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Review Paper

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Connecting the Dots: Connection and Wellbeing, and the Role of Mindfulness Meditation - A Review of the Literature.

ABSTRACT

“A human being is a part of the whole called by us universe, a part limited in time and space. He experiences himself, his thoughts and feeling as something separated from the rest, a kind of optical delusion of his consciousness. This delusion is a kind of prison for us, restricting us to our personal desires and to affection for a few persons nearest to us. Our task must be to free ourselves from this prison by widening our circle of compassion to embrace all living creatures and the whole of nature in its beauty.” Albert Einstein

1. This paper explores what might form some of the main factors underlying the relatively high levels of stress and unhappiness in the industrialised world, when many of our basic needs – such as food, shelter, material goods - are met. We theorise that underlying this is a sense of separation: of being cut off from others (particularly, and paradoxically, in cities); being unconnected to nature; and often being out of touch with what our own bodies are telling us.
2. This separation can lead to a reliance on possessions and distractions to bring an individual status and feelings of happiness, acceptance and worth, fending off any sense of being alone. For a social animal such as the human, being apart from others and from nature can give rise to feelings of isolation, rejection, and of being abandoned or ignored.
3. The first proposition explored in this paper forms a review of some of the literature which offers evidence of the importance of connection, as seen at three levels: i) at the individual level, between mind and body; ii) connection with other people; and iii) connection with nature (kincentricity).

4. What we mean by connection is the realisation that we're not separate, that we are part of a whole that's greater than ourselves, and that we are all related to one another and all other living beings. Kincentricity is that realisation in a single word. For the authors a deeply held belief that all life on planet Earth is not just interconnected, but taking this a logical step further, is essentially one life. Looking back about 4 billion years, it has been one earth, with one set of atomic constituents (bar space dust and the occasional meteorite crash), governed by the same forces that has produced the vast array of life, all with a genetic code that is probably notable more for its similarities rather than differences. The last part of this paper looks specifically at kincentricity and the problems associated with a lack of connection, and how we might address those challenges.

5. The authors propose that moving towards greater connection will help to lower overall suffering; will allow more people to reduce stress and facilitate the experience of being calm, with less focus on what happened yesterday, what might happen tomorrow, and their perception of their status.

6. The second proposition explored throughout this paper is the potential for a helpful role “mindful” practices can have in re-establishing connection. Mindfulness meditation can help that process by allowing the individual to move from immersion in their own inner narrative, to being aware of it, and then – ideally - being free of it. The person can then have more energy to listen to the signals from their body; engage more with others and with nature. These practices can be traced back to at least 200 BCE, and they have been practiced continually since then in the East It has existed in aspects of many ancient traditions and philosophical systems. While it has had adherents in the West for a long time, it has more recently become much more widely known and commonly accepted. Many in the industrialised world look to mindfulness meditation and similar practices as a way to relieve stress, process uncomfortable emotions, and find focus and calmness.

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INTRODUCTION

Our Genetic and Cultural Heritage

7. For hundreds of thousands of years, our modern human ancestors lived in small groups and were to a greater or lesser extent nomadic. It is a reasonable conjecture that they would have felt very close attachment to their group, and each individual in it. And their life as hunter-gatherers would have required close affinity with nature—animals, plants, weather, dry and rainy periods. A few such groups still exist today, despite considerable pressures from other groups of humans competing for their resources and land. But for the vast majority of the modern world, this way of life has changed.

8. Regarding this change, the authors agree with the view that in time, groups settled and grew crops and bred animals for food/fur/milk/protection. About 10,000 years ago, this process led to larger and more static groups, more densely populated, with specialisation in skills. There would also be rival groups who wanted to acquire the resources of other settled groups. The people had a dependence on the weather to grow crops, with widespread hardship if a crop failed. Storage of food/resources and trade would have followed. With the closer proximity of people it is likely that diseases spread more easily. And institutional hierarchies grew. This type of existence is more recognisable to many people as the start of the modern world. (See the book “Sapiens – A Brief History of Humankind” by Yuval Noah Harari for among other things, an in depth exploration of these themes)

9. It would be easy to fall into a trap of romanticising the earlier hunter-gatherer lifestyle – it no doubt had many positive, healthy attributes, but also hardships. For example, being subject to the climate. And while there may have been less incidence of disease, expectations for health, such as child mortality, would have been lower than they currently are in most of the industrialised world.

