

Chapter 9.1

Resilience & Adaptive Capacity

Death · Symbols of resilience · The cycle of the year · Other resources · Belief is not a placebo · Dependency on reliable information · More on Belief · Vulnerability · Coherence and multiplicity · Physical resilience · Societal resilience · Maslow · Beyond expectations · Generational & epigenetic factors · Viktor Frankl · The hierarchy of being · Transfer of information · Boundaries · Wider issues of relationship · Resilience and connection · The Heart Meridian · Four or five elements? · The Element of Metal · The dance

All shall be well
and all shall be well
and all manner of things shall be well,

for there is a force of Love
moving through the universe
that holds us fast,
and will never let us go.

-- Julian of Norwich

Resilience is a fundamentally important topic, because it resilience that – amongst other things - determines the capacity to stay within the window of normal (Autonomic) adaptation. Or to successfully navigate more extreme situations that take us into emergency adaptive ranges and then to gracefully return back to normal. And it is not that resilience completely prevents overwhelm from happening - though it will occur less frequently and in more extreme circumstances when we are resilient – but that any overwhelm recovers easily and rapidly, and does not easily become normalised. Resilience is an apparently simple principle that in reality has roots in every mental, physical and emotional corner of our being, and the more it is explored, the harder it is to pin down. Like some mythological beast, we would know it if we saw it, but describing its shape without having it there in view is almost impossible. “I know it when I see it” might be the most definitive statement. A visual image of resilience commonly used is the weighted toy in a budgie’s cage, that no matter how it is pushed always returns to vertical. One could say that the inner weight (of resilient capacity) is enough to always reorient us back to our proper uprightness and relationship to the Earth. This Chapter is not really meant to be read outside the context of the rest of the book, as so many other topics contribute to it – the extraordinary resilience of Life described in Chapters 1 & 2, the fundamental principle of Wellness (Chapter 3), and the workings of the ANS (Chapter 7).

Resilience and Death

Of course, the toy can break if knocked too hard, or might only hold together for so many years before falling apart. Resilience does not equal immortality, and part of human psychological resilience is a coming to terms with mortality. We are one of the few animals that can imagine death. Though really – the fact is that we can never imagine death – we can only think that we can imagine it, because something not directly experienced is always to some degree unknowable. Resilience in the face of age and death is not really a terrified “rail, against the dying of the light...” Nevertheless, Thomas’s poem (below) contains a reflection of the inner grit that is common to all living creatures. Rage is a form of anger, and anger is an emotion whose task is to gather all our resources to face the immediate vicissitudes and perils of the external world. However, if one observes animals they do not go around raving or respond with bitterness and regret. Resilience is something that relates directly to the present moment, yet also sustains over extended periods of time – years, decades, a whole lifespan - much more than being a last moment realisation that “death is approaching and I don’t like it”.

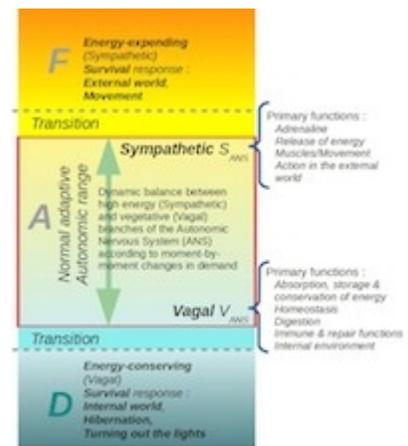


Figure ANS-1: A simple map of Autonomic ranges

Do not go gentle into that good night,
Old age should burn and rave at close of day;
Rage, rage against the dying of the light.

Though wise men at their end know dark is right,
Because their words had forked no lightning they
Do not go gentle into that good night.

Good men, the last wave by, crying how bright
Their frail deeds might have danced in a green bay,
Rage, rage against the dying of the light.

Wild men who caught and sang the sun in flight,
And learn, too late, they grieved it on its way,
Do not go gentle into that good night.

Grave men, near death, who see with blinding sight
Blind eyes could blaze like meteors and be gay,
Rage, rage against the dying of the light.

And you, my father, there on the sad height,
Curse, bless, me now with your fierce tears,
I pray. Do not go gentle into that good night.
Rage, rage against the dying of the light.

-- Dylan Thomas

The Zen principle of living each moment as if it were your last (or even as if it were your first!) is very animal in the way it directs attention to the immediacy and Beauty and Joy of living; and can accommodate the power welling up from the depths of Thomas's poem - without the need to flail and kick in desperation. Somehow Dylan Thomas still inspires because in his railing and refusal of the inevitable he has *also* captured something else more profound and empowering in addition to (and far more precious than) that last minute desperation contained in the poem's more superficial meaning.

Placing Thomas's response to death (and Life) on the PolyVagal map (Chapter 7), it is a fighting-fighting hyperaroused, energy expending state. This does not invalidate it, because ALL response states on that map are valid, and health is the capacity to express all of them equally *as is most optimally appropriate to the circumstances*. But maybe there are other responses also available? The mid Autonomic range is one in which energy usage is sustainable (so does not result in the brittleness that comes from excess immersion in fight-flight), and is mobile (so is functional in and responsive to the world). And the middle of that range further optimises and integrates both of these

capacities, and provides a platform that has the greatest potential for ease of pulsatile response in whichever direction is best. The logic is inescapable. The most resilient long term state we can possibly be in – is the loving curious appreciative grateful relational heart-centred zone that lies dead centre in the Autonomic chart.

Symbols of resilience

Commonly used symbols of resilience come from the living world, such as oak trees (in Europe), and the bamboo in Asia (along with the rat!). The oak's ability to endure for centuries comes partly from its softness and pliability as a living wood. If you've never worked fresh oak, you might be surprised to know that it cuts "like butter", as an old builder once told me. When oak is weathered, it endures in death because it slowly hardens into a leathery iron-like state. Willow is a surprisingly resilient and yet lightweight wood – and is used to make cricket bats because it is able to resist constantly being pounded and pummelled without splitting. This woody resilience comes out of the way in which the grain of willow is interwoven, so each grain is more held by its neighbours. Straight-grained woods such as ash are very strong (because each of the long parallel grains supports and is supported by its neighbour) and resist vibration; but there is a relatively weak bond between each adjacent grain, and so ash wood splits easily. In contrast, willow grains are related to each other more like the fibers on a piece of felt – another very resilient material. Similarly, the interweaving of relationships in societies also brings a resilience that is missing if everyone lives parallel lives.

The cycle of the year

The Rat is a Chinese symbol of perseverance and endurance because of its (Wood-like) ability to eventually reach its goal by relentlessly gnawing. In western astrology this particular flag is carried by the goat (Capricorn), who climbs the highest mountain one step at a time, not caring how long this may take. I was surprised once when I looked at the birth dates of celebrities – successful and well known actors, musicians, etc – to find that a disproportionate number of them were born under Capricorn winter suns. Of course – success is not through sheer good looks and raw talent, but also takes years of determined persistence, perseverance, practice, making contacts, waiting for the right opportunities. A life story that would not be unfamiliar to any mountain goat, or oak tree or bamboo plant, or rat. But more than that, the (Capricornian) midwinter energy of the Earth in the Northern hemisphere is one of expectant optimism. Life has been planted into the soil and it waits in the fertile potential of darkness for the coming

of the sun.

Professional and public acclaim are not the only ways that resilience manifests, but we are as a culture very focussed – unhealthily focussed – on the externalised form. It is clear that attitude is wrong, if only through a recent piece of research showing that facial expression and use of certain patterns of facial muscle is an utterly unreliable measure of emotional state¹. Instead, emotion is a whole-body and contextual phenomenon. Milton Erickson noted that most communication is non-verbal, but in a brain-o-centric and head-o-centric culture it is often mistakenly assumed that it is purely a facial expression of neurological (brain) activity. Of course we instinctively (unconsciously) know that the body is also important, because most people are able to read emotion accurately despite the fact that facial expression *alone* is a very poor indicator. But most people do not consciously, cognitively recognise the other tells that provide information, and so even if questioned hard they actually know better - they automatically think that “it’s all facial expression”.

It is ironic that the largely exclusive focus on the obvious might not fool your brain or body. But it fools the mind, and creates a superficial level of mental understanding that is disconnected from the greater, deeper and more subtle reality that everyone has the potential to be aware of, but which is screened out of consciously experienced reality because of a belief (in this case that “*emotion is a facial expression*”). Similarly, it is unfortunate that the popularised “*you will meet a tall dark stranger*” and “*expect changes to your love life this weekend*” form of astrology has lost all sense of and respect for the powerful archetypes that underlie it, as adopted by Carl Jung. Each astrological sign has its own particular strength and solar purpose that – if it is fully owned and embodied – sustains and gives meaning, which is why Jung’s use of archetypal forms to understand the psyche is so powerful. The turning of the seasons and their expression through Life are less visible in an urban environment, even to the point that there is no longer for most people any way of seeing the stars moving across the night sky. The cycle of the year is not a uniform concrete and tarmac blandness, but is literally a cycle of changing archetypal gesture and potentiality expressed in the seasons, the changing light, the movement of moisture, and the pulsating intent of Life; as can also be seen in the various expressions of leaf, seed, growth, decay and retreat. If resilience is founded in adaptive capacity, and skilful adaptation is dependent on a true recognition of the information that defines a particular moment - then an intimate and somatic knowing of the gesture and meaning of each season in the cycle of the year (and an active *participation* in that potentiality) also contributes to resilience. It is

a form of relational connection – not with *people*, but with the environment and the cycle of the totality of Life, of which we are in reality a very small part.

Today the only things you can enter into relationship with are other humans. Yet the human nervous system still needs the nourishment that it once got from being in reciprocity with all these other shapes of sensitivity and sentience.

Another human being cannot possibly provide all of the outrageously diverse and vital nourishment that we once got from being in relationship with dragonflies and swallowtails and stones and lichen and turtles. It's just not possible.

-- David Abram

Other resources

AA Milne's tale of Winie-the-Pooh is also a story of a yet another kind of resilience more related to compassion and acceptance. Milne suffered badly from PTSD as a result of his experiences in the first world war, which culminated in him being injured during the battle of the Somme in 1916. He suffered from what would now be diagnosed as complex PTSD, and each of the characters that Christopher Robin meets in the wood is an aspect of Milne's own trauma-fragmented personality. There is a deep compassion in the tales of Pooh, Piglet and their friends as they accept and love each other as they are. The inhabitants of Hundred Acre Wood enrich each other's lives in such a way that it is hard not to feel that – were one of them to not have been written into Milne's stories, his readers would somehow be deeply aware of (and disturbed by) its indefinable absence.

Resilience is directly related to resourced-ness, though the two terms are not totally interchangeable. We can think of resilience as operating on a multitude of mutually supportive levels – genetic, biological/physiological, adaptive/reactive, sensory, personal (including spiritual and mental), environmental, relational and societal; and also over different time scales. But the way that resilience works in practice shows how artificial these categories/divisions are. Resilience arises out of the *expression* of resourced-ness, and so is naturally greater if the normal window of Autonomic adaptation or Window of Tolerance (WoT, Chapter 7) is as wide as possible: meaning that there is a two-way relationship between the WoT and resilience.

Time

Resilience is particularly related to reserve capacity - in one sense a measure of how far we are from the bottom of the tank, or how much spare adaptive capacity we can tap into without calling on emergency adaptations; and how quickly the tank of – whatever it is that sustains and feeds resilience, love, connectedness, food, etc. - can be refilled. And resilience is about how many factors that support resilience and adaptive capacity we can do without and still remain adaptively resilient. Further, resilience reflects not just immediately personal resources but also the amount of support that is available to us from our physical and social environment, and resilience is (in reference back to the willow cricket bat) an inexorable by-product of appropriately supportive and nurturing relationship. When considering reserve capacity, perhaps the greatest resource of all is time. With sufficient time, almost anything is possible, and any gap in resources can potentially be filled if that time is well used. Hunter gatherer communities typically spend an average of only a 2 or 3 hours a day looking for food in normal years, and so have a vast resilience / adaptive capacity to tap into should food become scarce or some other survival-critical stressor enter their lives. The “spare” time is spent socialising – i.e. strengthening their familial and societal connections, and so increasing their collective resilience. Recent studies on workplace performance have shown that people are more productive in a 4-day working week than in a 5-day week, presumably because they become more resilient because the week feels more time-rich and spacious. In fact, Microsoft² found that employees in Japan were 40% more productive when working four days compared to working five!

