co-creativity of female and male in receptive–responsive partnership, not at odds with one another. We accept death as vital to the evolutionary flow of life as a return to Grace, not some ultimate punishment for failure. We worship and nurture life itself as sacred. We recover our sense of enchantment with being alive in a living world and caring for the needs of generations to come.

We come to love our natural neighbours and neighbourhood as we love ourselves, in a deeply heartfelt way that neither precludes nor is precluded by our intellectual awareness of natural space and boundaries. We seek love, not war – while recognising that the needs and demands of life and love by no means free us from pain and challenge. Need I say more? Yes, maybe I do!

Natural connection and communion – ‘flow-networking’

One of the most fundamental problems arising from the abstract perception that space is a source of discontinuity and distance – a measurable gap between objects – is the supposition that it is a barrier to, not a means of, communication. This is why the notion of ‘action at a distance’, which still bedevils our comprehension of

gravity, is so problematic. As soon as we appreciate the true nature of space as an intangible presence that invites and offers no resistance to natural energy flow, we begin to recognise space as a receptive source of communicative continuity that is no ‘final frontier’ to Star Trek travellers whatsoever!

This is important because many of us continue to imagine space as something that has to be connected or bridged across by some kind of tangible linkage if there is to be communication between one locality and another, when the truth is that space pools us all intangibly together in natural communion in the first place. In reality, communication between different localities depends on accessing and enveloping space by removing tangible sources of resistance along distributive channels, pipelines and networks, eg river systems, blood systems, nervous systems, plant venation, animal paths and the mycelial systems of fungi illustrated in my painting *Fountains of the Forest*.



Fountains of the Forest, Alan Rayner, 1998

Such ‘flow-networking’ is radically different in character from entrapment in spiders’ webs and fishermen’s nets, whose function is to capture and conserve energy, not pass it on. We don’t have to tie ourselves up in knots to communicate!

From evolutionary stagnation to evolutionary flow – ‘the survival of the fittest to the proliferation of the possible’

Darwin’s description of natural selection as ‘the preservation of favoured races in the struggle for life’ is a direct product of objectivistic thought, which continues to haunt us to this day. It cannot work as an evolutionary mechanism. This is partly because it is a prescription for

monoculture and stasis, not innovation, and partly because a future possibility cannot drive – it can only induce a current process. Natural inclusion therefore offers us a much more sensible way to understand evolution as the mutually transforming flow of all forms of life in co-creative, receptive-responsive relationship. This is a communal and improvisational process in which degeneration facilitates regeneration, not a prescriptive one in which death signals extinction. We can hence perceive life as a gift of energy flow, to be received, sustained and passed on in continuous relay, not a competitive struggle.

“We can perceive life as a gift of energy flow, not a competitive struggle”

Loving error – the art of natural reconciliation

An insidious implication of objectivistic perception and Darwinism is the notion that human frailty is an economically costly condition caused by mechanical failure, which needs to be singled out, fought and eliminated. This continues to pervade much medical practice and public discourse, as for example in the notion of ‘the battle against cancer’ and calls for ‘genetic screening’ to reveal our ‘design faults’.

Twenty years ago, dismayed by this notion, I painted the picture below.



Fountains of the Forest, Alan Rayner, 1998

At the time, I called it *Loving Error*, with the intention of drawing attention to the creative value of ‘deviating from the norm’ through combining rather than opposing complementary perceptions.

It strikes me that we need now more than ever to find ways in which to love and make allowances for each other’s natural capacity for error, instead of seeking to eliminate it. To do this we need to allow nature to be our healing guide and source of solace, not our judge.

There is a way
Between those warring fractions
To bring reconciliation
Through recognition of each other’s faults and virtues
As coming from the same deep place
Where creativity comes to life
In loving form
Burning with passion
Cooling with calm
Fire and stillness combining
In endlessly evolving flair
To know this we only have to listen
With deep abiding care
So, why can’t we?

What’s stopping us?

Further reading

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Iceland late April

Peter Owen-Jones

These planks these
bricks and buildings begged
with fish wrenched
from night
and wool heaved
from unswept stones
and wreaths of
infant bitter moss
and the wind
cutting crosses written
into the skin
there in the pages of men
who sit and wait and wait
for spring still living
with stoves and horses
knowing the many names
of water

Who will bride the boy
holding ice
in his hands for longer
than any London man
sweeping Fulmars
from the sky
who knows the mountain
as his mother
her warm saliva in his eyes
held by her complexions
and mute
as she speaks in rain,

Canada

Peter Owen-Jones

The warm flesh
of the forest speaks
formed and spun from sleep
did you not know
you emerged
from broken stones
contaminated scent with words
and cried
the dead bound husks of grief
into the ground.

See he will break every door
to find you
bringing thistles for your feast
parched grass
to quench your thirst
these are the crumbs of splendour.



Gulfoss, Iceland, April 2017, David Peters

Peter Owen-Jones is an English Anglican clergyman, author and television presenter.



Linocut, *Rabbit/Wolf*, Theo Peters <https://theopeters.co.uk>

Your world in words: connecting to oneself and nature

Gazelle Buchholtz

Freelance writer, researcher and environmental worker



The project *Your World in Words* seeks to support people's growth of nature connectedness and confidence. The idea arose from elements derived from my work based on a Master of Science, Biology – Communication of Scientific Knowledge, a Minor in creative writing, and as a guided reader at the Danish reader organisation. Furthermore, coming from an upbringing with severe alcohol and drug abuse in the close family, in a socially deprived area, it has been liberating to discover how nature, reading and writing can help to handle, redeem and process difficult situations. I wish to share these benefits with other people.

Gazelle Buchholtz

Ann Hodson

Social work lecturer



I am a social worker with more than 10 years experience in child protection. In 2011 I completed my PhD and since then have been working in academia as a social work lecturer. I teach a range of subjects including reflective practice and in 2014 I co-authored a book on reflective writing. I also have a research interest in childhood trauma. As a child I experienced close personal bereavement and found reading and writing stories provided an opportunity for emotional solace, but was criticised by teachers for poor spelling and grammar. This dented my confidence and I left school with few academic qualifications. As an adult I decided to take evening classes and ultimately went on to university. I now want to inspire young people to fulfil their potential.

Ann Hodson

The workshop described here was developed to support young people who are experiencing difficult challenges. Through a pilot test of the project, we saw that the session was mentally stimulating, and a powerful tool which can bring out vulnerability as well as well-being and healing aspects. Interplay of nature, writing and reading can tune people into connectedness with nature, oneself and other people.

Introduction

David Attenborough has stated, 'No one will protect what they don't care about; and no one will care about what they have never experienced' (Williams, 2013). We live in a world where urbanised areas continue to increase: in 2007 the United Nations reported that at least 50% of the world's population was living in cities. It predicted this would rise to 60% by 2030 (*Science Daily*, 2017). With a rapidly increasing world population, the growth of cities has the potential to create a wall between nature and humans, ultimately risking disregard for natural resources. William Bird (Moss, 2012) stated the importance of connecting with nature at a young age.

He claimed that if a child is not connecting with nature below 12 years old, they will lose the resilience which nature provides.

With a new type of workshop *Your World in Words* we want to help people of all ages, but particularly children and young people, to connect to nature as well as to themselves. The workshops allow participants to have space and time to connect with nature and to feel confident using written expression to reflect, relax and be creative.

This paper briefly considers existing research and outlines the findings from a pilot workshop of *Your World in Words*. The pilot was one of a series of workshops in creative writing and shared reading that has nature and the natural world at its core.

Building on existing research in the fields of nature connectedness and creative writing and shared reading, *Your World in Words* draws these elements together, resulting in a unique and interesting experience.

Building natural resilience

Connecting with nature

Research into the importance of being outdoors for children and young people is not new. Sport-based outdoor courses, walking and camping, and the growing interest in school-based outdoor education certainly have their place to help people connecting with nature. *Your World in Words*, however, provides a personal space to engage in the process of reflection and creativity. We are interested in the effect on children when they are given the opportunity to experience three sequential interacting elements: immersion in a natural environment, writing and the shared reading, out loud, of published literature.