10. But this paper argues that there is evidence to suggest that at its best, aspects of the hunter-gatherer way of living had and can have advantages for peace of mind, a sense of wellbeing and satisfaction and overall enjoyment of life. The vital element leading to this is connection which was also essential for survival - awareness of the feelings generated by their body; connection with other people in their group, and connection to nature.

How We Live Now

11. The “modern world” has many advantages for many hundreds of millions of us. We can be more isolated from the physical challenges of nature – homes that are solidly constructed and can withstand rain and frost; we have light when the sun is down, and to a large extent can maintain the temperature indoors. A variety of food is packaged ready to cook on smoke free appliances. To varying extents there is education, health and social provision; and beyond the purely physical, recognition of individual freedoms and rights.

12. However to set against these advantages, in many parts of the world, there is evidence of a lack of satisfaction with life, or anxiety, loneliness. People who have great material wealth can still be unhappy. Winning a fortune in a lottery is no guarantee of contentment or peace of mind once the initial euphoria is over. Repeated access to pleasure does not guarantee happiness.

About Mindfulness Meditation and Connection

13. There is a consistent demand for mindfulness meditation as people seek calmness, relaxation/freedom from stress, and seek to come to terms with their busy minds. Many live thinking about the recent past, ruminating and worrying about what has happened, and perhaps projecting this in to the future, giving rise to anxiety. They may fear failing a given task, of losing status or not achieving the material wealth and associated sense of fulfillment they desire. The authors believe that connection to the present moment, to switch off rumination or fear of the future, is important for finding contentment and reducing stress. This is particularly true in connection between the body and mind, where the focus is on what is happening here and now.

14. There is some evidence to back this up. In their study on the “wandering mind”, (61) Matthew Killingsworth and Daniel Gilbert conducted an experiment using mobile phone technology to contact their subjects on a day to day basis. Through this, they found that: people’s “*minds wandered frequently*”; “*that people were less happy when their minds were wandering*”, and “*what people were thinking was a better predictor of their happiness than was what they were doing.*” The article concluded: “*In conclusion, a human mind is a wandering mind, and a wandering mind is an unhappy mind. The ability to think about what is not happening is a cognitive achievement that comes at an emotional cost*”.

15. The authors judge that this study supports the notion that mindfulness meditation and focussing on the present moment can be helpful, as a counter to the alternative of an ever-wandering mind. A 2010 meta-analytic study (62) found a positive impact of mindfulness-based therapy on anxiety and mood problems. Without over-interpreting the findings in this study, the authors believe it is further support to the idea that connection to the present moment is helpful for positive mood and wellbeing.

16. Mindfulness meditation offers a way to reconnect through:

- connection between the individual’s mind and body. There is a wealth of evidence for the forms these connections take, and how awareness of them can be helpful;
- connection between people. Again, there is evidence of how beneficial this can be and the damage that can result from isolation;

- connection between people and nature. There is good evidence that exposure to nature helps wellbeing, measured in a variety of ways. The mechanisms underlying this are being studied.

17. These elements of connection contribute to “kincentricity” – which is how we feel when we act through a sense of connection. We argue that this sense of kincentricity is our natural heritage, and part of evolution shared by humans throughout the world. This deep connection to the whole world is a consistent narrative of humans of all ancient cultures – see for example Enrique Salmon’s work on kincentricity (18). In the modern world, we have become ‘un-connected’. In many modern societies the prevailing view that is taught is that we are all separate individuals (this is explored in more depth below). This is a self-centred world view, fixed on one’s own needs and desires, which risks leading to social fragmentation. When we act as though we are unconnected, there is inherently a risk that we can be isolated; feel rejected; ignored or abandoned. This can foster a sense that life is pointless, purposeless and meaningless.