With reduced stress the mind is more focussed, clear, creative, is less demanding of predictable normality (and so is more comfortable with assessing risk), and is more able to simultaneously attend to both the big picture and the detail. This has to some degree been recognised in European working practices by a reduction in weekly hours³. When Benjamin Franklin said “*time is money*”, he might also have said that *money is time*, for money is often used to replace time. Enough money can employ someone else, and can buy in services that are time-hungry. And in a money-dominated society, a lack of money – poverty - has been recognised to be one of the causes of a lack of personal resilience, particularly affecting children – and then passing on generationally. In cultures that do not rub wealth quite so strongly in the face of the poor and in which social structures are stronger, financial poverty does not have such a corrosive effect on the individual. When self-worth is measured externally (in material possessions, clothing etc) rather than being a somatic presence found internally, shame and

hopelessness can get a much stronger foothold.

These archetypes from the natural world (bamboo, etc.) perhaps give a flavour the *capacity to endure* more often than resilience. Endurance is one aspect of resilience – but the rat has to keep on gnawing and enduring until the hoped for fruits of its efforts materialise – which they may never do. And the willow cricket bat endures only until its capacity to endure runs out. Resilience carries a far more springy and at times tigger-ish innate quality. Pooh bear and his friends are resilient in 100 acre wood because each supports the other in their own unique ways; with sometimes that support simply being due to the fact that their very existence adds to and strengthens the sense of companionship and belonging for everyone else. The bamboo shoot is resilient so far as it is not pushed past its breaking point, and the whole bamboo plant is resilient in that it can re-grow even when one stalk has broken - this underlying plant-resilience being dependent on the nourishment available from the soil. Some plants do simply endure until rain falls. The rather blurry distinction between endurance and resilience is typified in the remarkable *Welwitschia mirabilis*, which lives in one of the driest deserts in the world, harvests traces of moisture from the cold morning air, and some specimens of which appear to be over 1000 years old. So to distinguish resilience from endurance it is necessary to invoke a renewal through something else that provides support. That something else is most often external, such as rain or companionship, but it may also come from a more internal sense of connection, or something that one might think of as *hopeful purpose* (see notes on Viktor Frankl below). Hopeful purpose is probably a good description of a the attitude of a plant.

Belief is not a placebo

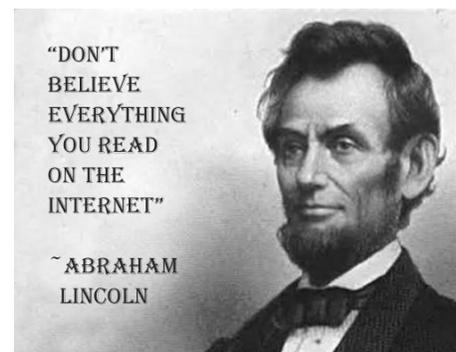
But for human beings, resilience also transcends the purely physical and biological, in that it depends on how much we fundamentally *believe* (on both mental and somatic levels) that we have enough resources to deal with what the world throws at us. A similar thing was pointed out in Chapter 4 (Senses), in that the senses are only available to us so long as we believe we have them. Someone who truly and fully believed they could not hear (that the “hearing” sense did not exist) would be pestered by some strange indefinable disturbance in his head, and would be deaf. Of course, that extreme position of denial is highly unlikely – but there are other less extreme versions that are not so uncommon. Many people believe they are hopeless at learning, when in reality they have been conditioned by various circumstances and influences to disbelieve their own capacity. Somatic belief is profoundly deeper and more meaningful than the way the word “belief” is often applied in everyday speech, and can

only really be unpicked, understood and measured by deep introspection and self-honesty... Resilience is a *somatically congruent* state of mind that expresses (or at least has the capacity to express) through movement (action). An inability to join somatic experience with the movement – through (e.g.) a conditioned belief that the body does not/should not express intrinsic movements of its own – decreases resilience, because only one half of the horse is being ridden. This is just one belief system commonly held in our Western European culture that is seriously at odds with our biological reality.

In common use of language I can “believe” that I can drive a car, or that I have remembered everything that I need to pack in my suitcase, or that the sun will rise again tomorrow morning, or that a little bit of cocaine now and again won't do me any harm, or that a certain pill will cure me, or that everybody is potentially untrustworthy, or that I am (or am not) cared for by a loving God, or that global warming does (or does not) exist. Clearly there are several very different levels of belief here, all being addressed by the same word. In short the English word “Belief” is, like “Love”, widely misunderstood and trivialised by being applied in ways that are both profound and frivolous or meaningless. The meaningless usage devalues the profundity, whilst the implied profundity of the word makes us “believe” (sic) that the meaningless and frivolous usages carry more weight than they actually do. Belief conveys a degree of certainty and conviction that can often merely indicate a strong opinion - which is a rather degraded form of belief, also tied into ego-identity. A belief is something of a statement that “this is who I am” and “this is how the world is” and “this is how I fit into the world”. So if there are too many trivial or peripheral ego-beliefs that have to be defended : *the Earth is round (or flat), Manchester United are the best football team in the world, all politicians are stupid, Elvis is still alive, I am correct in this (whatever) opinion, etc*⁴. - that cause an emotive disruption if they are challenged - this intrinsically reduces resilience. The survival- defence responses and their energy have been tied up in defending something that is not truly survival-critical. The ego is (at least on this level of this kind of belief) rather more expendable than the physical body, though not everyone might realise that fact in the heat of the moment.

Dependency on reliable information

In an information-saturated world, there is a continuous problem of what to believe and what not to believe. We rely on other people for much of our knowledge of the world, and the question is – which of them are reliable sources of information, and which of them are not? One assumes that teachers are truthful, but I had one friend who had to revisit every “fact” she knew and completely start her education from scratch again in her mid 20's



because one of her school teachers had simply made things up if she didn't know the answer. And my experience with information from teachers is that one way or another every one of them simplifies what they teach – either because that is the limit of their knowledge, or because time restrictions require that they only convey an outline. Science “truth” also changes over time, to the extent that cutting edge science today can be the next decade's toilet paper, but nevertheless, these factoids continue to live in textbooks for many more years after their sell-by date and in the memories of people who are unaware that they have been revised. Information is naturally more malleable than we have come to think of it, and this malleability extends out into the natural world. Which is perhaps why animals who are healthy live in a more or less constant state of sensory engagement and curiosity.

And a half-fact stripped of peripheral information can end up so diluted as to be effectively incorrect. As our culture has become more technologically sophisticated and more interconnected, the number of pieces of information that we rely on that are not derived from direct experience has increased exponentially to the point that some people question whether direct experience is even reliable. The question is – since all knowledge about the world ultimately comes from the senses – a measure of how far the head and body/senses have been philosophically disconnected. If you don't trust your own senses, whose do you trust? Misleading information often causes bad decisions, and potentially sets up a belief in how the world is (and how we are in it) that is illusory. There are very few ways to reset that lost calibration to to world's reality in your environment. Either you trust your senses, or you find someone who you trust more than you trust yourself. The science pundits increasingly tell people to not trust their own senses and to trust science instead, not realising that science doesn't account for most day-to-day experiences without being obliterated by the assumptions in a multitude of secondary interpretations. Exegesis has always been a matter of serious debate in mainstream religion.

If all is as it should be, science itself must change its opinion on a regular basis, which creates a difficult metaphysical position, in that absolute knowledge and certainty has become even less tangible than it ever was. Medical science changes its opinion regularly. In my lifetime I have seen Tamoxifen come and go as a cure-all solution to breast cancer , and simple Aspirin rise and fall as a safe way to prevent heart attacks. And have seen so many “this will cure you” diets that the temptation is to dismiss all of them (the opinion of one is almost invariably contrary to all the rest), except that clearly diet does something useful... This shifting best knowledge is de-stabilising, because it is not unlike the environment that we would experience if our prey and our predators were camouflaged. In this case, it is not the big details that are of importance, but the small, subliminal stuff that would be missed were we not so alert. I feel that this now defines how most people now take in information, and is one factor that drives the

emergence of polarised opinions and conspiracy theories. Either they are hypnotised by the big noises, so they cannot see the subtle signals that indicate a deception. Or they are tuned out of the big noises and into the subtle ephemeral nuances – but then cannot hear the more obvious big messages. This societal loss of reliability of information degrades the common means of communication, and results in a loss of resilience because there is no longer cohesion or coherence. It is very similar – interestingly similar to the way that coherence is lost in individuals when their loose coupling is frozen into a fragmentation. One part of the body-mind begins to listen to one set of information, and another has a different set of information.

The way that meaning-perception works is that we see what we expect to see, based on a system of expectation (belief) of how the world is and how it behaves – such as *“the sun rises every morning⁵”*, and *“light usually comes from above, so shadows are usually underneath a solid object⁶”*. This reliance on Gestalts (Chapter 4) has been well exploited by many people for their own gain. The determination of “truth” has always been difficult, but has become particularly difficult in the past decade due to an exponential increase in deliberate obfuscation and a radical expansion of the means by which those lies can be manufactured and distributed – social media, deep fake videos, Photoshopped images. The biological impact of that on whomsoever is exposed to the avalanche of misinformation – is easily underestimated. Every cell of your body relies on accurate information so that it can properly adapt and respond. Every living thing is wholly dependent on the information and a sense of meaning that is properly calibrated with its present environment. Whilst it is true that Life has evolved means to sow misinformation through use of camouflage; the normal expectation of deception is a prey response, and the unravelling of and seeing through deception is a predator response. And an unwillingness to engage with possible deception (looking away rather than towards) is an overwhelmed-prey response. So whichever way one looks at it the sowing of misinformation is biologically triggering - because in order to unravel misinformation (and obfuscation) at the level presented in modern media it is necessary to carry a certain expectation that it is there. And that kind of filtering is usually carried out by parts of the sensory and nervous system oriented to survival in extreme situations.

A simple example of the way that information (or its absence) feeds back into the physiology is the usually mild increase in stress that arises from using computers and smart phones (i.e. staring at computer screens). There are several aspects. First, the sustained short focus puts the muscles of the eyes into a slight hyperarousal – since in our evolutionary history intense stress plus short distance visual focus equated to physically dangerous situations, in which we would expect to fight our way out. Without the stress, the meaning is quite different, for love (or similar) plus short distance eye focus equates to intimacy. As LCD screen users, we know that we are not

in a physically dangerous environment, but the body does not know, and so the recipe of short focal distance + stress + immobility will have a tendency to feed back and increase stress. If we now add online conferencing – something that has become far more prevalent as a result of the coronavirus epidemic – there are personal interactions, but with distorted or missing body language information. The cameras usually only pick up the face and maybe shoulders, so much of the minute detail of body language that would fill in the gaps and tell us motivations and intentions – is missing. Similarly the voice is digitally compressed and missing frequency bands that would also provide information, and the voice may be slightly asynchronous with the visual image. This creates a stress response in the sensory system which tends to induce a mild hyperarousal, as both the eyes and ears attempt to skim off more information from nuances within the reduced information set they have been presented with. If the person using the video conferencing is relaxed, then this potential feedback loop is interrupted. If they already carry hyperarousal in their system then it is easier for this local sensory hyperarousal to feed back more deeply and more extensively.

According to a 19th-century legend, the Truth and the Lie meet one day. The Lie says to the Truth: "It's a marvelous day today!" The Truth looks up to the skies and sighs, for the day was really beautiful. They spend a lot of time together, ultimately arriving beside a well. The Lie tells the Truth: "The water is very nice, let's take a bath together!" The Truth, once again suspicious, tests the water and discovers that it indeed is very nice. They undress and start bathing. Suddenly, the Lie comes out of the water, puts on the clothes of the Truth, and runs away. The furious Truth comes out of the well and runs everywhere to find the Lie and to get her clothes back. The World, seeing the Truth naked, turns its gaze away, with contempt and rage.

The poor Truth returns to the well and disappears forever, hiding therein, its shame. Since then, the Lie travels around the world, dressed as the Truth, satisfying the needs of society, because, the World, in any case, harbors no wish at all to meet the naked Truth.