Exposure to natural settings increases children's ability to focus and enhances cognitive abilities

We want the project to support resilience by stimulating awareness and connection with nature as well as encouraging creativity and pleasure in literature. This does not need to be an activity located in remote woodlands and hills. Many young people who face complex social and personal challenges grow up in urban parks and small pockets of planting. *Your World in Words* is designed to be available to all and targeted at those who might need it most.

Not only does nature provide us with physiological benefits, like lowering stress levels and blood pressure, but the psychological impacts can improve life conditions. A report published by the North Carolina State University underlines that exposure to natural settings increases children's ability to focus and enhances cognitive abilities. Using outdoor classrooms and other forms of nature-based experiential education supports students in social studies, science, language, arts and maths (North Carolina State University, 2012).

Fleming (2018) says that it is possible to experience a deeper connection with nature, or with others in a group and in a wider sense of oneself, in natural areas like woodlands and mountains, as well as designed environments, for example urban green space and gardens.

A study of a group of young people aged 7 to 18 showed nature connectedness as a consequence of field trips (Braun and Dierkes, 2017). Children aged 7 to 9 years expressed the strongest shift towards nature connectedness. Braun and Dierkes conclude: 'In light of the growing alienation from nature among children, educational programs re-connecting students to the environment

seem more important than ever. The intervention presented in this study showed that direct experience of the surrounding environment can restructure students' connection to nature' (Braun and Dierkes, 2017: p946).

Using writing

The use of writing linked to nature to help people make positive connections to their surroundings and enhance wellbeing is not new. When studying university students' self-analysis through journal and personal essay writing related to nature experiences, Bennion and Olsen reported: 'We have found that this dual course helps students develop solid habits in recreation, reflection, and writing' (Bennion and Olsen, 2002: p245). Likewise, Gardner and Kuzich (2017) studied nearly 100 9 to 10-year-old children and found positive effects of the influence of natural spaces with the children's writing becoming more imagery-rich and evocative. Gardner and Kuzich concluded: 'The study has implications for students' literacy development, creativity and agency and suggests that students' poetic writing is enhanced through direct contact with nature' (Gardner and Kuzich, 2017: p1).

Research at The University of Sydney showed the benefits to children of writing. This included improvement in writing quality, better planning, organisation and ideas, enhanced ability to reflect and self-evaluate, increased confidence to work with others, and more willingness to talk to people, particularly adults (Sydney University, 2015).

Shared reading

Research shows examples of how reading can be a useful tool to understanding oneself and others, which can lead to increased feelings of confidence and positivity. See for example Polley and Kovandzic (2017).

The concept of shared reading originates from the organisation The Reader. The organisation describes itself as '... pioneering the movement of Shared Reading – helping people to connect with a better understanding of themselves and others, enabling them to realise the changes they want to make' (*The Reader*, 2017). Since 2008, the organisation has used shared reading as a tool to improve wellbeing, reduce social isolation and build resilience in diverse communities by supporting people to read great literature aloud together. The concept has spread to Denmark, Australia, Belgium, the Netherlands and Germany, and organisations are researching the effects of shared reading.

The workshop

The innovative side of *Your World in Words* combines all three of The Reader's elements: improving wellbeing, reducing social isolation and building resilience in diverse communities. The intention is to support individuals to feel connected with nature and to feel comfortable using words to convey thoughts, feelings and experience, and

therefore to connect to both their inner and outer world. On an individual level this may provide some therapeutic experience and on a wider level may even enhance care for the environment.

Your World in Words is run as a series of workshops with an ideal group size of five to eight participants. The project idea and framework was developed and tested by us (see *Pilot test – sign of a powerful tool*, below) and was presented at the International Conference on Ecocriticism and Environmental Studies in London (Buchholtz, 2018).

Each workshop uses exercises in creative writing and shared, guided reading with nature and the natural world as the focus. The aim is to create space for expression where the participants can consider their thoughts and feelings and how experiencing nature and natural surroundings might affect them. Ideally, a group should meet regularly.

Each of the six workshops lasts three hours and comprises:

- short writing exercises and an invitation to each participant to read aloud their own written texts
- a walk where people are encouraged to remain silent, focusing on nature and connecting to their thoughts and feelings
- guided shared reading of a short story and poem selected by the facilitator.

While writing is something many people take for granted, creative writing and sharing the work with others can be a daunting process. The writing exercise is designed to help people get in touch with their feelings and develop ways of expression. Reading their short text aloud gives them an opportunity to overcome shyness, anxiety or other challenging feelings.

After a few writing exercises the participants are asked to go for a walk alone in silence, and immediately after the walk to complete a given writing exercise. This task aims

to connect the participants with nature. They are encouraged to write about what is seen, heard and smelled, and to write stories, feelings or memories based on the nature encounter. This is also an exercise which aims to open up reflection and strengthen the formulating capacity. It is helpful to have access to natural surroundings but a session does not have to take place in the wilderness. Nature is everywhere and sunlight, the weather, a plant bursting through the pavement and urban gardens are as valid as the most remote wilderness.

Finally, there is a shared reading of a short story interspersed with group discussion, and the session ends with a poem. The selection and reading of short stories and poems aligns with the principles of the organisation *The Reader* (2017), and participants are invited to exchange and accept different points of view and to highlight the impact literature can have.

At the end of the workshop participants will have engaged in sensing, describing, reflecting and expressing their thoughts and will have also supported others in this experience.

Pilot test – sign of a powerful tool

Your World in Words is based on research as well as on the personal and professional experience of the authors. However, taking an idea to the point of working with young people who might be vulnerable because of their life experience is a serious step. Before developing further proposals for research and implementation with young people we ran a pilot session with social work practitioners and academics. Every participant had knowledge of working with vulnerable groups including children, families and people who have (directly or indirectly) experienced substance abuse.

The session was held in April 2018 at Dundee Botanic Garden.

The participants already knew each other to some degree, and so it was hoped they would be able to engage

in the session quickly. The session followed the format outlined above. Participants were asked to complete a feedback form immediately after the session, and follow-up interviews gathered more detailed feedback.

Overall the participants enjoyed the session far more than they had expected to. They reported feeling the session had been mentally stimulating and that it was therapeutic to take time out of their



The pilot session took place in a shielded room in the glasshouse

busy work-focused lives and to reflect and be creative. Although all the participants had experience of professional writing (reports, case notes and academic articles), they felt it challenging to share their creative writing. However, they overcame this and appreciated how the green setting brought out inspiration and supported the feeling of a safe space. They were surprised at how it also brought out emotions.

Quotes of the participants

'I think the elements [nature, creative writing and shared reading] work together. Exposure to nature gives inspiration – a safe starting point for creativity that would not be available with blank walls and pages.'

'The guided reading was a good way to allow people to think about different perspectives.'

'Really appreciated the approach – encouraging, and no "wrong" answer.'

'Sharing the writing was difficult. I was aware of an internal barrier, and appreciated the opportunity to take another step into a more creative side!'

It was pointed out by several participants that the session should not be used as a therapeutic tool by itself. If the session was to be held for deeply traumatised young people, they felt a therapist should be present at the sessions. The aim of *Your World in Words* is not to use this as a trauma therapy; it is about enabling people to connect with nature and the written word. However, it is recognised that there is potential for the sessions to trigger emotions and issues that may need referral to other resources.

Next step – growing connectedness

The pilot workshop showed that the project can support individual ways of expressions. Even when feeling vulnerable the green setting gave a sense of a safe space and source of inspiration. Sharing the experience and being able to freely express their point of views on a shared story and poem opened up space for personal expressions.

Both our experience and the pilot indicated that a series of sessions would work better than a single event. This structure gives an opportunity to develop the group dynamics and allows people to grow in confidence, as they gradually feel more comfortable.