PROBLEM STATEMENT AND RESEARCH QUESTION

18. Many people (the authors included) have noticed that with development and economic growth, people are becoming increasingly disconnected from their bodies, others, and nature. There is strong evidence from various sources indicating that this disconnection is negatively impacting the well-being of the population.

19. Below we examine this hypothesis about disconnection using current literature to support our investigation.

20. Furthermore, we propose that individuals can counteract this disconnection by engaging in practices such as meditation, mindfulness, understanding the messages from their own body, interacting with others, and connecting with nature. This paper also explores the potential benefits of these practices in restoring personal connections and enhancing overall well-being.

METHODS

21. Searches of publicly available literature mainly using Google Scholar. Search terms included: mindfulness; oneness; connection, kincentricity and nature.

22. Inclusion criteria: due to the scattered and limited range of study papers at the intersection of these domains, we could not just include randomised controlled trials and broadened the scope of inclusion to include papers from credible and reliable sources such as government departments and academic institutions of significant standing.

DISCUSSION

Background

23. Among many societies in the modern world, there are reports of high levels of stress and stress related pathologies. We suggest that many of the negative attributes of modern society stem ultimately from disconnection. In these communities, people often live away from their wider family, live in cities among fellow humans who are considered strangers, and encounter numerous acts of aggression – from competitive colleagues at work, impatient car drivers, inconsiderate neighbours, superficial judgements made by others. They may experience indifference – others who genuinely do not care about anyone but themselves. Loneliness can be common anywhere, but particularly in cities, where people may have reduced access to, and feel divorced from nature – from food being packaged in supermarkets, to lack of access to green spaces.

24. Many people live a lot of their lives in artificial surroundings, a commute to work and then several hours in an office where they may face different types of stress. Divorce rates are high, leading to further fragmentation of society. The scope for distractions from any sense of loneliness or dissatisfaction with life is wide ranging, such as alcohol, other drugs, television and social media. Although these have a positive potential for connection, they can act as pure distraction from the here and now. While accepting that in most of our lives there is a lot more complexity and light and shade, and that some people thrive on it, much reporting suggests that there is a significant scope for improvement.

Modern Day Stress

25. There is evidence of stress and unhappiness, or dissatisfaction with life, across much of the world. However, the need to establish common baselines and consistency of definitions of illness and comparable data gathering should be taken into account. In his paper looking at whether depression rates have increased, and if so what might constitute the causes, Brandon Hidaka (32) 2012 wrote in his review of some of the literature: “*To summarize, retrospective studies claim younger cohorts are more likely to develop depression with an earlier age of onset, but the evidence is confounded by recall bias. Longitudinal studies mostly confirm a rising prevalence of depression. In conclusion, available evidence suggests we may indeed be in the midst of an epidemic of depression*”. (Studies considered in this section of the paper were mainly from the latter part of the 20th century and early 21st)

26. We should note that there are some mixed signals about this. Work done by Twenge and others (34) found that anxiety levels increased in the selected US child and student populations between 1952 and 1993. However, when Schumann and Margraf (35) looked at European data for German speaking and British samples, and saw no such increase.

27. There is significant evidence suggesting an increase in stress and anxiety in modern Western society over time. Multiple factors contribute to this trend, including economic changes, social isolation, technology use, and changing societal expectations.

28. Research has shown an increase in mental health issues, including stress and anxiety, among adolescents and young adults in Western countries. A systematic review published in the *Australia/New Zealand Journal of Psychiatry* in 2014²⁰¹⁴⁴⁹ found that anxiety and mood disorders have increased in prevalence among young people in high-income countries over the past 10-20 years (67) A study published in 2008 (68) investigated the changes in adolescent mental health in England over a 25-year period. The authors found a considerable increase in emotional problems, such as anxiety and depression, among teenagers during this time, particularly among girls. And in 2016 a study published in *JAMA Psychiatry* (69) examined trends in the prevalence of major depressive episodes among adolescents and young adults in the United States from 2005 to 2014. The results indicated a significant increase in the prevalence of depressive episodes, especially among young women, suggesting an upward trend in mental health issues, including stress and anxiety.