More on Belief

Be- as a prefix used to convert a noun or adjective into a verb, having a sense of being carried away by something, or to make or cause to be (original meaning is near, next to, close to), as in *be-calm, be-witch, be-little, be-friend, be-loved*.

Lief is related to the modern German *Liebe* – Love, but if someone is *lief* to someone else, they are their obedient servant (the word also has a secondary meaning of willingness).

Thus, *Be-Lief* can on a more profound level relate to giving oneself wholly as a servant to God's Grace and Love; but on a more mundane level can be allowing oneself to be taken over, or made into a puppet. The linguistic moral is that one should be very careful what one believes in. And if belief is not wholehearted it cannot really be called that in the first place – it is a whim, an act of self-deception, an opinion, or an extension of ego-identity.

Resilience can be seriously damaged by belief – a fact very clearly demonstrated by hypochondria, paranoia, pessimism and low self-esteem. The thought “*I can't run any further*” will precipitate physical collapse if it is experienced as a strong belief. And it was a rather more positive belief that allowed Desmond Doss to single-handedly rescue 75 injured soldiers at the battle of Okinawa during the second world war.

In the grey area between belief and opinion, it is common that people discard trust and reliance on their own experience for reliance on someone else's opinion. The science belief – *that scientists always know best, that optical illusions demonstrate the senses are fundamentally unreliable, that “rigorous sceptical enquiry” is the only form of truth, that consciousness resides in the brain (etc.)* – is an extensive set of interconnected beliefs particularly prevalent in Western culture that disempower and sow confusion. There is a dangerous cultural tendency to take up a belief – not because one has seriously considered it or experienced it or tested it – but because adopting that belief brings an alignment with a particular peer group. In short, the adaptive capacity of flexibility is being sacrificed for a rather dubious sense of belonging. The result is often a lack of internal congruency that spills over as powerlessness and rage⁷. It is worth seriously asking oneself – *what is the difference between a belief, an opinion, and a Gestalt (a deep expectation based on how the normal world functions)? And to what extent am I served well by my beliefs? Do I believe in things that are really trivial and that should really be thought of as possibilities, opinions or Gestalts (i.e. comfortably familiar “normality”)?*

However, more open, self-nourishing and optimistic beliefs and convictions can also increase resilience. They bring determination, hope, strength and a deepened sense of connection or community. These more positive beliefs are often spiritual, but not

necessarily so. *“I love my family”, “I am going to get through this”, “I am right”, “I am never alone because God is at my side”*. There is no logically perfect way through the maze of belief. Someone with strong beliefs is always more *immediately* resilient than someone who is uncertain, regardless of what they believe - *provided that those beliefs do not cause self-destructive decisions to be made*. Although it might not matter for the individual what those beliefs are, the effect of them will also be felt by the people they come into contact with; so there are critical knock-on effects into wider society. And the beliefs may carry longer-term secondary implications for the individual. Although we would like to think of ourselves as being open minded, 21st Century culture is fairly intolerant of different beliefs. When security (the sense of social safety) is threatened, difference becomes threatening and anything that reinforces a core common identity becomes “good” - such as clothing, political party, or *“GMOs are good/bad”*. The Coronavirus (Covid-19) pandemic has cut right through this delicately balanced arrangement, with as yet unknown consequences. At time of writing it appears to have split society into two almost irreconcilable camps ... (1) those who are frightened of this pandemic and many of whom feel that measures taken by governments are insufficient, and (2) those who say that the lock-down response has been disproportionate and destructive. I have seen those two positions harden over time, and when it’s all over there will be (at least) two quite distinct realities being lived by two otherwise indistinguishable sections of society. This differently perceived reality is a fragmentation of society, and fragmentation – a loss of wholeness – is a survival-adaptive state rather than a resilient one.

As stated earlier, this closing down to the outside world, to different possibilities (to even maybe being wrong), to other people being able to live their lives by a different yardstick and with different beliefs - creates a temporary increase in resilience for individuals *provided that their belief system is not pushed too far from its centre by a contradictory reality*⁸. The world appears to be safer because anything potentially not safe has been denied or rejected or even destroyed. There are some advantages to hardening belief systems, putting ones head in the sand, persecuting foreigners and imposing uniform behaviour on society. Which – as a bulwark against uncertainty in the face of chaos - works so long as the issue being faced is small enough to fight against, or flimsy enough that it will eventually go away – and provided that the beliefs we resort to are not perpetuating and reinforcing it.

But this comes at a cost. The cost is a hardening of the heart and the mind and a replacement of the willow-like interweaving of society by coach bolts and cheap glue. The current climate crisis is beyond all personal, societal, political, national and cultural scales that we have been used to operating on. So although denying it and resorting to fear-based reactionary politics might feel like the safe thing to do, it only

provides an illusion of increased resilience locally and for a short time. But in the long term and on the bigger scale it induces a brittleness that will create more problems. Shutting down, closing the personal and national borders, and seeking to bolster the lowest common denominator just make the world smaller. It is only by opening the heart and becoming vulnerable that it becomes possible to fully accept the present reality and to be capable of finding new ways to respond. The Coronavirus has in many ways pushed us down a route in which we choose a smaller (and therefore apparently safer) world, and at the same time has forced a level of behavioural and changes that would not have been contemplated a few months previously.

Vulnerability

Blessed are the meek - for they shall inherit the Earth

- Matthew 5.5

For the most part, given that most people's environment hardly changes from day to day, the present situation almost always results from previous behaviour, responses, reactions and habit. If the present situation is unsatisfactory, continuing with the same behaviour patterns that created it in the first place will not do anything other than dig a deeper and deeper hole and end up in some kind of collapse. This recognition of present reality is absolutely necessary on all levels, from biological through to personal, through to societal to cut through this deadening and switched-off expectation of past normality. Without recognition of the specifics and minutiae of each new moment moment, our actions are poorly calibrated to reality, and so are inevitably going to be maladaptive in one way or another. So adaptive capacity and resilience, perhaps paradoxically, are – in the longer term, measured over years, decades, lifetimes - dependent on a certain willingness to remain vulnerable and open to possibilities and difficult realities, and most importantly – to be *curious*.

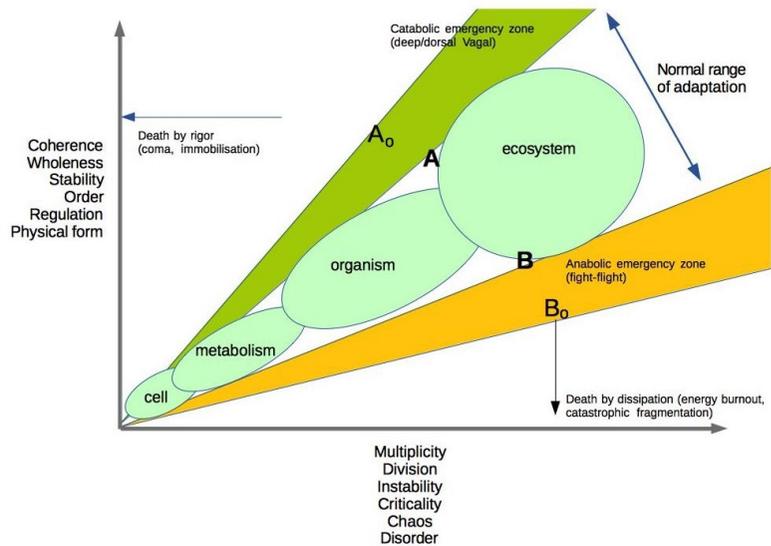
I have personally benefited a lot from Edward de Bono's principle of "Po" (possibly so, possibly not so) - that allows for any "fact" known about the world to have a certain degree of intrinsic uncertainty and looseness, and any "impossibility" to retain a modicum of possibility. This strategy avoids the use of absolutes ("never, always", etc.) and more importantly separates factual beliefs from more important existential beliefs. Getting to this place was not painless. Several years ago I spend many hours in an internet chat room discussing various topics with some very abrasive characters – an experience that I found incredibly useful in recognising how dearly some factoids had become held to my bosom as if my life depended on them. The process of having these petty beliefs ripped away is not pleasant. But it is highly valuable, and clears space to recognise what is truly important, and then gives more possibility to be aware of direct immediate experience. Whatever we observe is filtered through a belief system of how the world is constructed, and so the undressing of more trivial beliefs (so that the

Emperor is truly naked) and assigning them to “Po” can also open the mind to new experience and to being more able to see the world afresh. Ill-considered or unnecessarily absolute beliefs (*my neighbours are ignorant gits, I always trip up when I'm walking* – or maybe as Descartes did – *thought is more beautiful and fundamental than feeling*) are capable of placing severe restrictions on the capacity to adapt to the unexpected turns that Life might take.

Like everything else in the expression of Life, belief is (also) subject to the rules of homeostasis. Factual beliefs (*the sun will rise again tomorrow*) are useful Gestalts that make space for more immediately important things to be considered, and prevent us having to determine the meaning of everything from first principles every time we are confronted by a familiar object or event. There is a *necessity* to retain an expectation of normality, against which we are necessarily more aware of the abnormal because of its contrast. Normality is a set of qualitative meanings and secondary interpretations such as “*the sun rises*” rather than “*facts*” in the way that word is usually understood. Most people know intellectually that it is the Earth that is turning, and the Gestalt is better framed as “each morning I perceive the sun rising in the sky”. But exactly what perception constitutes a “*fact*” in this sense, and what does not, is often very personal and subjective. Such beliefs and expectations are a form of learned normality, and as such should ideally - to maintain resilience in a changing world - be intrinsically re-programmable should normality shift its own goal posts. It might be interesting experience to physically perceive (i.e. through the senses, rather than as an intellectual construct) the Sun to be stationary and the Earth to be rotating under my feet!

Gestalts

These learned expected normalities called “Gestalts” are practical examples of Ukhtomsky's dominant (Chapter 8.2) in action, in the sphere of information rather than physiology. It is not possible to function in a completely new environment. Even babies have certain “knowns” - smell, skin contact, eyes, nipples, vocal tone, etc – that they recognise “instinctively” and do not have to work out meaning from first principles, and the meaning of the world that is constructed during growth to adulthood is founded on those basic Gestalts. As the collected vocabulary of familiar normality becomes imprinted in new Gestalts, more attention can be given to a more limited number of “new's”, which can then be mapped into and around the context of an already determined normal. Learning is cumulative, and requires some consistency in the way that the world behaves in our presence. So Gestalt patterns (archetypes of reliably consistent normality) are of profound importance – even if they are “false”. As a measure of this, one of the most profound disruptors of children's' sense of safety is erratic and unpredictable behaviour in their responsible adults. And even adults exposed to an excessively unpredictable environment can eventually become anxious and neurotic.



Goethe himself cautioned against simply applying known methodologies to solve problems in unknown situations. In his aphorisms he says, *“Inherited formulas frequently repeated, lead to convictions. Utterly dulling the organs of perception”*. This is particularly apt since goal of the phenomenology in the sensing phase is to awaken the organs of perception. To awaken latent organs of perception in the natural world requires observing and observing in local epoche methodology. To awaken latent organs of perception in the soul realm requires that a clear insight into the motives for actions be observed. This is the universal epoche of Husserl. However this need to be further brought into focus by transforming inner images based on memories into living picture imaginations.

Dennis Klocek <https://dennisklocek.com/deep-u-presencing/>

Coherence and multiplicity

Like all other adaptive feedback loops that control our metabolism, the homeostatic balance of learned normality (expectation through to belief) vs openness to the new (curiosity, vulnerability) is necessarily adaptive. If the environment is very “same”, the senses must become far more interested in subtle difference so that this same-ness can be navigated. When I first arrived in the Kalahari when starting a new job, it all looked almost featureless. After a few months, without really trying I discovered that my visual sense had found a richness in subtle shifts in gradient, colour and type of vegetation, smell, sand texture that (to my delight) has never really been lost after I returned to Europe. The converse is also true. If the environment is very rich or even overloaded with information, then we must learn to abstract the information of importance by filtering out whatever is (potentially) unimportant. The process of abstraction – the capacity to identify and focus on just a few salient features – is in humans a primary function of the sensory nervous system and the “higher” functions of the cortex.