We believe that throughout life it is possible to create new, strong connections with nature, as well as with people and ourselves. We aim to support young people who are experiencing challenges in their life to find their own words to express their views and to find their own route to feel connected to nature.

The next stage is to run the *Your World in Words* workshops for a group of young people and to evaluate their experience including their nature connectedness. This process will be supported by Pamela Candea, founder of the community interest company The Surefoot Effect, who has expertise in the field of personal resilience and nature reconnection. Funding opportunities and collaboration with existing projects working with young people are being explored.

Your World in Words is in the early stages of development, but the indicators are that it is beneficial for individuals, helping them to engage in reflection and creative writing and enjoy connecting with nature. We are pleased with our early findings and, as we take our project to the next stage, we look forward to exploring how children and young people experience the workshops.

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Fractals: the hidden beauty and potential therapeutic effect of the natural world

Lucy Loveday

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I live on Dartmoor with my young family and I am married to a physicist. This combination lends itself perfectly to a predilection for the natural world! While intuitively I know that being in nature makes me feel better, I am becoming increasingly interested in the scientific evidence base that supports this sentiment and the potential to apply this in a therapeutic context. I have always appreciated the intricate beauty that exists in nature and often pause to stare at tiny seashells when walking along the beach. Recently, I have been asking myself *why* exactly this pastime confers such a sense of calm? Is there any science behind these natural fractals? Curious to learn more, I have started to explore this subject further. In our increasingly technology-dependent world, I believe we have an innate need to reconnect with nature and experience for ourselves the benefits this can have on our health and wellbeing.

Most people know about fractals; even if they don't know how they come about, they perceive there is something special about them. Yet it was only recently that mathematician Benoit Mandelbrot's simple equation first generated these shapes. He recalled that though this emergent geometry had not been seen before, it looked curiously familiar. In fact many natural forms – trees, clouds, rivers and mountains – have a fractal geometry. Some computer-generated fractals, perhaps because of their 'natural' appearance, have a positive aesthetic appeal. These shapes have been classified as 'biophilic fractals'.

In 1975, polish-born maverick mathematician Benoit Mandelbrot discovered the fractal (Mandelbrot, 1982). A fractal object features a repetitive pattern, recurring on a progressively finer scale to create shapes of enormous complexity. Fractals can be found in abundance in nature and examples include pine cones, romanesco broccoli, trees, sea shells, ferns, peacock feathers, pineapples and clouds. The D-value assigned to a fractal is an important parameter to be aware of. It is used to denote a fractal pattern's visual complexity. The D-value lies between 1 and 2. The closer the D value is to 2, the higher the extent to which the fine structure features in the fractal mix of repetitious patterns, resulting in a shape full of intricacy and detail. To the contrary, fractals with lower D-value reflect a smaller content of fine structure resulting in shapes that are more smooth and sparse in appearance (Taylor and Sprott, 2008).

Background

In 1981, Ulrich (1981) examined how scenes of nature influenced brain

activity and stress physiology. He found that viewing scenes of nature (featuring water and vegetation) was associated with higher alpha wave amplitudes, which has been identified as indicative of a wakefully relaxed state (Laufs *et al*, 2003). Higher alpha wave activity is also associated with increased serotonin production, a chemical and neurotransmitter that operates within the nervous system, believed to play a role in regulation of mood.

D-value and the neurophysiological response to fractals

As well as being aesthetically pleasing, fractals have the capacity to lower stress, by affecting human physiology. This body of pioneering research has largely emerged over the past 15 years.

Taylor *et al* (2005) have demonstrated that experiencing mid-range D-value fractals has the potential to positively affect human stress levels by favourably altering human neuro-physiology. In collaboration with neuroscientists and psychologists,



Romanesco broccoli detail, Jacopo Werther, <https://creativecommons.org/licenses/by-sa/3.0/deed.en>

Professor Taylor has successfully managed to objectively measure people's responses to fractals found in art and nature by using photographic images of natural scenes in his studies. Initially, skin conductance measurements were used as these had previously been found to be a reliable indicator of mental performance stress, with higher conductance occurring during higher stress (Ulrich and Simons, 1986). Taylor *et al* monitored 24 participants carrying out a sequence of three intentionally stress-inducing mental tasks. During the tasks, the participants observed different fractal images comprising a range of D-values. The results showed that the smallest rise in stress occurred when the participants were observing an image of savannah, reported to have a fractal pattern with a mid-range D value of 1.4. This preliminary study highlighted the importance of the fractal dimension (D-value) when considering the potential for stress reduction by incorporating natural images into artificial environments. Naturalness alone is not sufficient. To develop this theory further, another study used continuous EEG (electroencephalogram) monitoring to quantify participants' neurophysiological response to visualising computer-generated images of landscape silhouettes with different D-values. Results demonstrated a significant difference in alpha response activity in the frontal area of the brain. The highest response occurred with the silhouette that possessed a mid-range D value of 1.32 (Taylor *et al*, 2011).

The conceptual model of nature therapy begins with a stressed state at the top and specifically alludes to the restorative effects of nature in its conclusion, while simultaneously acknowledging the individual differences and the need to incorporate evidence based medicine before concluding the preventative medical effects. The emerging empirical data that mid-range fractals have

positive effects on human stress levels could be applied to the conceptual model of nature therapy as a potentially accessible lifestyle solution for stress that requires further exploration.

Research on natural fractals remains limited. There is great potential to build on this work and it would seem logical to build on existing research by incorporating more realistic forms of fractal stimuli as found in nature, perhaps using virtual reality to do so.

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Researching the potential therapeutic action of medicinal plants using a post-reductionist method

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After studying medicine at the University of Bristol and psychiatry at the Middlesex Hospital, I spent four years exploring a medical approach aiming to encompass patients' soul and spirit as well as their bodily conditions, in anthroposophic hospitals in Germany and Switzerland. I returned to the UK to help found a residential anthroposophic therapy centre called Park Attwood Clinic. Later I enjoyed applying this approach to the range of problems encountered in NHS general practice in Stroud, Gloucestershire, working with like-minded GPs, therapists and counsellors. I have a special interest in facilitating experiential learning, helping colleagues in the UK, the Philippines and China discover the spirit in themselves and in nature.

This two-part paper presents a method of studying medicinal plants with a group of participants of postgraduate holistic medical training. The method involves both exact observations, developing a picture of the plant's development over time, and participants' subjective feeling of the plant's inner qualities or 'personality'. From this the plant's possible therapeutic uses were imagined. When later checked against bibliographic indications, a large proportion of these hypothetical indications matched indications in the literature of herbal medicine and other medical traditions including conventional pharmacology.

Introduction

A future science beyond the reductionist world view will need to explore appropriate ways of consciously including the subjective experience of the researcher alongside more objective observations. The method described here could be a contribution to balancing 'the over-emphasis on quantity at the expense of quality and the exclusion of subjectivity' (Walach, 2018).

While there is extensive literature on the traditional uses of plants in many cultures which may have been based on intuitive knowledge as well as practitioners' experiences, modern research on medicines and phytotherapy has been dominated by the isolation of individual chemical compounds which are tested in animal trials and randomised controlled trials on humans.

This article describes a method of medicinal plant study and research which is a pioneering approach to include the observers' experience and which can complement medicinal

knowledge gained by more reductionist conventional scientific methods.

The method used has involved groups of between 6 and 18 participants who generally have neither botanical nor medical knowledge of the plant chosen for study. However, the plants that have been studied have been selected by the process facilitator as being recognised for their medical properties in the literature of several medical traditions. The name of the plant is not divulged to research participants until the penultimate stage of the process.

The research process

Exact observation of the plant

The first formal step in the method is to observe an example of the plant either outside in nature or indoors in a pot. Participants are asked to use their sense of sight and smell. They are encouraged to observe the forms, size and colour of all parts of the plant.