30. Finally, a systematic review and meta-analysis published in 2016 in the *Canadian Journal of Psychiatry* (70) analyzed 37 studies from various Western countries to explore trends in depression prevalence over time. The authors found an increasing trend in depression rates, particularly among younger populations, which could indicate a rise in stress and anxiety levels as well.

Connection between Mind and Body - Interoception (and Resilience)

31. The first form of connection is that between the individual's mind and body. Much of this is effected through interoception, which is the process / set of processes by which the body lets the mind know what its needs are. Obvious ones include hunger; thirst; need to find warm/cool surroundings; need to urinate. It also signals emotions as well as physical sensations. And there is evidence suggesting that if the individual's mind is well attuned to the signals from the body, there can be advantages involving overall wellbeing. Antonio Damasio has written about the concept of homeostasis. This term was historically used to define the efforts by the body to remain at a steady state internally (such as oxygen and Co2 levels, body temperature) Damasio suggests it could be considered more broadly to encompass feelings and consciousness as another way to help achieve balance and do well overall. (63,54)

32. One example of the advantages of awareness of signals from the body involves coping with adversity, or resilience. We define it as "*Resilience is the capacity to cope with adversity in a way that helps us cope with future adversity*".

33. A study by Hasse et al (27) looked at people they judged to be with low, normal and high resilience. The most obvious differences between individuals/groups was their degree of interoception. In self-reporting, lower resilience correlated with lower interoception. The study also used fMRI recording and found that people with low resilience were less attuned to interoceptive messages, and more resilient people were more effective processing information from certain neural systems at times of stress.

34. A study by Tugade and Fredrickson (29) indicated that highly resilient people use positive emotions to bounce back from negative emotional experiences. And in their literature review (36) Paulus and Stein consider the role of interoception in anxiety and depression. In their overview (Interoception and Mental Health: A Roadmap" (31)) of the first Interoception Summit in 2016, organized by the Laureate Institute for Brain Research, Khalsa et al (31) noted: *"Dysfunction of interoception is increasingly recognized as an important component of different mental health conditions, including anxiety disorders, mood disorders, eating disorders, addictive disorders, and somatic symptom disorders."*

35. The definition of resilience used above, *"Resilience is the capacity to cope with adversity in a way that helps us cope with future adversity"* encapsulates the key observation that resilience helps us cope with future adversity, and that it can be learned. The authors believe that all aspects of resilience are interdependent and support each other. Highly resilient people stay connected to how they feel while experiencing adverse events and learn to regulate their emotions as they do so (for example, (29)). It seems reasonable to say that people considered highly resilient tend to:

- allow themselves to experience full awareness of difficult physical sensations and uncomfortable feelings;
- learn through experience to regulate their responses to those feelings;
- use positive emotions to counterbalance their negative emotions.

Meditation and Interoception

36. Mindfulness meditation slowly facilitates the practitioner to connect to the internal body state, and over time, interoception grows. Lori Hasse et al (26) looked at the neural processing of interoceptive stress and concluded *"Thus, MT {mindfulness training} may serve as a training technique to modulate the brain's response to negative interoceptive stimuli, which may help to improve resilience"*. Antoine Lutz et.al (28) studied people who have extensive experience in meditation practices. The subjects were asked to do a number of different meditations while an electroencephalograph measured the electrical activity of the brain. Overall, with some exceptions, they discovered that the gamma synchrony level of this group of meditators was high. Normally gamma synchrony is achieved at particular positive emotional highlights in a lifetime. This study suggests that the long-term meditators were able to synthesise this experience.

37. There is some significant evidence to lend weight to the idea that allowing our minds to be calm and in touch with our physiology, while retaining connection to the present moment, supports aspects of wellbeing.