Behind the façade of our normal lives eternal destiny is shaping our days and our ways. The awakening of the human spirit is a homecoming. Yet, ironically, our sense of familiarity often mitigates against our homecoming. When we are familiar with something, we lose the energy, edge and excitement of it. Hegel said "*Das Bekannte überhaupts ist darum, weil es bekannt ist, nicht erkannt*," i.e. generally, the familiar, precisely because it is familiar is not known. ... Friendships and relationships suffer immense numbing through the mechanism of familiarisation. We reduce the wildness and mystery of person and landscape to the external familiar image. Yet the familiar is merely a façade. Familiarity enables us to tame, control and ultimately forget the mystery. ... Familiarity is one of the most subtle and pervasive forms of human alienation.

John O'Donohue (Anam Cara)⁹

Whether we have to turn up the dial of sensitivity or turn it down in adapting to the new, the sensory system is naturally capable of self-calibrating - so that we are exposed to the greatest level of richness, variety and potential newness that we can sustain. However, if any of the Gestalts of normality have been consigned to a belief – being changed from “usually” to “always” - then change cannot be accepted, that particular Gestalt is no longer reprogrammable, we have lost the capacity to adapt to that, and a certain part of behaviour becomes brittle and maladaptive – incoherent, because it is no longer coherent with current reality. Denial in any form is in essence a non-adaptive belief system. It is unfortunate that our culture does not encourage people to discriminate with any form of clarity between adaptive Gestalt and belief. The

potentially maladaptive nature of trivial beliefs is in itself a good example of the way in which cognitive activity enters a feedback loop that affects non-cognitive (“automatic” or “more primitive”) information processing and understanding of meaning down to a somatic level. The rigidity that comes with incongruent information or normalities unnecessarily fixated by belief is a very modern cause of loss of personal and social resilience.

In the homeostatic balance of Gestalts/expected normality vs curiosity/newness, if the balance tips a little too far towards Gestalts, then increasingly the tendency is towards being a reactive automaton. Life starts to become meaning-less because the increasing dependence on non-conscious Gestalt-responses reduces the degree of conscious engagement with the world. On the other hand, if the balance tips a little too far towards newness (because everything is unfamiliar), then we have to slow down because the fast reactivity of Gestalts is less available; and at some point there is an increasing tendency to switch off due to overwhelm, which once more throws us back into a Gestalt-driven reactivity. The understanding of meaning being processed by the muscular system via the premotor cortex has an upper limit of 10 new pieces of simple information per second¹⁰. That might seem either a lot, or very little depending on your outlook. But in the case of a complex social environment, a single second might carry far more than 10 new pieces of information. It is not unusual for therapists to experience this information overload when DID/complex PTSD patients flip between many different mental-emotional-somatic(-personality) states in less than a second. This rapid flux of impossibly complex information may leave the therapist with a feeling of mild confusion that can tend to dissociation if it is not fully recognised and acknowledged.

Due to the fact that the meanings contained in both newness and Gestalts are played out via mirror neurons and the premotor cortex, so far as resilience is concerned, the proof of the matter is shown in body language. If the body language is congruent with the thoughts and words, then that congruency demonstrates a coherent mental-emotional-somatic state. Therefore, in the circular manner that so much afflicts the topic of dissociation, somatic belief is negatively affected by fragmentation and dissociation, because the whole body cannot truly be coherent in its response if parts of it “believe” that the world is extremely unsafe and we are already in an overwhelm state. Therefore, fragmentation undermines belief and congruency, and this is one of the ways that it reduces resilience and creates the circumstances for further overwhelm and possibly increased degrees of fragmentation. It is really not (sensibly) possible to cover all of the possible nuances in a descriptive text. A lion can believe wholeheartedly that it is in charge of a situation when it is placing its paw on a mouse. But every time a predator takes down a larger animal, even the strongest predator can experience some caution or uncertainty, because even small animals can have sharp

claws or horns and fight fiercely when cornered. The question is whether that sensible caution remains at a level of adaptive reactivity, or whether it sows seed of doubt so large that it restricts the possible range of physical movement or reduces reaction time – in which case it would reduce resilience and increase potential danger, or make the predator less effective. Fearful horse-riders are far more likely to fall off their horse, and the cowardly lion in “the Wizard of Oz” would of necessity be vegetarian. So adaptive capacity, resourced-ness, and resilience may relate to the very physical attributes of long term health, strength, mobility ... but in rapidly changing situations they are also dependent on mental-emotional states and ANS balance, and so are always to some greater or lesser degree contingent and affected by context.

Physical resilience

Resilience may be very physical. A car can be thought of as being “resilient” if it has a strong waterproof body, a well functioning engine, a full petrol tank, all its various fluids (oil, hydraulic, windscreen wash, tyre pressure) topped up, everything well lubricated, and its lights and windows clean. In this state it can travel many miles without undue stress on its various parts, and adapt to any normal road conditions. One might think of a 4x4 as being more resilient, or an armoured tank as being very resilient. But as the chassis weight increases (and component parts are made more durable but also more heavy), so the demand for fuel also increases, so the total resilience of the vehicle (/organism) is only greater in some circumstances – say in a desert, or a battle, or where the vehicle does not have to move very far, or where there is a particularly hostile and corrosive environment. It is more dependent on being refuelled, so its resilience is far more intimately tied into the regular supply of fuel – to relational factors. This very simple analogy gives some hint at the way in which “external” ecosystems and internal physiology are locked together; and the necessity for evolution to seek parsimony across several scales – always seeking optimum energy efficiency in physical structure and physiology, but also in context of the wider set of relationships to Life and Landscape. Complex living creatures like humans may be fragile, but that fragility is an evolved resilience and adaptive-ness that is unfathomable and always capable of surprising.

... For all those born beneath an angry star
Lest we forget how fragile we are
On and on the rain will fall
Like tears from a star!¹¹...

In fact, the apparent resilience of metal vehicles is illusory. *Every* car is dependent on some kind of supply of energy and lubricant, and as such its resilience is tied into the ecology and distribution of petrol stations. And its wheels and chassis are only capable

of surviving long given a certain smoothness of road, so a resilient car on a modern highway would not last so long if it had to navigate up a rocky hillside. In nature, these demands and their solutions are catered for where the external and internal ecologies meet. Hence the ability of bones to adapt to loading by strengthening themselves only where they are too weak, and dissolving themselves so that they are never too heavy shows that contextual adaptation of the organism to a window of current normality is yet another fundamental aspect of resilience. And the linking of bones into the adrenal system ... since high loading of bone is inevitably tied into high energy demand, it makes sense to link bones to energy metabolism. Mammals have sought increased resilience by becoming more adaptive in their mobility and thermoregulation, balanced against an increased energy demand per unit of body mass (when compared to a crocodile). Energy-efficiency is greater in rich ecosystems¹², and so vibrant, rich and often visually beautiful ecosystems also exhibit greater resiliency. Maybe one part of what we call “beauty” is a subliminal recognition of that underlying vibrancy. Cells within a complex organism – be that neurons in the brain or cells in the pancreas - participate in threshold responses, so it is extraordinarily rare in health for a single cell to initiate a response to a stimulus. Cancer is an example of individual cells “going it alone”. So the variety of cell types and individuation of cells within those types creates a living potential, and they respond as a whole – and it is the wholeness that provided adaptability and resilience. In a parallel manner, ecosystems are resilient through diversity, and the organisms in them respect that. So predators only rarely will take only certain types of prey, but rather will spread their predation across many species. This might take place “naturally” as a result of opportunism, but nevertheless, the rule stands.

Scientific ecologists have studied the structure of food webs in nature and have discovered that in the most resilient webs each species feeds a little on a lot of its prey species whilst feeding strongly on only a few of them.

- Stephan Harding¹³

Genetic resilience depends on having a well stocked set of well honed and conservatively evolved tools that can be used to construct and adapt and reproduce and evolve the organism. Dinosaurs (and therefore birds) are genetically resilient, in a way that allowed them to dominate the world's ecosystems for 200 million years and diversify into a cornucopia of different forms, from the size of a chicken (or even a *bee hummingbird* weighing less than 2 grams) up to an *Argentinosaurus* weighing over 70 tons. Genetic resilience requires a diverse gene pool, so a particular species (that cannot interbreed with any other similar life form) is only as genetically successful as it can maintain an adequate breeding population. Genetic resilience also requires the capacity to adapt and evolve. So moths in industrial England could change their wing

patterns to suit smoke-blackened trees and stones - without that genetic change having a significant negative impact on DNA that controlled critical aspects of their metabolism. Research is gradually revealing that evolutionary genetic resilience is as dependent on the action of viruses in cutting and transporting large sections of DNA between hosts – as it is on the gene pool itself. So once more, resilience is no longer seen to be an individual quality, but one that is intimately connected to the entire wheel of Life. Exactly what has been retained from previous evolutionary stages may only reveal itself in extraordinary circumstances. Whilst there has been a lot of hand wringing and grief that corals might go extinct due to increased ocean acidity, the corals themselves have been adjusting. What is being seen is that stony corals are reverting to forms that they once took up during the last major extinction event 60 million years ago¹⁴. The fossil record tells us that this morphological adjustment took a million or so years to return to the kind of glorious reef system we are familiar with today off the East coast of Australia. But for Life that is just a small hiccup. Unlike corals, the human technologies and infrastructure that have increased ocean acidity have not been repeatedly tested to destruction over hundreds of millions of years, so it is unlikely that they will last the course. Maybe there is something about the resilience of Life that we can learn from?

Metabolic/physiological resilience is about the capacity to minimise energy (and raw material) usage in normal everyday life in a way that ensures good health for the total organism and its various internal entities; and also to be able to gracefully handle extremes that push the metabolism outside that normal window of operation. And to return to health when exposed to conditions such as extreme cold or heat or dehydration or infections that have temporarily offset the homeostatic balance of health. So one example is the way that muscles prime themselves with ATP when relaxed – in a manner rather like a battery being charged up when it is not being used. Resilience requires that several simultaneous stressors (that are “normal” to the everyday environment) can be managed, because it is a rare and memorable day in which we are faced with only one source of stress. Some stressors lie well outside the normal range of experience... It would not be good evolution to maintain a capacity to survive in the vacuum of space or under high radiation exposure, or desiccation (complete dehydration) - because these are not common experiences when living on a planet with a water-abundant atmosphere and a magnetic field. Which poses interesting questions about tardigrades, which can adapt to such extreme conditions.

We are here to awaken from the illusion of separateness
-- Thich Nhat Hanh

With the exception of taking care of ourselves physically – breathing fresh air, exposure to sunshine, clean water, good quality nutrition, and taking appropriate steps to avoid

unnecessary dangers – we cannot directly influence these genetic and metabolic/physiological pools of resilience. However, we are born with a vast innate resilience and adaptive capacity, and can adopt a lifestyle that prevents the depletion of this resilience. Or as the Daoists did, we can “cultivate” practices that increase resilience in various ways. There are feedback loops from the usage of the body-mind-sensory systems and from society as a whole that directly affect deeper metabolic systems. Adaptation is itself an aspect of resilience. Babies and children adapt to almost any external stimulus or situation, learning language, motor skills, societal patterns of thought and how to navigate the peculiarities of their parents personalities. There are ideal situations in which maximum resilience / adaptive capacity is nurtured. And there are less ideal situations in which the child has to adapt in ways (and does adapt – often in highly creative ways) that compromise its future adult resilience and capacity to adapt.

Physical health usually has a strong influence on mental/emotional health, and mental/emotional health has an even greater effect on physical health. And since all of Life is based on relationship (whether that is the relationship between two cells, or between metabolic factors), relationship – both personal and societal – is critical to maintaining health, and is a key factor in maintaining resilience. Spiritual beliefs are a special form of relationship. If there is a high level of resilience and health in these relational factors, then again the more internal (physical, mental, emotional) resilience is also greater. Western culture has focussed on individuation and the development and strengthening of an individual ego, and in the late 20th century this eventually led to the rather odd cultural belief that individuals can exist on their own. Most Hollywood films portray quite simplistic social and interpersonal networks, and almost always present the background environment in a manner similar to a stage set in a theatre, almost sterile and devoid of other life or of interaction with that life. Maybe this is an expression of the perceived reality in urban environments. The *lived* reality is rather different. Almost everyone experiences rain, wind, trees and green spaces, house plants and pets; and whether they are conscious of them or not, these qualitatively increase the friendliness and nourishment of the environment that we live in and bring about greater mental and physical health. These subtle internal shifts cannot easily be conveyed by cinematography in a way that tells a good storyline. But they are the bread and butter of existence.