After several minutes of silent observation each participant is asked to share one observation, going around the circle till a fairly complete description has been achieved. In this phenomenological process participants are asked to minimise the use of botanical terms and avoid speculation on the plant's growth process or their subjective reactions or feelings. This step, called 'exact observation', focuses on the spatial expression of the plant at one moment in time. The process of observation can be intensified by making a black and white exact drawing of the parts or whole plant using pencil or charcoal.



Example of a participant's 'exact drawing' of henbane

The plant's growth process

The second step of the process involves building a picture of the plant's growth process. This is what Goethe called 'exact sensorial fantasy' (Colquhoun and Ewald, 1996). This is facilitated by looking to find those parts of the plant which appear youngest

and those that emerged earlier. If the plant is viewed in its natural environment it is often possible to find examples at an earlier stage and plants at a later stage of their growth. The aim is to make a moving mental image of the process akin to a time-lapse film. Often various hypotheses of this process arise, and can be discussed by the group. Sometimes questions remain unanswered. The goal of this process is for participants to 'get inside' this growing process. This process is called the 'picturing the growing' and is the expression of the plant in time which reveals its life dynamics. This process can be intensified by drawing the growth process or choreographing a group sculpture of the growth process.

Subjective feelings about the plant

The third step is more subjective. Participants are asked about what feelings or mood the plant evokes. This step could be compared with what in psychodynamic psychotherapy is termed countertransference. The step can be aided by reflecting on the following question: 'If I imagine this as a person, what kind of personality comes to mind?' It can be helpful to close one's eyes to reflect on this. Participants are asked to note their descriptions and then share the results. Although the descriptions are quite individual, often common themes and qualities emerge. This step can be anchored if participants make an artistic expression of the characteristics by making a colour

abstract representation of the qualities, mood or personality, using for example, coloured pastels. The instructions are not to draw the plant literally, but to express the qualities they have experienced.



Example of a colour abstract representation of henbane's character

Essential character of the plant

The fourth step is to refine and distil participants' sense of the special qualities of this plant and to reduce their description to only a couple of words. They remind themselves of the previous step and review their artwork. They are challenged to try

to find the most salient and individual characteristics of the particular plant, and also to avoid words such as 'vital' which might apply to many, if not all, plants. They may borrow descriptions from other participants if they feel they have captured an essence of the plant better. When ready, participants' distillations are shared and charted.

Hypothetical therapeutic indications of the plant

The fifth step is to hear these essential qualities read out, to take them seriously and respond to the hypothetical question: *If a medicine prepared from this plant could give these qualities to a patient, for which illnesses or conditions might it be therapeutic?* Participants work alone preparing a list of theoretical indications for this plant. When ready they are shared and noted. Particular therapeutic themes may emerge and as well as areas of repetition or overlap.

Therapeutic indications of the plant in the literature

Only after this fifth step is the name of the plant revealed. A bibliographic search is then performed to include western herbal literature, conventional pharmacy, eastern herbal literature, homeopathic and anthroposophic literature; the indications found are then listed.

Level of confirmation

The sixth step is to revisit the group's own hypothetical indications and compare them with the indications found in the bibliography. The number and proportion of hypothetical indications which are 'confirmed' by the literature is noted.

When, as is frequently the case, 60–70% of them are ‘confirmed’, the sense can arise that there is far more validity to this process than participants expected.

object or plant. I suspect that this method starting with more objective observation steps and using a group sharing and a ‘distillation’ of initial feelings and sense of

‘personality’, may to some extent overcome the one-sidedness of a particular individual’s own subjectivity. I offer this paper for discussion to physicians and scientists interested in developing a science beyond reductionism.

Table 1: Summary of the method’s steps

Step 1	Exact observation of the plant	Spatial physical description
Step 2	Creating a moving picture of the plant’s growth process over time.	Time gestalt, life organisation
Step 3	Noting the subjective feelings or mood evoked by the plant – describing the plant’s ‘personality’	‘Soul’ level
Step 4	Distilling the essential qualities of the plant	Ontological, essence level
Step 5	Considering hypothetical medical indications for this plant assuming the above qualities could be ‘administered’ to a patient	Hypothetical indications
Step 6	After learning the name of the plant, consulting traditional and conventional medical literature and tabulating indications	Bibliographic indications
Step 7	Examining the hypothetical indications and comparing them with those listed in the literature to see which are ‘confirmed’ and which are not. Estimating the proportion that are ‘confirmed’.	Assessment of results

Discussion

It may be argued that while the method may arrive at indications that older traditions came to, perhaps through an intuitive sense, it is not validated by conventional evidence. With this in mind an article on a plant which has been studied whose constituents have been pharmaceutically assessed and included in conventional medicine follows below (on henbane [*hyocyamus niger*] which is known to contain pharmacologically active constituents such as hyoscine and atropine).

To ensure the research process was original and not influenced by previous knowledge, participants are asked if they know the plant and its uses. It is the author’s experience that doctors rarely recognise the medicinal plants studied. If participants recognise the plant and could be aware of its uses, their observations are only heard after the rest of the group. Their perceptions and any therapeutic ideas are excluded from those listed in the study that follows.

While this method needs to be researched and tested more widely and possibly refined by other facilitators and groups, it does appear to yield results of some validity while engaging a method which goes beyond the accepted methods of current materialistic science. It may therefore offer a modest inspiration to the development of post-reductionist medical science. It also has the effect of building a ‘personal relationship’ with medicinal substances which is not the case in the conventional study of pharmacology.

The author has noted that groups practised in the method tend to produce indications that are bibliographically confirmed to a greater degree. Conventional science aims to bypass subjectivity, mindful that subjective reactions may say more about the observer than the object being observed. The author acknowledges that subjective reactions reflect both the observer and the observed

Background to the method

The first four steps of this method can be seen as a reflection of the four levels of consciousness described by Steiner and Wegman in the first chapter of their book *Fundamentals of Therapy* (Steiner and Wegman, 1925). The first of these steps correspond to the methods of natural science appropriate for the non-living world; then three higher levels of consciousness enable perception of the realms of life phenomena, soul and being or spirit respectively.

Alongside its potential value as a research method, I recommend it as a learning and training method for physicians and other healthcare professionals who want to train in more holistic approaches to medicine, helping them to develop a more holistic approach to nature and medical substances. One participant noted:

‘As a scientifically minded doctor, I was surprised at how the process brought us to such accurate and specific intuitions regarding the potential medicinal utility of the plant(s). When I saw this repeated again and again throughout the course I learned to trust the process and to be able to follow it myself when encountering new plants.’

Dr Simon van Lieshout, NHS GP

This method is used in the British Postgraduate Training in Anthroposophic Medicine¹ and in the International Postgraduate Training in Anthroposophic Medicine in the Philippines² to explore the potential medicinal properties of individual plants. This training is designed for physicians wishing to explore anthroposophic medicine, a holistic, spiritually based extension of conventional medicine (Evans and Roger, 2017).

Notes

- 1 See www.anthroposophic-drs-traing.org for details of this UK three-year part-time course. The next course, designed primarily but not exclusively for doctors, is planned for October 2019.
- 2 See <https://medsektion-goetheanum.org/en/training>

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For further information and training in anthroposophic medicine see www.amuk.wildapricot.org

The author wishes to acknowledge the contributions of the late Margaret Colquhoun PhD, Dr Jurgen Schurholz, Ian Wiggle MRPharmS, Dr Geoffrey Douch and Dr Frank Mulder whose work, together with the author, contributed to the development of this method of research.

Henbane plant study

The following section describes examples of the results of applying the method described above to a plant with recognised medical value by conventional pharmacy as well as complementary medical traditions. This plant has been studied by several groups. Details of the first two steps have been well recorded by a group researching the plants included in the anthroposophic medicine called cardiodoron.** The subsequent steps are recorded from participants in the British postgraduate training in anthroposophic medicine during their summer seminar in 2018.