Connection Between People

38. It is common experience that warm interpersonal relationships, and a wider sense of belonging (to a group, a community, society) is helpful as a foundation for a fulfilling and satisfying life. However, there is a wealth of data and theorising about just why this is so, and in this paper, we look at some of work done on the questions around why this need for social interaction might exist; what happens when people feel isolated and lonely and what the link between body and mind might be.

Evolution

39. Human beings are among the many animal species considered to be social. In comparison to other species, humans are particularly interdependent and have very complex ways of collaboration over time (24, 40). It is likely that evolution has favoured these traits being continued. This could stem from the need to nurture offspring for a long time which requires close relationships (24, 45, 53) as well as behaviours that do not meet an immediate need for the individual. But essentially there seems to have a realisation that working (and thinking) as a group and being interdependent could bring great benefits to all in terms of meeting day-to-day-needs as well as successfully rearing offspring.

Social Connection and Disconnection

40. The high levels of socialisation among humans give rise to studies of the effects of isolation and loneliness. The sensation of loneliness may have an evolutionary benefit (39, 45) over time, as it tends to motivate people to keep together and connected and seek out others if the individual becomes isolated. But there are individual differences in susceptibility of the sense of loneliness, and a degree to which genetic inheritance plays a role (39, 43, 45). Some people appear to require a lot of social interaction to feel connected; others get a satisfactory level from relatively few interactions. Cacioppo and Patrick (53) wrote *“Those who are highly vulnerable to sensing disconnection can be socially satisfied, and those low in the need for connection can be lonely. The problems arise simply when there is a mismatch between the level of social connection desired and the level the environment provides.”*...and in the same book: *“There are extremes within any population, but on average, at least among young adults, those who feel lonely actually spend no more time alone than do those who feel more connected.* See also 21 (Andrew Huberman podcast on Social Bonding). It is generally accepted that loneliness and social isolation are viewed as separate issues.

41. There is some ‘hard-wiring’ at play in social connection, along with chemical neurotransmitters. A number of brain structures are associated with the state of loneliness (for example 20, 25, 43). Tomova, Wang, Thompson *et al* used functional magnetic resonance imaging (fMRI) with subjects who were isolated or had been fasting, and concluded that *“acute isolation causes social craving, similar to the way fasting causes hunger”* (37). On a similar theme, an article in Science in 2003 by Eisenberger, Lieberman and Williams (23) reported also on an fMRI study looking at social exclusion and physical pain. It concluded: *“This study suggests that social pain is analogous in its neurocognitive function to physical pain, alerting us when we have sustained injury to our social connections, allowing restorative measures to be taken.”*

42. There are also indications that there are neurological correlates of social connection. In his podcast on Social Bonding (21), Andrew Huberman discusses the longstanding literature that demonstrates that aspects of an individual's physiology can change to match that of another person they are with – things such as breathing rate, skin response, pupil dilation and heart rate. A study by Perez *et al* (44) shows that listening to the same story can bring together the heart rates of individuals. The transfer of emotional states from one person to another is also referred to in the paper published in the BMJ by Fowler and Christakis looking at the Framingham Heart Study (42).

43. In his podcast on social bonding, Andrew Huberman (21) suggests “...*shared experience is shared physiology...*”. In the same segment of the podcast, he continues with a consideration of how this shows the importance in a culture of common stories and social gatherings around a common story in binding people together across generations. And in the same podcast he considers some of the evidence at a physiological level of an apparent drive to seek social connection when we feel lonely. This is looked at in some detail in (25).

Impact of Social Isolation and Loneliness

44. There is a considerable amount of evidence on the damaging effects of loneliness on several aspects of human health. (21, 22, 38, 41, 43). There is a correlation between perceived loneliness and risk factors including for cardiovascular disease (41). A meta-analysis by Holt-Lunstad *et al* examined the impact of social isolation and loneliness on health, (72) and the authors also highlighted the importance of addressing social isolation as a major public health issue. A 2022 study by Brandt *et al* (73) states “*Social isolation and discrimination are growing public health concerns associated with poor physical and mental health. They are risk factors for increased morbidity and mortality and reduced quality of life*”

45. There are several studies that suggest a link between social isolation and the increase in mental health issues, including stress and anxiety. In a 2003 review, Cacioppo and Hawkey (71) discussed the relationship between social isolation and health outcomes, particularly focusing on the potential mechanisms that could explain the association between social isolation and increased risk for various mental health issues, including stress and anxiety.