Societal resilience

Around us, life bursts forth with miracles—a glass of water, a ray of sunshine, a leaf, a caterpillar, a flower, laughter, raindrops. If you live in awareness, it is easy to see miracles everywhere.

Each human being is a multiplicity of miracles. Eyes that see thousands of colors, shapes, and forms; ears that hear a bee flying or a thunderclap; a brain that ponders a speck of dust as easily as the entire cosmos; a heart that beats in rhythm with the heartbeat of all beings.

When we are tired and feel discouraged by life's daily struggles, we may not notice these miracles, but they are always there.

~Thich Nhat Hanh

Resilience in society is about feeling one has a valued place in that society and can in some way contribute. When I travelled in third world countries in the 1980's and 90's I was always touched by the way that children naturally were expected to contribute to the family. I can particularly remember two young tots (of maybe 7 or 8 years old) playing together as they herded 30 sheep up an Andean track at about 4000 metres above sea level. In England we were forced to make child labour illegal because it was so badly abused in the 19th century. But the natural order of things is that children also need to feel included in the household, and one of the best ways that this can be done is for their play to also be contributory to the household. Herding sheep while out playing is not a bad way to achieve this, to everyone's benefit. The direct contribution of sitting behind a desk in school is harder to define, and something else is needed to offset that little alienation. Conversely there is also a powerful need to be physically and emotionally supported by that society that is natural for babies and children, but is also felt strongly by adults. "Home" is where there is a place for us. There is a sense of being welcome and part of that society. The net effect is not only about feeling safe and "at home" (and that the home itself is safe) but that we are valued and respected as an individual. Children gradually grow into this state, first being welcomed into the womb, then into the world of the family, and then into society, until they find a unique place of their own in it. Society is a form of inner-external environment as the greater world can be thought of as a more outer-external environment.

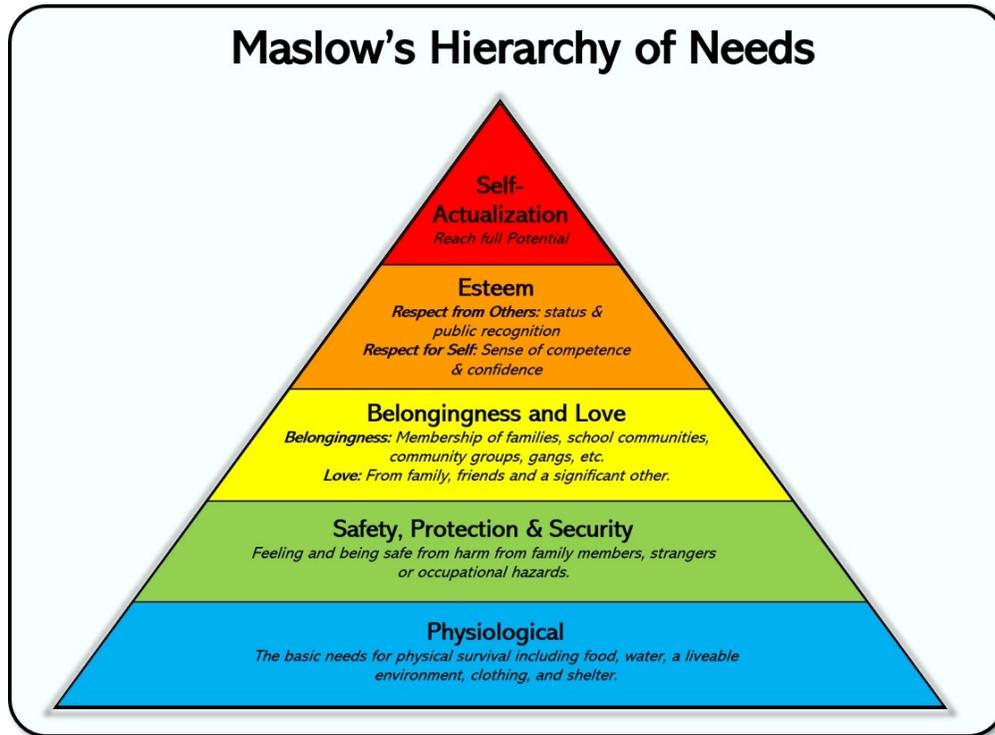
As a living organism, we may crave connection and societal relationship, but we also need those basics – air, water, food, clothing, shelter. So there are many things that can negatively impact this nurturing embedded-ness. Poverty, racial or other forms of discrimination, unemployment, homelessness, dirty air or water or insufficiently nourishing food, inability to move (or inadequate physical activity), very limited social contact, poor self-esteem or "negative" belief systems of various kinds, shame, and any

sense that the lived environment is unsafe, or little availability of contact with a green natural environment ... All of these decrease the degree of experienced support (and/or increase the level of perceived hostility) from home, society, culture or environment and therefore decrease adaptive resilience. Resilience is profoundly affected by the quality of experienced support, connection, safety and abundance (or lack of it) in early years – including the time that we spend in the womb – through the mechanisms of epigenetics. It should be clear from this context that “perception” and “experience” in this sense covers not only cognitive perception, but also biological perception – the experience of the physical organism.

For me, trees have always been the most penetrating preachers. I revere them when they live in tribes and families, in forests and groves. And even more I revere them when they stand alone. They are like lonely persons. Not like hermits who have stolen away out of some weakness, but like great, solitary men, like Beethoven and Nietzsche. In their highest boughs the world rustles, their roots rest in infinity; but they do not lose themselves there, they struggle with all the force of their lives for one thing only: to fulfil themselves according to their own laws, to build up their own form, to represent themselves. Nothing is holier, nothing is more exemplary than a beautiful, strong tree. When a tree is cut down and reveals its naked death-wound to the sun, one can read its whole history in the luminous, inscribed disk of its trunk: in the rings of its years, its scars, all the struggle, all the suffering, all the sickness, all the happiness and prosperity stand truly written, the narrow years and the luxurious years, the attacks withstood, the storms endured. And every young farmboy knows that the hardest and noblest wood has the narrowest rings, that high on the mountains and in continuing danger the most indestructible, the strongest, the ideal trees grow.

— Herman Hesse, *Bäume. Betrachtungen und Gedichte*

Maslow's Hierarchy of Needs



Maslow

On a more personal mental-emotional level, I would define resilience as an ability to maintain curiosity and an open heart and to engage fully with the world in a way that may be sometimes painful for short periods, but that does not result in chronic recoil from life – either mentally or in the more biological defence mechanisms. Children need safety to know that they are safe, but only learn to be aware of their own capacities and strength by exposure to stressors and situations that are unsafe and unsupported. A nurtured but unchallenged nervous system can also end up un-resilient, because of the lack of experience in estimating and/or engaging with risk. In a resilient state, the senses are as engaged as they can be, we are as open to new experiences as is wise - so do not deliberately court unnecessary danger or do that in a totally uncalculated manner. This kind of proactive resilience results in the willingness to explore and a fundamental curiosity about what the world might offer. This is how humans came to spread out across the entire planet. One can clearly see Maslow's hierarchy in this description, and another way of looking at Maslow is to think of it as a set of preconditions that optimise resilience. In this light, it is no longer a hierarchy, but a set of interacting levels of resourcefulness that each are capable of supporting other

levels that are not so well provided. The pyramid is usually thought of as a set of lower levels that provide the means by which the upper levels can be properly supported.

However, *given an initial state of high resilience*, it is possible to remove parts of lower levels one-by-one like a stack of jack straws, and the upper ones will still provide the missing support. Indeed, although the upper levels might seem less important for survival, their supportive effect on resilience increases exponentially the further up the ladder we progress. For instance, in times of famine, a strong sense of belonging and community creates the possibility for joint efforts to find food, a high self-regard supports the fortitude necessary to endure, and a strong spiritual belief can lend a sense of genuine hope and expectation of a good outcome. Once the hierarchy has collapsed to any degree due to overwhelm, then it must be re-built – though not necessarily from the bottom. Any layer missing or inadequately provided for is represents a substantial reduction in resilience. As has been described elsewhere, Maslow's hierarchy is not absolute in its workings - in the way that a physical stack of bricks would be.

As the collective (e.g. societal) resilience increases, so does personal resilience increase. However, a personal resilience unshared and unintegrated - no matter how great - does not substantially increase collective resilience.

It is simply evident that societies need individuals, and individuals need society. The fallacy of the cult of individuality is the assumption that individuals [can] stand alone. Human uniqueness lies in the process of differentiation, not polarisation. It is a principle of embryology that cell differentiation is dependent on location, position and contact with the surrounding cells. It is contact between cells that calls forth differentiation. The cell responds to the needs of a community of cells.

-- Stanley Keleman

Beyond expectations

It's not what happens to you but how you react to it that matters

- Epictetus (Stoic philosopher, 50-135AD)

When Meir Schneider was just five years old he underwent operations that were supposed to correct the blindness that had afflicted him since birth. The operations were botched quite badly, and during one he woke from the anaesthetic just in time to see the surgeon bringing the scalpel towards his eye. If you have ever come back round from general anaesthesia, you'll know that there is a transition period during which you are aware, but unable to move a single muscle. Yes, the normal reaction to hearing this is one of horror. However, that wasn't young Meir's reaction. Remember,

he had been blind since birth – so his autobiography goes on to say “... *and that gave me hope, because I knew that one day I would be able to see.*”

Whilst it is true that “bad stuff” often results in trauma, this should not be taken for granted, and in fact the very idea that difficulty of any kind or degree will inevitably result in trauma or is “traumatic” – for your self or anyone else – is an extremely unhelpful attitude when dealing directly with that person. If *the potential for resilience* is assumed, then it is present and is always more available. There are many ways to explain this phenomenon, all of which can be badly misconstrued and twisted into an even more dangerous “stiff upper lip” attitude, withdrawal of compassion, or dismissal and invalidation (being unable to *recognise*) of real trauma. So yes – it is important that we provide a safe and nurturing environment for children so far as is possible. And yes – saying “pull yourself together” in most circumstances is incredibly unhelpful – though may be necessary if danger is still present.

On the one hand, there is a universal rule that goes something like (there are many slightly different versions) “***whatever we focus on gets bigger***”. This is certainly true for the sensory system, and for many other things, such as survival-based Gestalts, for Love, and for an awareness of support, strength and safety. So emphasising the traumatic nature of a situation or assuming traumatisation often makes the problem bigger than it need be. The route back out of trauma is a recognition of sufficient safety, and if someone (including yourself) is telling you how bad it is/was in a way that goes beyond simple recognition, then the result is that the trauma is magnified. This is a delicate line, and perfection might not be an easy target to hit. Insufficient recognition by the self arises from dissociation and tends to perpetuate traumatic dissociation. Insufficient recognition from others *can be experienced as* a withdrawal of support, and the sense of safety is therefore also reduced. The point about Meir Schneider’s “... *and that gave me hope...*” is that one cannot make it up. It was 100% genuine, congruent, immediate, and arose from deep inside him. There is no faking it. The whole body-mind reaction to any event wells up from a profound depth of soul that is immune to platitude or deception. It can be caught and either amplified or interrupted by more cognitive processes but these always come second. I have seen this kind of resilience in newborn babies – where some appear to be able to throw off the most “traumatic” of births and still come out victorious and fully engaged with life, whereas others have less trust in Life and in themselves, and have less capacity to draw on the support available from their parents.

Generational & epigenetic factors

"Wake up with a winged heart and give thanks for another day of loving."