The **first step of exact observation** results in the following description: the plant has a strong vertical stem of around 20cm height with large, dark green, fleshy leaves in a close spiral. These leaves are symmetrical with several points and indentations on either side of the leaves. The lowest flower sits at the top of this stem at the centre point of up to three forked branches set at around 45 degrees from the vertical arise. Hairs are noted on both the vertical stem and are even more obvious on the side stems. The leaves on the side branches are asymmetrical in their indentations and points. They hang downwards from the slanting side stems. The upper side of the leaves, which are a little darker than their underside, are orientated in the same direction as the 'terminal' flowers. At the outermost point of each branch several flowers are visible. They have a foetid smell and below them is a hairy furled stem enclosing numerous flower buds. The flowers have

five petals and are bilaterally symmetrical. The petals have purple veins. At their bases they are densely purple. More peripherally their background colour is cream on which the purple veins are visible. Above and more medially on the branch are more withered flowers. Also more medially are green cup-like structures with five points uppermost on their rims. They are quite rigid and upright on the stem. More centrally on the stem these cups are brown and dry but also rigid and upright. Within these brown cups is a green swelling which, if cut open, reveals sticky

bright orange seeds. Below the side stem hang pairs of leaves opposite pairs of flowers/calix cups uppermost.

The **picture of the growing process (the second step)** that the group came to was that in spring after the appearance of simple leaves an upright shoot surrounded by leaves would push upwards with the leaves unfurling,



A participant's 'exact drawing' of henbane

opening and growing in a spiral around this stem. While some of the leaves have serrations, they would be bilaterally symmetrical. Later in the year it was pictured that a terminal flower bud would appear with three buds around it from which side branches would emerge. These side branches would now grow at around 45 degrees from the horizontal. These side branches would appear as tightly coiled spirals that would gradually grow and unfold revealing pairs of not quite symmetrical leaves hanging downwards alternating with flower buds which would open when they were roughly in a horizontal orientation. As the paw-like hairy spiral unfurls the flowers move to face upwards and at the same time begin to wither. Their surrounding calix becomes more prominent, initially green and later drying to brown. After the withered flower has dropped off, a green structure in the centre of this cup grows and becomes more prominent. These rigid cup-like structures have five points on their rims and alternate along the 'dorsum' of this semi-horizontal side branch. Below them the pairs of leaves hang down 'ventrally'. The flowering process and the development of leaves on these side branches accompany each other. So vegetative and the flowering process continue side by side. It was imagined that in autumn the plant would die leaving dried stems with their alternating dry cups looking like a dragon's back with withered leaves hanging below. The group was uncertain about the dispersal of seeds but imagined pollination by flies attracted to the foetid smell

of the flowers and wondered if the seeds might be spread by ants.

These first two steps may include inaccuracies. The aim is for participants to engage an intensity of observational skills and in the second stage to create a living mobile picture of the growth process. I hold the view that these steps give an intense objective connection to the plant forming a sound basis for the more subjective descriptions that follow.

'Personality' of the plant: the semi-horizontal orientation of the side branches, the hairy paw-like structure, the stickiness, the smell reminiscent of cat urine, and the ventral arrangement of pairs of leaves mirrored by dorsal pairs of jagged hard cup-like structures all conjured up an animal quality. The pale creamy flowers with purple veins and a deep purple interior with their horizontal rather than upright orientation produced a fascination with both beauty and foreboding. The inner responses of participants were expressed in the following words and phrases; 'sense of darkness', 'devilish, spiny, frightening', 'threatening, metabolic connection', 'reptilian indifference', 'poisonous', 'crafty, complex'.

In a previous study of this plant with another group one participant wrote the following verse:

*With rhythm and vigour you start to grow
A thrusting, spiralling, branching bow
Ethereic forces, surging up
Until a flower forms on top
Slowly then your beauty brings
Purple-yellow deadening
Twisting turning snaking eye
Beneath your beauty secrets lie
Animalic forces form
Seeds in hardened skeleton*
Dr Simon van Liehout



Example of a participant's colour abstract of henbane's 'character'

After having worked at expressing these qualities artistically participants were asked to distil their sense of the **special qualities of this plant** into a concentrated description. The **distillation was as follows:**

- potential malevolence
- paralysing annihilation of soul and spirit
- 'see me, watch me and decide'
- poison eye
- portal to sub-conscious core.

After being reminded of these essential qualities they were asked to take them seriously and respond to the question: *If a medicine prepared from this plant could give these qualities to a patient, for which illnesses or conditions might it be therapeutic?* Their response was the following list of conditions:

- abdominal cramps *
- nausea *
- diarrhoea ◇
- emetic ◇
- exocrine secretory problems including corneal and skin dryness*
- epilepsy*
- asthma*
- panic*
- nightmares*
- soul shocks, panic attacks, fears in mid childhood *
- dysfunctional teenagers in search of autonomy*
- addiction, substance abuse, alcoholism and self-harm ◇
- low self-worth, borderline personality disorder ◇
- polluted soul states – depression – (homeopathic like treating like) ◇
- fear of darkness – connection to pineal gland ◇
- truth serum (allopathic) ◇
- stagnation or blockage in CNS 'carrying energetic imprint of blocked kundalini' (homeopathic) ◇
- loosening centre (psychologically)*
- bending too much forward or backward and adolescent spinal deformities

* **Clearly confirmed in literature**
◇ **potentially supported by literature**

Only after this step was the botanical identity of the plant henbane – *hyocyamus niger* – revealed to the participants who were asked to search the bibliography and tabulate the indications found in the various medical traditions. The following lists of indications were found and then compared with the groups own hypothetical indications.

Conventional pharmacology

Hyoscine^(1,2)

Used to treat:

- crampy abdominal pain
- oesophageal spasms
- renal colic, and bladder spasms
- bloating and the spasm-type pain that can be associated with irritable bowel syndrome and diverticular disease
- motion sickness and nausea
- reduce respiratory secretions at the end of life (exocrine secretory problems?)
- atropine
- uveitis
- bradycardia
- smooth muscle spasm

Western herbal indications⁽³⁾

- antispasmodic
- to aid sleep – hypnotic
- analgesia and narcotic
- diuretic – mild
- relax involuntary muscle spasms
- reduce secretions
- tranquiliser
- to prepare eye for surgery – pupil dilation
- treating internal inflammation of eye
- mania 'asylum conditions'
- Parkinson's disease
- neuralgia
- local use for rheumatic pains and haemorrhoids
- to break up kidney stones
- erectile dysfunction
- liver pain
- to produce hallucinations – ritual use
- to induce hypnotic states
- to induce sensation of flying
- to induce anaesthesia

Homeopathic indications⁽⁴⁾

- spasms of various kinds
- convulsions
- mania
- loquacity and crude language
- sexual disinhibition
- diarrhoea and involuntary nocturnal evacuations
- coughing
- sleeplessness
- 'bewildering images'
- overexcitability and restlessness
- disruptive behaviour in hyperactive children
- involuntary tics, twitching and grunting
- delirium tremens
- absences 'coma vigil'

Anthroposophic medical indications⁽⁵⁾

- somatiform disorders eg heart palpitations, restless legs, insomnia, compulsiveness and hypertensive peaks
- arterial hypertension
- ADHD
- dry cramping cough
- hiccups
- impulsivity in children
- psycho-developmental disorders in adolescents
- muscle cramps
- epilepsy

Locally

- dry vulva and Lichen sclerosis
- pruritis

Red = confirming hypothetical indications
Green = possible relationship to hypothetical indications

Comparing and contrasting the group's own hypothetical indications with the bibliography it was noteworthy that the group's indications included all but one or two conventional indications for hyocine and atropine, the two recognised 'active ingredients' of *hyocyamus niger* (henbane). Only one, 'reduce respiratory secretions at the end of life' is seen as an *exocrine secretory problem*.

Overall, of the 19 theoretical indications around 10 appeared closely confirmed and another eight more vaguely confirmed and only one (bending too much forward or backward and adolescent spinal deformities) not at all confirmed.