The Positive Connection Between Social Connection and Wellbeing

46. And there is evidence that social connection can help wellbeing. (19, 42, 43) The UK government had a large-scale evidence based review in 2008 called “Five Ways to Wellbeing”, (19) and the conclusions were based around key findings about the importance of social relationships, physical activity, mindfulness/awareness, learning and giving. The Framingham Heart Study (42) that took place over 20 years concluded: “*People’s happiness depends on the happiness of others with whom they are connected. This provides further justification for seeing happiness, like health, as a collective phenomenon*”. The Harvard Study of Adult Development (47) which is a

longitudinal study of men in the US, which started in 1938, has found a strong link between good relationships and happiness: *“The surprising finding is that our relationships and how happy we are in our relationships has a powerful influence on our health,”* (Professor Robert Waldinger, current director of the study).

47. Another longitudinal study is called The Roseto Effect (53). The close-knit community that formed the town of Roseto in the USA was found to have a noticeably low mortality rate from heart disease compared to comparable towns nearby over the period 1955 to 1965. This has been looked at in some depth, and after allowing for other factors, the conclusion is that in that period, high levels of social cohesion among the population was correlated with the low rate of mortality from heart attacks.

48. There seems overwhelming evidence that, for deep-seated reasons, social connection is important for our wellbeing and that loneliness and/or isolation can have detrimental effects.

Mindful Meditation and Connection with Others

49. Mindful meditation can be done in a group setting or alone, and a mix of the two will probably be optimal for many people. The enhanced sense of calmness, and lowered levels of anxiety that can be helped by meditation will help foster a wider sense of connection, including the breaking down of barriers that get in the way of engaging with others. There is some evidence to support the idea that meditation can improve the sense of connectedness too people and nature (64)

Connection With Nature

50. Many people find being out “in nature” is a positive experience and might use descriptions such as refreshing, revitalizing, energizing or calming. By nature, we mean green space, from parks and gardens to forests, shorelines around the sea and lakes, pastures, mountains, that is mainly non-human made areas. And the assumption is typically in good weather (though not necessarily) and that it does not involve risky aspects of nature such as harmful animals, or uncontrollable aspects like extreme weather events.

51. Included in the definition of nature is *homo sapiens* (and the trillions of microbes that inhabit a healthy human’s body). And by extension, artifacts built by humans could be defined as “nature”. However, for the sake of argument, while believing that connection – interoception, human-human and nature – is one interrelated whole, we have broken it down into the three components for our purposes here.

52. There is evidence to support the idea that being in nature can have significant positive and measurable effects. Connection with nature is something intrinsically felt by many people. A study by Maas, de Vries *et al* (55) went beyond self-assessed measures of wellbeing. They found that when looking at assessments made by health professionals, the same beneficial effect of green space was found.

53. The literature has some good examples of reviews that point to the beneficial impact of nature on wellbeing. For example: a systematic review and meta-analysis published in 2021 (56); a systematic review (14) in 2019 and a meta-analysis in 2014 (12). The Mental Health Foundation of the UK highlighted the importance of our relationship with nature in a report in 2021 (13). A longitudinal study published in the BMJ Open (16) found that *“A high exposure to natural environments (green space and gardens) in communities was associated with fewer mental disorders among older people”*.