-- Khalil Gibran

The way that trauma and stress have generational knock-on effects has been highlighted by recent advances in epigenetics. For instance, we now know that sperm is modified during its brief storage in the epididymis^{15,16} so that it transfers characteristics related to the current levels of safety (or danger) in the environment. And it has long been recognised in body psychotherapy that even memories can be transferred through the egg. The fertilised egg that you grew out of started as a division of cells in your mother when she was only three months old in her mother's (i.e. your grandmother's) womb. And it is not uncommon for the particular mental-emotional conditions that existed then to be a large part of waking experience two generations down the line. This is not so much a genetic transfer, but literally a transfer of mental-emotional experience that often feels real (and may dominate somebody's life), but which may be completely released within a few minutes, given a sufficiently deep recognition of where it has come from. And the mental-emotional environment that the child develops in (in the womb) and grows up in also imprints, with the strongest imprint happening earlier. Pre-birth experiences, particularly experiences of the mother, are felt intimately by the developing embryo because this mental-emotional field bathes its psychic space and creates a biochemical and neurological milieu within which it is immersed and cannot escape. In many ways the sense of self-identity of the embryo and baby is tied to the mother, and babies do not have a well developed appreciation that they are no longer inside the mother's body until about 6 to 9 months of age. Therefore they are intimately plugged into the mental-emotional state of their mother, to a slightly lesser extent their father, and of the whole household, and experience these emotional atmospheres as if they were their own. Babies need a stable household as part of their sense of the world being safe-enough. Michel Odent documented¹⁷ the evidence that a split in the marriage/partnership sometime in the few months before and after birth is a substantially increases the likelihood that child will suffer from addictive behaviours or other mental health difficulties when they reach adulthood. I regularly see parents (especially mothers) feeling guilt when they hear this kind of information. And this may explain some of Odent's other observations – that many of the various stressors that he describes having a negative effect on the development of a resilient adult identity could be ameliorated by changing medical (obstetric) birthing procedures to make them more



natural. The evidence was available for decades before Odent wrote his book, but changes were always quietly sidelined or ignored. So maybe there is a collective guilt. I have also heard these facts being used as a means to blame the parents. Both the guilt-shame and the blame-shame responses are actually closer to the main problem... in that our culture has become so nuclear and isolating, and free in its use of shame and blame - that individuals often feel inadequate and insufficiently supported for the huge task of parenthood. I regularly experience new mothers in my clinic who are in shock, because the physical reality of childbirth and childrearing has turned their previously virtual world upside down, like a hurricane might smash through a small ramshackle tin hut.

I am not alone in having observed over 25 years practicing bodywork that a far larger proportion of our population that one would think (well over 50%) are negatively impacted by trauma passed down in families through many generations and by the unsupported overwhelm of their parents. Indeed, when one parent leaves a relationship, by far the greatest fundamental cause is that they are already dissociated, overwhelmed, and are unable to cope with the responsibilities of relationship and parenthood. But what is particularly interesting is that – not all children are affected in by these potential insults to their sense of safety, regardless of the circumstances of their conception, gestation and birth. Life is fundamentally resilient, and sometimes thrives and blossoms despite the seed falling on difficult ground. Artists throughout the centuries in many cultures have celebrated trees that have grown roots in improbable places – perched on bare rocks and clinging to sea cliffs. These images remind us of our own inner resilience and bamboo-like capacity to be shaken but not stirred by insurmountable and uncontrollable forces.

When he was 40, the renowned Bohemian novelist and short story writer Franz Kafka (1883-1924), who never married and had no children, was strolling through Steglitz Park in Berlin, when he chanced upon a young girl crying her eyes out because she had lost her favorite doll. She and Kafka looked for the doll without success. Kafka told her to meet him there the next day and they would look again.

The next day, when they still had not found the doll, Kafka gave the girl a letter "written" by the doll that said, "Please do not cry. I have gone on a trip to see the world. I'm going to write to you about my adventures."

Thus began a story that continued to the end of Kafka's life.

When they would meet, Kafka read aloud his carefully composed letters of adventures and conversations about the beloved doll, which the girl found enchanting. Finally, Kafka read her a letter of the story that brought the doll back to Berlin, and he then gave her a doll he had purchased. "This does not look at all like my doll," she said. Kafka handed her another letter that explained, "My trips, they have changed me." The girl hugged the new

doll and took it home with her.

A year later, Kafka died.

Many years later, the now grown-up girl found a letter tucked into an unnoticed crevice in the doll. The tiny letter, signed by Kafka, said, "Everything you love is very likely to be lost, but in the end, love will return in a different way."

Viktor Frankl

Everything can be taken from a man but one thing: the last of the human freedoms – to choose one's attitude in any given set of circumstances, to choose one's own way.

- Viktor Frankl

Probably the world's greatest expert on endurance, who therefore also has important things to say about resilience, was **Viktor Frankl** (1905-1997) – who was a practicing neurologist and psychiatrist in 1920's and 30's Austria. He had started to write a book with the title "*two times two make four, even if a paranoid patient says it*", before being caught up as a Jewish person in the Nazi holocaust. The book title itself is interesting, showing that he already recognised that truth and falsity, along with wellness and sickness are universally understood. Deep down, we *know (Know)* truth when we meet it, but have been confused so much by the various body/mind myths in our culture that this universal Knowing is rarely recognised.

Frankl was deported to the Theresienstadt ghetto in Czechoslovakia in 1942, and then moved to Auschwitz concentration camp on 19th October 1944. He survived, and returned to continue his medical and psychology practice. "Man's search for meaning"¹⁸ was written in just a few weeks after he was released from Auschwitz. Frankl's experience is worth reading in full, but it can be twitterised into a few basic points. He considered that his capacity to live came from a sense of meaning – of having a meaningful life - and that in turn came from purposeful work, love, courage in the face of difficulty, and was further supported by an enduring sense of humour and dignity. All this was founded on a deep spiritual belief, and there are several ways that one can interpret that – a belief in Life itself, a belief in a fundamentally loving God, or a belief that goodness can be found wherever one looks (with the proviso that there is also evil); and Frankl notes that good and bad people could be equally found in both Auschwitz's inmates and guards.

Love goes very far beyond the physical person of the beloved. It finds its deepest meaning in his spiritual being, his inner self. Whether or not he is actually present, whether or not he is still alive at all, ceases somehow to be of importance.

He saw people who lost their sense of meaning crumble and die. The ones who lived

could see outside their own diminishing world – even if the limit of that extended vision was love or compassion for the person standing next to them.

What was really needed was a fundamental change in our attitude toward life. We had to learn ourselves and, furthermore, we had to teach the despairing men, that it did not really matter what we expected from life, but rather what life expected from us. We needed to stop asking about the meaning of life, and instead to think of ourselves as those who were being questioned by life – daily and hourly. Our answer must consist, not in talk and meditation, but in right action and in right conduct. Life ultimately means taking the responsibility to find the right answer to its problems and to fulfill the tasks which it constantly sets for each individual ...

“Life” does not mean something vague, but something very real and concrete, just as life’s tasks are also very real and concrete. They form man’s destiny, which is different and unique for each individual. No man and no destiny can be compared with any other man or any other destiny ...

Ultimately, man should not ask what the meaning of his life is, but rather he must recognize that it is he who is asked. In a word, each man is questioned by life; and he can only answer to life by answering for his own life; to life he can only respond by being responsible. Thus, logotherapy sees in responsibility the very essence of human existence ...

Love is the only way to grasp another human being in the innermost core of his personality. No one can become fully aware of the very essence of another human being unless he loves him. By his love he is enabled to see the essential traits and features in the beloved person; and even more, he sees that which is potential in him, which is not yet actualized but yet ought to be actualized. Furthermore, by his love, the loving person enables the beloved person to actualize these potentialities. By making him aware of what he can be and of what he should become, he makes these potentialities come true.

So ultimately, the resilience that took Frankl through one of the most brutal experiences anyone can survive was a recognition of the healing power of Love. It was Love that sustained him, Love that often brought out the best in other people, and their Love in turn reflected back to re-nourish the Lov-er. Like the internal reflections of a well cut diamond can express the light that enters it, Love reflects backwards and forwards, embracing everyone in its light.

It is interesting comparing Frankl's account with the list of life circumstances that tended to prevent the development of PTSD in people who were near “ground zero” during the 9/11 attacks on the World Trade Centre. They :

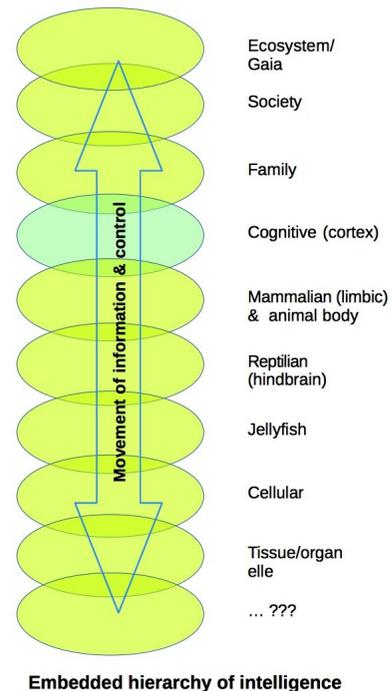
- lived in pleasant green areas (and so had some kind of ready everyday connection to the natural world)

- had solid, supportive, loving families, friendly neighbours and supportive work colleagues
- had regular jobs to which they returned fairly quickly

A sense of belonging and support and sharing of love between family members, friends, and colleagues – or in PolyVagal terms one might say *plenty of positive socialisation and co-regulation*. And some positive contribution to society through their work, a recognisable rhythm of normality, and their time taken up with some constructive occupation. It would seem that the basic ingredients that can be used to bake the cake of resilience are fairly universal.

The hierarchy of being

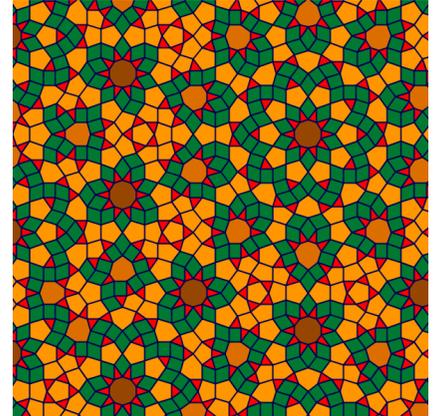
The previous discussion on reliability of information might have seemed odd in the context of resilience... but Life is fundamentally relational and the basis for relation is communication of information. The conscious, cognitive human sits within a web of interconnection. I have visually depicted this (right) as a hierarchy, and a hierarchical stack is the most commonly used device to communicate the relational order that exists. It is, however, not the only method. The Flower of Life (Chapter 8.3) and Penrose tiling (below) or similar *Holacratic* structures – as found e.g. in Islamic architecture - show more fully how non-linear relationship can be at many simultaneous scales and organisational potentials at the same time. In pentagonal tiling, relationships can arise at many scales, with these being visible or not depending on how one colours the individual elements¹⁹.



We like to think that control passes from top to bottom, because the boss always knows best and the brain is in charge; but in Life, both information and control flow across and in between many organisational scales. That does not mean that “we” (i.e. the conscious cognitive mind) cannot be in charge, but that we that control is not so absolute as we would like to think. Control is more subtle than that found in a set of mechanical levers. A company's ethos reflects that of its directors because their actions and directives reflect their personal and collective ethos. This can be made more concrete in a mission statement, but the nuance not contained in any statement of intent always transmits – and so it is just not possible for a company to be incongruent

with its directors attitude – but it is possible for it to be incongruent with its formal stated code of ethics. The controlling influence of the directors is subject to their need to respond to real events, so information flows up – information needed to exercise control, and information saying – something outside your control has happened... And information flows down – company policy, directives, subtle tells as to the directors attitude. If that information is hijacked or made unreliable or blocked, then some new arrangement and order will inevitably form, but it will not usually be a very happy one.

Similarly information does not just flow in Life from one level to another or irrevocably on one direction. The ecosystem has a microbiome and virome that is like a living sea we swim in – and inevitably this affects the body's internal ecosystem, which in turn affects the immune system and mental-emotional processes. Maybe there is a holographic subatomic gestalt that simultaneously informs and consists of every level? Whatever the arrangement, the organisation of process and energy flow between different scales and functional parts are information-dependent. So the entire structure organises itself according to the ease with which information moves between various levels, thus informing other levels as to how they might best be in relationship – whether that is as part of the food chain, or as a member of family, or as an object of beauty – or many other possibilities.



There is a kindness that dwells deep down in things; it presides everywhere, often in the places we least expect. The world can be harsh and negative, but if we remain generous and patient, kindness inevitably reveals itself. Something deep in the human soul seems to depend on the presence of kindness; something instinctive in us expects it, and once we sense it we are able to trust and open ourselves.