The participants found it remarkable that so many of the hypothetical indications were confirmed despite the process including very subjective steps. They also found it remarkable not only that many traditional indications had been 'rediscovered' but also that the literature of conventional pharmacology confirmed many of their own findings.

1 BNF under NICE Website *Hyoscine Hydrobromide* and *Atropine Sulfate*.

2 Wikipedia Website *Hyoscine*.

3 Grieve M, *A Modern Herbal* Henbane 1931 Johnathan Cape p397.

4 Boericke W, *Materia Medica* Hyocyamus 1927 Boericke & Tafel Inc Philadelphia p336.

5 *Vademecum of Anthroposophic Medicines* 2017 Hyocyamus published by The Association of Anthroposophic Physicians in Germany p358.

** The author wishes to acknowledge the contributions of Cardiodoron Research Group made up of the late Margaret Colquhoun PhD, Dr Jurgen Schurbolz, Ian Wiggle, Dr Geoffrey Douch and Dr Frank Mulder and the author, which contributed to the development of this method of research. The contents of their unpublished paper provided the material used in the plant descriptions above.



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The dog with the David Bowie eyes

and how things are not as they first seem

William House

Retired GP; Chair of the BHMA



More than a quarter of UK households own a dog.¹ I grew up with dogs – an Aberdeen Terrier called Laddie and then a West Highland Terrier Brucie. I don't know why we had terriers, nor why they were Scottish breeds, nor why they were both male, and I didn't care much. I just liked the dog being there, playing with them and stroking them, despite Brucie biting me. Looking back on it he was probably protecting my mother, the head bitch, from me, her other troublesome puppy! Then when they died and there was no tale-wagging greeting after school, I felt the emptiness. Only recently did I begin to understand this.

Of course this was at least 60 years ago. In the meantime, I graduated in medicine, married my lovely wife (who had also grown up with dogs), trained as a GP, had two children and completed a 30-year GP career. Over this time we've had three more dogs, all border collies from working stock on local farms. They are intelligent dogs, often particularly good with language. With our present dog, Sheppie, we are never short of conversation.

So what is it about dogs that made us, and over a quarter of UK families, go to all the trouble, the expense and the worry, of keeping dogs? I suggest it is the need for connection. Both dogs and humans are sociable animals. We need to be connected with our own kind, or with another sentient creature; and so do dogs. Loneliness and isolation makes both humans and dogs miserable, often ill too. For humans, there is a strong body of research that shows the health benefits of dog ownership², especially for the heart and for mental health³.

But neither we, nor our parents, kept dogs for health benefits; those were incidental. It was all about connection. Our need for connection is genetically programmed. Without it we cannot thrive. But why dogs? Why is connecting with humans not enough? Well it probably is enough for some. Many of the three quarters of humans without a dog, will be happy and productive. But not all. So much was obvious to me as I sat in the GP's chair listening to my patients' stories about their life. The fact is that a relationship with another human is complex and difficult. Dogs are easier to love and the love of a dog is loads better than no love at all.

As well as all of this, the dog will also mediate human-to-human connection. For instance, I often walk Sheppie

on the public footpath along the valley below our house and we often meet other dog walkers coming the other way. Like the late David Bowie, Sheppie has different coloured eyes, one blue, the other brown – it's the first thing people notice about her; the eyes have it! There may be a brief conversation about this or something else. This sometimes happens even when the walker is a lone woman with her dog. I cannot imagine this happening if the woman is walking alone and meeting a lone man.

But what does all this tell us about our culture? How is it that we need dogs and other pets to keep us in good health? In his chapter *On Animal Friends* (Kellert and Wilson, 1993) academic and prolific writer, Paul Shepard, wrote powerfully about the human 'invasion of the ecological world in a spirit of human ignorance' (p285). He bemoans the domestication of the wolf through selective breeding to become 'these mindless drabs of the sheep flock... (and)... the colossal upsurge of the pet as an industrialised healer...' (p286). Though this chapter is something of a diatribe against animal slavery that is hard to read, much of it has a dark ring of truth. It requires us to ask ourselves some hard questions about our culture and its tendency to use our cleverness to change Nature to fit our culture at our will, largely heedless of the consequences. In short, our stewardship of the planet is not going well.

Likewise, our first thought in the prevalent medical culture is to fix the problem in hand. But the BHMA is committed to asking deeper questions, however uncomfortable they may be. That is certainly the case for me. It takes courage and is sometimes met with hostility. But we go on. Tomorrow I will attend a BHMA meeting in the nearby city of Bath and Sheppie will come with me. She clings on to some of the relics of the wolf inside her by sometimes refusing to do what I ask of her, though she understands perfectly well. I respect her for that. We cling on together.

1 www.statista.com/statistics/308218/leading-ten-pets-ranked-by-household-ownership-in-the-united-kingdom-uk/

2 www.nature.com/articles/s41598-017-16118-6

3 www.manchester.ac.uk/discover/news/evidence-shows-pets-can-help-people-with-mental-health-problems/

Kellert R, Wilson EO (eds) (1993) *The biophilia hypothesis*. Washington, DC: Island Press.

Reviews

Bird therapy

Joe Harkness
Unbound, in press
ISBN 9 781 78352 772 4

'What we are capable of loving from moral duty is limited, but when we widen and deepen our sense of self...then our protection of nature is felt and conceived of as protection of our very selves.'
Arne Naess



Bird Therapy tracks Harkness' journey from a breakdown to relative mental and physical wellbeing partly through birdwatching, partly connecting with nature, and I think partly through writing a blog and eventually publishing this book. Joe loves birds and sometimes I can imagine the birds loving him back. Joe's sense of self widens and deepens page by page and bird by bird.

The book has 12 chapters each ending with a few practical tips such as: 'develop your bird sense – it can reveal so many of nature's secrets to you'. There is a plethora of useful references to wellbeing research. And each chapter begins with a handsome black and white full-page illustration of one of his beloved birds. Harkness affirms that through birdwatching he soon 'came to realise that you're just an inconsequential part of this system. No matter how bad you think things are, your connections within nature are strong, tangible, and ever-present'.

Bird therapy is only one of several approaches Joe followed. In his recovery from alcohol, OCD, and a breakdown, he attended a mindfulness course, used prescribed drugs, took up running; he tried all sorts of things and developed a new network of friends. Throughout the book, he weaves science with art. Some of the writing draws on his action research, surveying other birdwatchers. This reminds me of my own research into arts on prescription (AoP). When I spoke with Sir Kenneth Calman (former Chief Medical Officer) he said:

'Good fun is sometimes good medicine and the objective of the whole process is to improve quality of life for patients and the community.'

Some of my conclusions in my AoP research were that participation in the arts lengthens life, improves communication skills, gives greater connectedness with others, reduces stress and can save money for the NHS. And these are all similar to Joe's conclusions. One of the people I interviewed was Patch Adams, the clown doctor, and he said, 'It's a pity you have to prove something so obvious'. *Bird Therapy* is obvious too, but as Harkness points out, it can be stressful – it depends on how you

do it. Harkness tried all the approaches to birdwatching: twitching, keeping records, joining clubs, following the weekly survey from the British Trust for Ornithology... but finally encourages us to, 'take a step back and leave technology behind, stop actively searching for birds and simply allow yourself to be present, in their company.'

You can tell that Joe Harkness is a teacher. The book is clearly structured and easy to read, informative with copious notes and references. Clearly, the writing of the book has been as therapeutic as the bird watching: 'It's been cathartic to reflect back on more difficult times and connect them with the natural moments that eased them.'

His journey is accompanied by several lifestyle changes: a new career and personal identity, a hobby becoming his therapy, a high profile on social media through his research and blogging ...I'm sure the book will be an inspiration to many. Joe claims a 'web of wonder' around all those who partake in it (bird therapy).

My only wish would be for an index and perhaps a glossary of birds named in the book with small illustrations. *Bird Therapy* finishes with a Joe Harkness poem which begins with these two lines:

*Consistent and constant, yet wild and free,
Are the avian wonders comforting me.*

Having read the book, I now want to learn more about birds.