Forest Bathing

54. There is also a body of evidence around the benefits of “forest bathing”, or Shinrin Yoku. This term comes from the Japanese Ministry of Agriculture, Forestry and Fisheries in 1982 (51). It essentially involves walking in a forest and breathing in the air. Many studies have been undertaken, some measuring physiological responses (50, 51). In 2022 an umbrella review looked at the “Effects of forest bathing (shinrin-yoku) on individual wellbeing”. The study included in its abstract the following: *“Overall, the best available evidence supports the use of forest bathing as a complementary practice for the promotion of psychophysical well-being, whereas evidence for its use as a therapeutic practice for the improvement of organic diseases needs to grow before clear and specific clinical indications can be formulated.”*

55. Enrique Salmon, in his work on kincentric ecology (18) sets out how many indigenous communities take this a step further and see connectedness between themselves and the whole of the natural environment. These beliefs are common across many indigenous peoples who are otherwise not connected. (see section below, “Wider Connection”)

Nature/Wellbeing Causation Yet To Be Demonstrated

56. In considering nature/wellbeing, there are many variables involved, including whether both physical and mental health benefits accrue; what precisely is meant by “nature”, and what are the differences between a walk in the park say, or living and working in close proximity to and in connection with nature. There are also nuances in what is meant by wellbeing and impact on mental health. These are addressed as necessary in the individual studies. But the idea of an overall positive impact seems irrefutable.

57. There are a number of possible explanations as to why connection to nature appears to have a positive impact on wellbeing. For example, Capaldi et al (1) outline three theories in the literature which are: our ancestors being closely connected to nature for survival; as a way of resting from prolonged cognitive attention, and stress reduction. Pearson and Craig (2) consider in particular the restorative aspects of connection with nature, as well as the issue of whether representations (e.g. photos) of nature have an effect on wellbeing. There is further discussion of a possible pathway

between nature and health in the mini-review by Ming Kuo (5) that include physiological/psychological, the environment, behaviours and conditions.

58. The precise nature of the impact of exposure to benign nature on some aspects of health and wellbeing is complex, however for our purposes in this paper, in terms of one of the three pillars of connection, it is reasonable to say that connection with nature can help wellbeing.

Mindful Meditation and Connection to Nature

59. As mentioned above, although this paper looks at connection through the lens of categories and actually separates out interoception, social connection and linking to nature, the themes are as one. It follows logically that when someone is trying to be present through meditation, that to do so while in nature may both facilitate the meditation practice and enhance the sense of connection to nature, the both leading to an improved sense of wellbeing. Schutte and Malouff undertook a meta-analytic investigation (6) and found a significant relationship between mindfulness and connection to nature; a further systematic review and meta-analysis (Djernis et al 8) found there is evidence of positive benefits from nature-based meditation, a finding echoed in a study “The Impact of Mindful Meditation in Nature on Self-Nature Interconnectedness” (4). A study by Richter and Hunecke (7) again found a link between mindfulness and connection to nature. Nisbet, Zelenski and Grandpierre (65) found some evidence that subjects who walked outdoors with mindfulness instruction were more aware of their surroundings, felt a greater connectedness with nature and less negative affect compared to a) outdoor walkers without the mindfulness guidance and b) indoor walkers. They said in their paper’s Abstract that “*However, mindfulness did not produce significantly more positive affect outdoors in nearby nature. Results suggest that mindfulness may enhance some beneficial effects of nature exposure*”.

60. There is a wealth of evidence that nature mitigates stress and anxiety, though there is no causal evidence. But there is a wealth of data all pointing in the same direction, that spending time in nature can have significant positive impacts on wellbeing. And that while clinical guidelines may not currently include forest bathing as a prescribed therapy due to insufficient evidence, numerous studies have demonstrated significant psycho-physiological benefits associated with this practice.

The Wider Connection (Breaking Down Barriers)

Understanding Kincentricity: Humanity’s Natural Worldview

61. Up until the 17th century, humankind universally believed in a life energy that animated all living beings, often referred to as “spirit.” Different cultures and religions around the world had their own stories and interpretations of this singular life force, which acted as a common bond amongst humans.