John O'Donohue²⁰

Transfer of information

If we come back to the human being, the internal organisation has (just like an ecosystem) a certain intelligence that is not only dependent on the conscious, cognitive will. And similarly, a collection of cells (such as a muscle or segment of the liver) might organise itself according to a balance between the demands of the whole organism and its own particular needs; but those priorities can change, subtly or substantially, to the point that one “level” or organisational grouping ceases to pay quite so much attention to another part. There are always local survival requirements – a free flow of blood and nutrient – and more global requirements that are somewhat abstract to those cells and tissues. Since meaning is abstracted into a more symbolic form when it is communicated within various processes in a living organism, and the various parts

have their own intrinsic survival agenda that is to a degree independent of the whole organism, communication, flow of information (propagation of signals that allow coordination between different parts, and the transmission of whole-organism “directives” through acts of will to whatever processes and anatomical organs need to respond) is what maintains a pseudo-wholeness of the organism.

But any loss of flow of information does not mean that the whole organism then fails. Taking figure 1, there may be a situation in which the conscious mind is overwhelmed, and can not deal with what is in front of it. One could say that the fuses blew. Along with the overwhelm comes a loss of capacity to respond adequately – precisely because the ability to respond adequately itself has been overwhelmed. But the whole organism does not just give up at this point and collapse. Instead the next layers of organisation down take over. I don't think it is anthropomorphising the situation to say that – if the conscious mind is overwhelmed - the mammalian reflexes take over and say “well, human part can't deal with this – we have to step up to the plate now so that we all survive”. And if the mammalian (limbic) part is overwhelmed, the reptilian part (hindbrain) does the same. And if that is overwhelmed, then if there is still the possibility for life (there is still a flow of blood, and there is still oxygen and nutrients available) certain parts will continue function – such as the way the digestive tract continues to function in a coma despite not being controlled by the brain any longer.

When control is passed downwards in this way due to overwhelm several questions arise, such as...

- How is the integrity of the body maintained?
- To what extent can the lower parts integrate their activity with the meaning of the external world (since understanding meaning is – in humans - the job of the cognitive mind)?
- How does control by a one level of organisation - taken during an emergency - pass back from the temporary level to its original? (One assumes that there is a sequence from higher to lower and back to higher, but maybe there are also always exceptions to these general rules?)
- And in terms of the subject of this book – how does all of this relate to dissociation?

This all has to be placed into a 21st century western context to make sense. What we see is the effect of two world wars, which absorbed a lot of societal and personal adaptive capacity. The response to them appeared to be resilient – but in effect what was being seen was as much a depletion of resilience as a rallying of resources. These wars were punctuated by a great financial depression, and followed by a cold war with the threat of nuclear annihilation, and after the cold war a lukewarm war continued by proxy in various corners of the world, particularly in the Middle East. Furthermore, the

structural changes in society (e.g. the “nuclear family”) that followed the industrial revolution, the rise of much easier personal transport and the gradual dominance of many supply chains a few large corporations led to a general reduction in the quality of support experienced by individuals in society. An economy less dependent on local circulation of resources is one that depletes local resources. This multidimensional qualitative loss of support through community and society reduces resilience and makes dissociation more common. Dissociation is in effect a loss or degradation of communication in the hierarchy of the biological and social human being. And in the first decades of the 21st century that has come full circle as the personal degraded communication has been projected out into society and resulted in a society-wide degrading of communication. In 2020, we see many societies split in ways that make it difficult to foresee any good or easy resolution. And the deliberate spread of misinformation has become normal. The only time we are fed deliberately false information by nature is in the use of camouflage, and so another open question is – what instinctive response is triggered when we are presented with deliberate deception?

In a world that runs on information, it is disturbing that – not only is information skewed because of different viewpoints – but it has become commonplace that it is deliberately altered. Faced with this lack of reliability of external sources of information, the temptation is to decide how the world is in advance and then disregard all information that contradicts those assumptions. This is the easy way out of an information crisis. This is also the internal process that arises in dissociated trauma. Lower (non-cognitive) levels of the human organism have less ability to determine nuance, and so tend more and more towards black-and-white interpretations and an expectation of danger. External behaviours such as climate change or holocaust denial and the rise of politicians who clearly lie so that they will be elected is a reflection of an endemically disturbed inner processing of information. External (societal) incoherence is a reflection of a loss internal (embodied) coherence. People who unconsciously or semi-consciously lie to themselves are far less capable of knowing when they are lied to. In fact, when they are told the truth it may feel so uncomfortable as to be unpalatable.

It is not the strongest of the species that survives, nor the most intelligent that survives. It is the one that is most adaptable to change.

Charles Darwin

Boundaries

Dissociative parts of the personality' grabbed the headlines, but my inability to set boundaries was the silent assassin destroying me from the inside. The powerlessness of trauma had left me without a sense of autonomy. For too long I had mindlessly enacted the relational templates of my upbringing, unable to choose when to say yes and when to say no, and enmeshed in a destructive morass of compulsive care-giving alongside chronic self-neglect. I said yes to everyone else, and no to myself. Other people mattered; I did not. And so, breakdown.

from Carolyn Spring's blog post: <https://www.carolynspring.com/blog/boundaries>

The fundamentals of boundaries have already been discussed in Chapter 3.1. Boundaries serve several functions – they repel or resist invasion (an active form of safety) and they contain (another, more passive form of safety). And they adapt so that there is an appropriate transfer of food, air, information, Love (etc) according to the situation and needs. The physical boundaries tend to be fairly obvious, though not necessarily as simple as they might appear at first glance. For instance, the skin acts as a boundary. But in order to do so effectively, it grows gardens of bacteria within the dermis – i.e. within the tissues of the physical body - that have an antibiotic effect against many classes of bacteria. So when the skin is healthy, e-coli can only survive on it for a few minutes. However, these natural epidermal colonies have no effect on bacteria that thrive on dead meat such as streptococcus. If 18th century hospitals had been run by gardeners with equally dirty hands, mortality rates would have been much lower, and we might not have come to realise the importance of hand washing quite so easily. As it was, they were run by doctors who spent a lot of time dissecting corpses, and who were therefore exposed to bacteria for which the skin is not antibacterial. Similarly, whilst it used to be thought that cell boundaries were a continuous bilipid layer, in reality the bilipids are penetrated by large areas of protein that is mobile, and can coil densely or unravel itself to regulate cell permeability.

It is evident from the discussion so far that many forms of resilience become part of a Russian doll of nested containments and interconnecting membranes. Right from the very beginning we are contained – by the nurse cells in the ovary, the *zona pellucida* and accompanying cells of the zygote, by the extra sperm (who, when one of their number has been chosen by the egg, the rest accompany her and rotate her through the fallopian tube), by the walls of the womb, by the blastocyst/placenta, by the amniotic sac and its contained fluid, by the mothers womb and body, by the family and home, and by the society we emerge into. As we come out, our own skin and muscle takes up some of these functions, but others are still in place. When Life initially divides so that it may grow an individual, there is no need for attention to basic survival (the

bottom rung of Maslow's hierarchy) because our physical resource is provided by our parents. Similarly they provide rung two – a safe environment, and rung three – a welcoming family unit which provides a sense of belonging. So the higher the quality of these containers available in early life, the easier it is to feel safe in the world. In fact, the early developmental period from preconception to two or three years, and then through into early teens is where we learn to embody resilience.

Resilience is not about having everything all of the time, but is about the right support being available very early. Given early experiences of safety, we know what safety feels like, and can then find it again. Given early experiences of supportive relationship, we know what that feels like, and can then find it again. Given early experiences of being loved unconditionally, we have a sense of self-worth and of the possibility of being loved, and can therefore also become vulnerable and open to love again. Given early experiences of being contained and bounded, we know what appropriate boundaries feel like, and therefore can maintain them. And given that fundamental grounding in feeling safe, supported, protected, bounded, loved, there remains through our whole lives a somatic “home” to which there are internally plotted pathways along which we can walk to return home. This – for a relational and socialising animal that has a ventral vagal nerve – is the core basis for resourced-ness and resilience, and almost everything else related to resilience is a secondary consequence of this ground.

Our whole organism orients itself in these early years to the perceived level of safety and support or threat and lack. There are also layers of adaptive resilience (and both organic and “human” intelligence) that underpin the relational resilience described above. These should not be dismissed by saying that resilience is only possible given a strong relational basis. For there are many examples of people in the world who exhibit resourcefulness and resilience despite having been deprived of all of the relational foundations described above. Life is creative and adaptive. Children are “expressions of life’s longing for itself” - so the child adapts by inventively making the very best of what is available. However, a metabolism and brain that has adapted to threat and scarcity is fundamentally less adapt-ive than one that has adapted to support and safety. It has already specialised itself to a specific hostile environment. This makes for good biological sense and is an epigenetic change, a change in how the whole organism is primed to express its genetic capacities. But it does not make sense if it occurs within a society - if that society is capable of doing better.

If everything progresses ideally, a child that is very confident will then learn easily that it can physically separate for a short time from its parents and they will still be there later; and that confidence in safety then converts into resilience in adulthood. So (for example) the simple game of peek-a-boo, where the eyes are covered and then revealed is a safe way to begin to explore the possibility that support might go away

and then come back. It is a small risk. In the end, we are learning how to feel safe *enough (or in control enough)* in situations which are not (or which may be safe but do not feel) fully safe. We are mapping internal pathways to feelings of insecurity and loss of control so that we can traverse them with relative comfort and know how to retrace our steps back to a sense of security and once more feel that we do have sufficient control. It's pretty much like moving into a new neighbourhood and learning how to go to the shops and back without getting lost.

Each state of safety/non-safety is a somatic feeling - and familiarity with those feelings and their transitions allows them to be gracefully navigated. This learning of internal experiential pathways from safety to risk/danger and then back to safety is a critical aspect of resilience. It allows future danger and even overwhelm to occur and yet – we know our way home – back to an *internal* home of feeling that safety has returned. The prerequisite for this learning and for its future usefulness is a basic sense of safety in the lived environment – in the body, the thoughts, the physical environment, and most importantly in the relational environment of family, friends and spiritual beliefs.

I thought the earth remembered me,
she took me back so tenderly,
arranging her dark skirts, her pockets
full of lichens and seeds.
I slept as never before, a stone on the river bed,
nothing between me and the white fire of the stars
but my thoughts, and they floated light as moths
among the branches of the perfect trees.
All night I heard the small kingdoms
breathing around me, the insects,
and the birds who do their work in the darkness.
All night I rose and fell, as if in water,
grappling with a luminous doom. By morning
I had vanished at least a dozen times
into something better.

- Mary Oliver

When boundaries have been overwhelmed and overridden (as in the quotation from Carolyn Spring above) they do not reset to a healthy self-regulated state until it is safe to do so. Safety is not a simple matter, particularly when the boundary has been overridden or overwhelmed and a consequential reactive-survival response pattern adopted at a very early age. The capacity for children to adapt creatively to the most appalling of situations is itself a form of resilience, but it comes at a heavy cost because

those adaptations are very situation-specific. As they are retained through into teenage years and adulthood they cease to be the best or most efficient response. Considering the depth at which these survival adaptations are held and play out, it is extraordinary that some people manage to throw them off or have normal lives despite everything. But this extra-ordinariness should not be a source of shame for the many who cannot effect such a mighty resurgence - because the shift is not a trivial one, and there is usually insufficient help of the right kind for this metamorphosis to happen. Nevertheless, people make do, Life makes the best tat it can of every situation.

Wider issues of relationship

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 feelings 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. Nobody is able to achieve this completely, but the striving for such achievement is in itself a part of the liberation and a foundation for inner security.

- Albert Einstein

Individual resilience also requires that s/he is embedded in the socio-economic ecosystem. Work, friends, geographic and social home all provide support, context, and a degree of certainty. Hobbes described the delicate relationship between people and state that has existed in hierarchical cultures. The state is another layer of skin, providing safety from internal threat through a police and justice system, and against external threat through a standing army and by diplomacy. If the state is too weak, then its people are exposed to violence; if it is too strong, then the state itself becomes the source of violence. So the social structure that we live in is itself a form of boundary. Free Trade policies aim to remove the regulation on trade of goods, but this really kicks against the way that biology works, and societies are a scaled-up organism. For trading systems to thrive and prosper and be adaptive they must inevitably operate under the same rules that operate in an ecosystem, and have a fractally distributed set of quasi-circular relationships – rather than a linearly networked hierarchical one.