Larry Butler

Editor PlaySpace Publications; convenor Lapidus Scotland
See Joe Harkness with Chris Packham on BBC Winterwatch at
www.youtube.com/watch?v=iXOnwIojmkU&feature=youtu.be

The wild remedy: How nature mends us – a diary

Emma Mitchell
Michael O'Mara books, 2019
ISBN 9 781 78929 042 4

This is a really beautiful book. Following the months of a year, it is a personal diary of the author's encounters with the natural world as she struggles with her recovery from a lifelong depression. She brings a naturalist's knowledge and an artist's attention to her regular walks with Annie her dog, and her observations, reflections and collections are illustrated with delicate line and



paint and superb photos woven through the text in a delightful volume.

The whole book reads like a eulogy to 'very careful noticing', as she tracks her moods and the seasons passing: 'Every day I walk myself into a state of wellness', she quotes Kierkegaard, while finding she is herself fascinated by how 'the balance of the chemistry of my brain and hormonal and nervous systems are changing as I linger among trees and plants and ...this can impact the tone of my thoughts and my mental health'.

She describes the harrowing realities of being disabled by depression, the crippling restrictions and limitations it puts on her life: feeling too unwell sometimes to venture outside, or her desperate dependence on light in her seasonal mood disorder. But this is not a detailed account of depression, its wider causes or therapy options. She briefly mentions medication and talking therapy, but her main focus is on the ways she notices that nature can alter and help her mood.

She shares what she has learnt and found helpful in the literature and research evidence on nature and mental health, especially where it echoes her own lived experience. So she mentions attention restoration, biophilia, Shinrin-yoku or forest bathing, and blue mind, and reflects on the impact of her own childhood nature attachments and her current dopamine and serotonin reactions to different environments and activities. This is a story of someone who has had to learn to be an expert from experience, so it is not a comprehensive or academic book, but the references are reasonable and helpful.

While providing an honest and touching first person account of her times in nature and her recovery from depression over the course of a year, it reads primarily as a naturalist's diary: she conveys the power of noticing small things, as well as larger-scale landscapes, of collecting objects of beauty, complexity, wonder and intrigue, and the disciplined use of art to respond and record her observations. The book inspired me with wonder first and informed me next, as she shares her knowledge with the skill of a natural communicator – so heart first, then hands, and head next – small wonder she has a large Instagram following and a string of TV credits. The influence of Keble Martin's *Concise British Flora in Colour* is evident in the meticulous way she arranges her specimens to photograph or draw them on the page: fossils of sharks' teeth arranged next to whelk and mollusc specimens – with handwritten captions explaining their origins and changes over geological time; a flock of peewits in flight across a page complements the thrill she writes about in the text; owl, kestrel, pheasant and woodpecker feathers are curated carefully for curiosity and comparison. Many pages are simply exquisite, reminding me of a delicious meal presented deliciously. This is intelligent and environmental education at its best and most creative.

How helpful will health practitioners, therapists or their clients and patients find *The Wild Remedy*? Her talent, knowledge and skills as artist/naturalist might be daunting – for example for someone struggling with depression looking for help or advice. Her diary is set in a very rural setting, with access to nature that would be the envy of many city dwellers. And she explores only briefly, how, in treating her own depression, she has found medication, talking therapies, behavioural activation or 'occupational therapy' and social contact work together and when. She offers little advice with no self-help hype and describes honestly how hard she can find doing the very things she knows help her.

For medics and psychiatrists (considering anti-depressant prescribing), or therapists and other holistic practitioners who recommend books as bibliotherapy, Miriam Akhtar's *Positive Psychology for Depression* has more practical focused strategies for depression, and Florence Williams' *The Nature Fix* offers a more detailed and academic but accessible account of the current research into nature's therapeutic potential. Practitioners wanting to learn how to engage patients with nature-based interventions in their own practices might need other introductions to ecopsychology, ecotherapy, or green care, in a fast-emerging field.

Many of the current initiatives in nature in health and well-being strain to fit into a prescriptive model of health; talk of a dose of nature, and nature-based social prescribing is much in the news, and many nature-based projects (gardening, green exercise, care farming, woodland wellbeing) are now trying to package their projects for particular groups or, to gain the financial sustainability and recognition they deserve, they aspire to become 'commissioner-ready' (a tough one in these days of austerity and service cuts) with impressive efforts at evaluation.

I found this book a breath of fresh air: it is non-prescriptive and tells a simple story well: how a person's own reaching out, exploring, desperation, curiosity and unique creative attention can guide her to her own recovery.

It is a lovely book to hold and flick through, lending itself to 'dipping' and returning to over time and the seasons. It would make a welcome present or a lucky find in any waiting room or inspire anyone struggling with a long-term condition to reflect on their daily connections with nature.

I think her account adds a beautiful and real voice to the self-care literature, from someone who is surely an expert from experience. It is refreshingly free of any psycho-babble and offers a truthful if occasionally harrowing account of self-care for one of society's most widespread and disabling conditions.

Emma Mitchell also reminds all health practitioners to include nudging encouragement for regular contact with nature in all their self-care messages. And her wonderfully illustrated book opens up the door to nature's apothecary of remedies not only for anyone interested in health and the natural world but for all of us who might need to open our eyes to the wild curious and precious life we all share.

Alan Kellas
Psychiatrist

The children's fire

Mac Macartney
Practical Inspiration Publishing
ISBN 978 178860 045 3

The Children's Fire is the story of one man's journey – a modern-day pilgrimage that led him to walk out of this century all together.

Navigating by the stars and the moon and the sun, with no tent, no compass and no map, and with the kindling for his next fire shoved down his trousers to keep it safe and warm in the depths of midwinter, it is the story of a man walking from his birthplace in Malvern in the Midlands, to Anglesey in Wales,



which was once the centre of a spiritual tradition that spanned much of Western Europe.

'Every day grew colder, and every day took me some steps deeper into mystery.'

The book is a testament to Mac's deep love for both this ancient land, and for the people who live in Britain today, as he recounts countless tales of the generosity and kindness of strangers. In one such story, left without water due to the sub-zero temperatures, he decides to knock on the door of a farmhouse just outside Hereford, after sunset. There his simple request is greeted with the words: 'Come in, my dear, you look as if you could do with a little more than just water', and soon he is sat on the sofa with a dear old lady, eating cake, drinking hot tea and discussing the merits of Paul Scofield's rendition of King Lear. Despite his wild appearance, enormous backpack and no doubt slightly unusual fragrance after days and weeks of sleeping out on the land, time and time again he is met with similar acts of kindness.

These outflowing's of generosity help bolster Mac's spirits, as he traverses England and walks across the Welsh heartlands, but it is the land itself – and the intense feelings of aliveness, keenness, and beauty that come in his communing with wild places – that fill him with a deep sense of wealth.

But why this journey? And why to Anglesey?

The answer lies buried in a past that is not known to many, but for which there are clues lying in both the landscape and the literature. Thousands of years ago, Anglesey was known by another name: Mona. Across what we now know as Western Europe, Mona was the spiritual epicentre of the Celtic world, a place where druids would have come to learn, a place 'wreathed in rumour, dreams and legend...a holy isle...revered across the tribes'.

Trained for decades by Native American teachers, Mac was now walking the song-lines of his own country, back to Mona, and back to the pulsing heart of freedom that lay at the centre of the Celtic world. It was a walk into wildness, a wildness that some would think hard to find in our land of motorways, shopping centres, and blazing billboards.

But that was not Mac's experience:

'The wild is close; very close. It is the very essence of life, the soul-centre of our joy, the ache that yearns to scream obscenities at everything that is false, pretend and cynical. The wild is everything that our consumerist Christmas is not. It is the smell of fear and the sound of rain drumming on rock; it is food when you are hungry and water when you are thirsty. It is the most gentle of caresses and the soul of every kiss freely given. It is my heart. It is the song of these islands, no matter how many millions we are, no matter how long our traffic queues and no matter how dull our jobs. If never before, and if only this, we will know the wild at least twice in our twenty-first century lives; when we are born and when we die. It can be much, much better than that.'