62. However, with the advent of the 17th century, and the start of a period called the Enlightenment, a different belief system began to take root - materialism. Under this model, humans began to view themselves as individual entities of inanimate matter rather than beings imbued with a spiritual essence. This new worldview ushered in a multitude of differing and often conflicting philosophies, ideologies and perspectives.

63. The Enlightenment deliberations gave rise to a false dichotomy. As the notion of a common bond between all living beings was associated with spirituality, it was often dismissed in what were and are increasingly secular societies. This led to a detachment from our ancestors' innate understanding of our biological connections to all life forms.

64. Despite learning about evolutionary biology in school and understanding that DNA connects all living things, this fundamental truth often fades into the background of our consciousness. Environmental narratives touch upon our shared biology in the context of sustainability, yet it often comes across as a remote scientific fact – for example, structure and function of DNA - rather than a personal truth. Our common bond, or rather familial relationship with all living beings is largely missing from our worldview. When we interact with nature, although we will usually feel connected and at peace, most of us most of the time do not behave as if we are engaging with our extended family. This comes at a cost: engaging with nature is engaging with our extended family; and this brings us to the concept of “kincentricity,” which is the realisation and acceptance of the indisputable truth that all living beings are related.

Kincentricity: Bringing Together Ancient and Modern

65. Kincentricity can form the foundation of our worldview, much like it does for indigenous peoples, without the need for us to adopt any other aspects of their belief systems.

66. In an example of the wheel turning full circle, kincentricity aligns with current scientific paradigms and forms one of the fundamental tenets of evolutionary biology. There is widespread acknowledgement that all living beings could be descended from the same common ancestor, referred to as LUCA (last universal common ancestor – perhaps living some 3.9 billion years ago).

67. To truly embrace kincentricity, we need to integrate the belief of interconnectedness into our consciousness and daily lives. The knowledge of our shared biology is already present within us, but ‘modern’ humans often do not behave as though we are related to all living beings, and as such a part of the family. In a world centred around kincentricity, life is imbued with meaning and purpose. Our mission becomes to connect with and support our extended family of all living beings. We already do this on a smaller scale within our immediate human families.

68. Confining our understanding of “family” to our close human relatives only is not conducive to our happiness. It lays the groundwork for a divisive, polarising, and

destructive worldview. By embracing kincentricity, we can foster a deeper sense of connection, unity, and purpose in our lives.

CONCLUSION

69. In this paper we have aimed to demonstrate the power of connection seen at three levels: i) at the individual level, between mind and body; ii) connection with other people; and iii) connection with nature, (which includes all natural phenomena, “kincentricity”). This is in the light of evidence of evidence that there is stress and unhappiness among people in many parts of the world.

70. The evidence supports arguments that improved interoception can help personal resilience, that reductions in a sense of isolation/loneliness can have a positive impact on many aspects of health. And greater exposure to nature has been shown to have a positive impact on wellbeing.

71. The evidence supports our hypothesis that reconnection, and being more aware of the present moment can help tackle some of the causes of dissatisfaction. And that this is possible in any society, with whatever distractions are beckoning. It is not a zero sum game – reconnection will bring benefits that can sit alongside the current and expected future development of societies. It may be though, that with higher levels of reconnection, demand for certain types of distraction/instant pleasure might reduce

72. The authors propose that moving towards greater connection along the three lines suggested, and our close connection to all living things, will help to lower overall suffering; will allow more people to reduce stress and facilitate the experience of being calm, with less focus on what happened yesterday, what might happen tomorrow.

73. We go further to suggest that mindfulness meditation can help that process considerably, by allowing the individual to move from immersion in their own inner narrative, to being aware of it, and ideally being free of it. The person can then have more energy to listen to the signals from their body; engage more with others and with nature.

FUTURE RESEARCH

74. Future research is needed:

- a. While there is evidence to demonstrate at least a correlation between mindful meditation in nature and stress reduction – causation is yet to be shown;
- b. Mindfulness meditation has clear links to interoception and being more exposed to nature. While social connection is an absolute necessity for wellbeing and overall happiness, it would be useful to consider whether mediation helps in forming social connection.

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