At the heart of the book are two invitations. The first is to jump over the garden fence and dive deep into the wild that lies all around us. You do not need to travel to Siberia or deepest Amazonia to feel the salty air on your skin, the dark soil beneath your feet, and to drink in the vast beauty of these isles.

The second relates to a teaching given to Mac many years ago by his Native American guides, which has formed a key part of his life and mission ever since. It is a pledge, around the

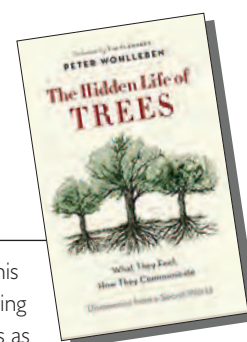
children's fire, that 'no law, no decision, no commitment, no action, nothing of any kind will be permitted that will harm the children, now or ever'. The book ends with an invitation for the reader to take this pledge, and to live their life bearing in mind the consequences for children – of all species – for generations to come.

And in a time when the consequences of climate change, mass extinction and soil degradation are becoming painfully clear, there might not be a more important invitation than this for us to take up.

Tommy Crawford
Artist and storyteller

The hidden life of trees

Peter Wohlleben
William Collins, 2017
ISBN 978 0 008 21843 0



The author, Peter Wohlleben, began his career as a commercial forester knowing 'as much about the hidden life of trees as a butcher knows about the emotional life of animals'. The book describes his experiences in the forest he manages in the Eifel mountains of Germany. He underwent a transformation, learning a new set of values that transcend our monetised culture. In his own words, 'My love of nature – something I've had since I was six years old – was reignited. Suddenly, I was aware of countless wonders I could hardly explain even to myself.' Thankfully, Wohlleben is blessed with an ability to communicate his wonder to others. Once you've read this book, a walk through a woodland will never be the same again.

'After reading this book, I am left with the greatest awe and wonder about trees, much more than I had before ... and am humbled by what these species can do.' PJ

Every reader will take slightly different messages from the book. My own indelible impression concerns Wohlleben's depiction of the woodland as a community. The parallels with human communities are remarkable, but perhaps they needn't be: trees and humans alike are all products of nature. We all need food for nourishment, water to drink and air to breath. Beyond that, the key to a healthy human community is connection. We do not thrive well when we are alone. Exactly the same applies to trees. A woodland is a community. The trees communicate with one another through their roots, and especially through the fungal mycelial web that exists throughout the soil of a healthy woodland. The fact is that trees communicate through the web – the fungal web.

'If there is ever a book that might make a person feel connected to nature, that we are all interdependent, then this is it.' PJ

As in human communities, some relationships involve giving more than taking. In the woodland, young trees continue to be supported with nourishment from their mothers for many years.

A sick tree will be fed by its neighbours until it regains its strength. In fact, Swiss law treats trees as 'sentient organisms' and ensures they are treated as such.

'Although they live life in the 'slow lane', as the author repeats many times, they have intelligence which enables them to react quickly to predators.' PJ

I will describe one more extraordinary example of the community behaviour of trees. The acacia trees of the African savannah have a clever way of deterring giraffes from feeding from them. Within minutes of nibbling a leaf the tree starts to pump toxic substances into their leaves. Not only do the giraffes move on, but they also avoid the nearby trees they have not yet started to nibble. This is because the affected trees also released a warning gas that triggers nearby trees to also pump toxins into their leaves, and the giraffes are wise to this. European trees also use scent messages. Some of these release pheromones that attract specific predators to insects that are feeding off the tree. This requires the tree to identify the specific predatory insects from their saliva.

They may operate 'in the slow lane' but trees are surely remarkable creatures.

'I couldn't help but feel that for Peter Wohlleben, all the trees in the ancient German forest he manages are like his children.' PJ

William House, BHMA Chair, and Poppy James

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holistic healthcare

Re-imagining healthcare

About the BHMA

In the heady days of 1983 while the Greenham Common Women's Camp was being born, a group of doctors formed the British Holistic Medical Association (BHMA). They too were full of idealism. They wanted to halt the relentless slide of mainstream healthcare towards industrialised monoculture. They wanted medicine to understand the world in all its fuzzy complexity, and to embrace health and healing; healing that involves body, mind and spirit. They wanted to free medicine from the grip of old institutions, from over-reliance on drugs and to explore the potential of other therapies. They wanted practitioners to care for themselves, understanding that practitioners who cannot care for their own bodies and feelings will be so much less able to care for others.

The motto, 'Physician heal thyself' is a rallying call for the healing of individuals and communities; a reminder to all humankind that we cannot rely on those in power to solve all our problems. And this motto is even more relevant now than it was in 1983. Since then, the BHMA has worked to promote holism in medicine, evolving to embrace new challenges, particularly the over-arching issue of sustainability of vital NHS human and social capital, as well as ecological and economic systems, and to understand how they are intertwined.

The BHMA now stands for five linked and overlapping dimensions of holistic healthcare:

Whole person medicine

Whole person healthcare seeks to understand the complex influences – from the genome to the ozone layer – that build up or break down the body-mind: what promotes vitality adaptation and repair, what undermines them? Practitioners are interested not just in the biochemistry and pathology of disease but in the lived body, emotions and beliefs, experiences and relationships, the impact of the family, community and the physical environment. As well as treating illness and disease, whole person medicine aims to create resilience and wellbeing. Its practitioners strive to work compassionately while recognising that they too have limitations and vulnerabilities of their own.

Self-care

All practitioners need to be aware that the medical and nursing professions are at higher risk of poor mental health and burnout. Difficult and demanding work, sometimes in toxic organisations, can foster defensive cynicism, 'presenteeism' or burnout. Healthcare workers have to understand the origins of health, and must learn to attend to their wellbeing. Certain core skills can help us, yet our resilience will often depend greatly on support from family and colleagues, and on the culture of the organisations in which we work.

Humane care

Compassion must become a core value for healthcare and be affirmed and fully supported as an essential marker of good practice through policy, training and good management. We have a historical duty to pay special attention to deprived and excluded groups, especially those who are poor, mentally ill, disabled and elderly. Planning compassionate healthcare organisations calls for social and economic creativity. More literally, the wider use of the arts and artistic therapies can help create more humane healing spaces and may elevate the clinical encounter so that the art of healthcare can take its place alongside appropriately applied medical science.

Integrating complementary therapies

Because holistic healthcare is patient-centred and concerned about patient choice, it must be open to the possibility that forms of treatment other than conventional medicine might benefit a patient. It is not unscientific to consider that certain complementary therapies might be integrated into mainstream practice. There is already some evidence to support its use in the care and management of relapsing long-term illness and chronic disease where pharmaceuticals have relatively little to offer. A collaborative approach based on mutual respect informed by critical openness and honest evaluation of outcomes should encourage more widespread co-operation between 'orthodox' and complementary clinicians.

Sustainability

Climate change is the biggest threat to the health of human and the other-than-human species on planet Earth. The science is clear enough: what builds health and wellbeing is better diet, more exercise, less loneliness, more access to green spaces, breathing clean air and drinking uncontaminated water. If the seeds of mental ill-health are often planted in an over-stressed childhood, this is less likely in supportive communities where life feels meaningful. Wars are bad for people, and disastrous for the biosphere. In so many ways what is good for the planet is good for people too.

Medical science now has very effective ways of rescuing people from end-stage disease. But if healthcare is to become sustainable it must begin to do more than just repair bodies and minds damaged by an unsustainable culture. Holistic healthcare practitioners can help people lead healthier lives, and take the lead in developing more sustainable communities, creating more appropriate models of healthcare, and living more sustainable ways of life. If the earth is to sustain us, inaction is not a choice.

Journal of Holistic Healthcare

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