Currency is also subject to ecosystem rules, and in all large trading blocks that have adopted a common currency unit (e.g. Europe, the USA, China, India) we see regional variations in poverty and wealth as a consequence. Wherever there is poverty people always revert to a more ecological form of trade – by leaning who they can trust and operating a social system based on debt²¹ – a small more user-friendly version of the

international banking system... Paper currency issued by the Bank of England acknowledges that debt is its basis by stating “I promise to pay the bearer the sum of ...” Currency working to ecosystem rules would be much more local, would not generally be storable or transferrable in ledgers except in specific circumstances, would have far more local cycles of wealth transfer and interdependency (instead of being dominated by large corporations such as Microsoft, Amazon or Google) and would see the debtor to be as valuable as (or even more valuable than) the lender. The debt of a tree to its supporting mycorrhizae is paid in full when its leaves fall to the Earth, but even before then the two organisms live in a creative symbiosis, exchanging sap and nitrogen, that has withstood the test of several hundred million years. This is not a one-way transaction – it is a cycle of Life. But at the present moment in human history we are seeing the end result of centralisation of wealth and toxification of debt, in an economical system that is inherently un-ecological and therefore is inimical to all ecologies. It's not sustainable. It is certainly not resilient. This lack of resilience and sustainability at a macro-level affects everyone lower on the “food chain”. The ecological inefficiency of macro-economics knocks down the chain to negatively affect personal resilience. As individuals, most of us can do very little about how those external structures are organised – so some personal adaptive capacity must be taken up by the need to adapt to a human society that is not playing by biological/ecosystem rules. As discussed above, if we start as an individual with a firm resilient foundation, Maslow's hierarchy can be bypassed. But there are many ways in which Western socio-economic culture does not adequately support individuals if they begin life without a full tank of resilience and adaptive capacity – or if that adaptive capacity gets knocked by various accumulated insults to the body-mind-spirit.

Viktor Frankl noted that²² – regardless of how people perceive belief, in the end belief can either be wholehearted and unconditional, or it is not belief at all, and if anyone should look inside themselves “*with utmost sincerity and honesty*” they will know how much they do believe – or not.

To paraphrase what La Rochefoucauld once remarked with regard to the effect that separation has on love, one might say that just as the small fire is extinguished by the storm while a large fire is enhanced by it – likewise a weak faith is weakened by predicaments and catastrophies whereas a strong faith is strengthened by them.

Love and Belief are, like laughter, not things that can be genuinely experienced or expressed on-demand. Having personally explored both Love and Belief for some time, I can honestly say that they have profound depths – more profound than one can imagined at any point on the journey into them by looking back at past experiences.

One of the reasons I began writing this book is that four realisations converged namely (i) that a deepened experience of resilience is the key to undoing dissociation, and with that is the key to mental and physical wellbeing, (ii) Love and Belief are the foundations of resilience, (iii) it is dissociation – an incapacity to access the deepest aspects of being human – that forms the “veil” between waking experience and Love, and (iv) the Gratitude on which Belief is founded is actually a “colour” in the emotional spectrum that we call Love. Some movement or unveiling or strengthening of any part of this chain leads to further deepening everywhere else, and this is a lifetime’s work. If you read that list and thought “yes – I can do all of that – so what?”, then you are largely experiencing what I would call the veil, not the thing that it covers. The thing about the universal principle and presence of Love is that – whomsoever loves it is be-loved, and through that Love will be led further towards that which beckons. Which brings us to Eudaimonia :

***Eudaimonia** (Greek: εὐδαιμονία), is a Greek word commonly translated as happiness or welfare; however, "human flourishing or prosperity" and "blessedness" have been proposed as more accurate translations.*

Perhaps we should ask why Frankl chose to call his book “Man’s search for Meaning”? What is so potent about *meaning* that it should be the central focus of his experiences in Auschwitz – or indeed that he (and many others before and since) have attempted to come to terms with or to explain or reconcile major events in their life by finding a sense of meaning? Perhaps one small facet of this question can be seen in the way that placebos work. Although placebo is often dismissed as a belief – perhaps a fundamentally mistaken one, that happens to work in someone’s favour despite all the common sense that science can throw at it - there are other ways to frame its action. Moerman and Jonas (2002)²³ pointed out that placebos by definition cannot of themselves be a cause the “Placebo Effect”. Instead, the act (or process) of belief is extremely powerful. Belief is a (the) template through which we understand and construct meaning, and it is “man’s search for meaning” that results in the placebo effect. As shown in previous chapters, the mechanisms by which meaning is interpreted by the human organism are not just cortical and conscious, but tied into the deepest recesses of the primitive parts of the brain. The effects of so-called placebo are to put the physiology and biochemistry of the body into a state as if there had been a real input, so ...

Placebo analgesia can elicit the production of endogenous opiates. Analgesia elicited with an injection of saline solution can be reversed with the opiate antagonist naloxone and enhanced with the opiate agonist proglumide²⁴.

As Wim Hof²⁵ has demonstrated by re-framing the meaning of cold to be one of empowerment, and Bruce Lipton²⁶ has demonstrated through medical research – that

meaning and its associated belief goes very deep. So deep that it passes beyond the mental level of ideas, having an impact on the organic homeostatic balancing act, and even into the functioning of cells.

Resilience and connection

In nature we never see anything isolated, but everything in connection with something else which is before it, beside it, under it and over it.

- Johann Wolfgang von Goethe

There are also non-physical means of connection to the external world – the proxemic sense (body space, Chapter 3) and the empathic heart. These non-physical forms of contact are far more important than is usually recognised, are profoundly affected by overwhelm, and can be a major contributor to the experience of either safety / control or overwhelm. Although virtually invisible, they too are a form of gate or tap whose degree of open-ness / closed-ness must be adjusted and adaptive. They must be open in order to allow human contact and contact with the greater natural environment, and yet must also regulate that according to need and safety and capacity to be connected. If they are left wide open all the time, this causes a huge drain in energy, and may lead to uncontrollable transcendent experiences in a way that is often unhealthy and debilitating. If they are closed, social interactions become cardboard-like or sterile, or pathological, and there is little sense of the sacred.

Although in one sense the empathic Heart and proxemic space are two quite distinct systems, they feed back into each other and are highly interdependent. For ease of description I will separate them out, but the descriptions will inevitably be interwoven.

Healthy boundaries aren't walls or barbed wire fences. They are gates, portals that we selectively open when it is safe and life-enhancing to do so. Sometimes we do have to wall others off - to heal, to get a taste of what it feels like to be protected after an abundance of suffering - but eventually we come into a sacred balance. Here, we make conscious decisions as to when to open, when to close. I think of it as the art of selective attachment. Rather than responding from a patterned place that is too open or too closed, we assess each situation on its own merits. We keep the gate closed when it is unsafe to open it. We unlatch the gate if there is a healthy basis for connection. Healthy boundaries are situation-specific, evolving and clarifying as we grow. We sift connections through an intelligently discerning filter, only opening the gate on those experiences and individuals that enhance our sacred true-path.

-- Jeff Brown (Grounded Spirituality)

Proxemic space is – as its name suggests - more about the management of the space

immediately round the body; but there are repercussions to that internally – both psychologically and through the armouring tissue (connective tissue and muscle), and autonomic balance. This is a two-way street ... changes in autonomic balance have a direct effect on proxemic space. Proxemic space is also a zone in which the sensory aerials are activated. The sensory activity in and focus on the space the in the two or three metres of space immediately surrounding the body is a direct reflection of the sense of danger or threat being felt both consciously and by the more reactive elements of the primitive survival-alarm system.

The empathic Heart is the harder of the two to change in any kind of direct intervention, and is more strongly related to emotional and physiological state. It is harder to define (not just by me – all writers on the subject of the Heart have been forced to resort to analogy and mysticism, and it is essentially ungraspable except through experience), and yet is central to the capacity to be a fully individuated human being and to have stable spiritual experiences. The Christian Church²⁷ and all branches of Buddhism have heart-centred forms of prayer/meditation in their tradition. My personal spiritual practice has ended up (with no particular deliberate or conscious choice of direction) returning to the Heart over the past 30 years, to the point that I have to accept that it is central to everything that is truly important.

The Heart Meridian

The simplest structured description I know of the Heart (as it relates to how we navigate relationships and interpersonal boundaries) is contained in Traditional Chinese Medicine (TCM). The acupuncture meridians include one Heart meridian and one Pericardium (or “Heart Protector”) meridian. Just as Western medicine did up to the beginning of the 19th century, Traditional Chinese Medicine (TCM) considers mental problems – trauma, distress, hysteria, etc – to be caused by or to cause various dysregulations of the Heart and Pericardium. Being a description of a natural process, TCM meridian and five-element theory is always a two-way street. It is a mistake to think of the heart (or any other anatomical term used as a label for an acupuncture meridian) to be directly correlated with the anatomical organ as defined in western medicine. Although the Chinese were aware of the general features of internal anatomy (the Yin organs are solid – such as the Heart, Liver and Kidney and the Yang organs are hollow, such as the bladder and Large and Small Intestines) they did not dissect dead bodies in an attempt to understand living ones in the way that gained popularity in Western medicine; but rather preferred to observe the processes of Life and understand them in the context of recurring archetypal relationships found



throughout nature. There are inevitably some correlations to anatomical organs, but the meridians were originally conceived as vessels containing a balanced flow of energy divided between Yin and Yang principles, expressing in a cycle of five elements (5-Wood, 5-Fire, 5-Earth, 5-Metal, 5-Water); plus two major “extraordinary” meridians that circulate energy round the sagittal line of the body. Fire is the expansive force of Life that also requires a correct balance of the four other elements to be healthy and stable; and the Heart is a Yin (receptive) 5-Fire organ. This can be understood experientially by noting that as the heart opens, it connects us inside to whatever it touches outside (i.e. it is Yin/receptive). And as it does that, the accompanying somatic sensation is that the heart itself is expanding like a warm cotton-wool mist out into the space beyond the body (the expansion of 5-Fire).

The function of the heart (心, xīn) in TCM is thought of as that of the Emperor of the body.

The heart is the ruler of the five organ networks. It commands the movements of the four extremities, it circulates the qi and the blood, it roams the realms of the material and the immaterial, and it is in tune with the gateways of every action. Therefore, a desire to to govern the flow of energy on earth without possessing a heart would be like aspiring to tune gongs and drums without ears, or like trying to read a piece of written literature without eyes.

- Contemplations by the Huainan Masters (Huainanzi) , ca. 110 B.C

So the TCM Heart has some correlation with will, particularly the way that conscious will translates into physical movement. However this is not a hard “wilful” will, but more related to “following one’s passion”. The Heart is also seen as the most important organ of perception – allowing the energetic relationships of the natural world to be experienced, just as one would use the eyes to read a book. My personal experience over several decades is that as my Heart has gradually opened and become stronger, my sense of rhythm has improved (so music and drumming became far more natural and effortless) and I have gained some capacity to perceive the natural world as a living intelligent many-in-one being.

The Heart physically circulates blood and “Qi” - or “energy”, and blood follows energy just as energy follows blood. There is some correlation here with blood as a means to transport the chemical basis of energy - oxygen and sugar. But the Heart also does something more, being involved in the movement of a deeper level of Qi “energy” (whatever that might mean) that in some circumstances allows people (such as Daoist masters or Shaolin monks) who “cultivate” it to perform feats with their body that appear to be superhuman. Having observed and directly experienced some of these, I don’t doubt at all that “something” the Chinese called “Qi” exists, and its phenomenology defies any attempt to fit it into the usual understanding of physics.

The Heart is also traditionally called the “keeper of the gate of the tongue”, and embryologically²⁸ the physical heart first develops just below the tongue and then moves into its final position lower in the thorax as the embryo develops into a more human form. The Heart controls facial expression – i.e. it is the seat of emotion. It is only very recently even in the West that the seat of the mind was placed in the brain, and every ancient civilisation considered the Heart to be directly related to what we would now call **consciousness**. With this more traditional view came the recognition that thought and emotion along with the sensory integration of body/sensation are all “mind”. A Daoist practitioner would consider the isolation of body from mind to be extremely irrational(!), and if not impossible, then deeply inadvisable.

The heart is the emperor of the human body. Its subordinate officers are in charge of the nine orifices and their related functions. As long as the heart remains on its rightful path, the nine orifices will follow along and function properly. If the heart's desires become abundant, however, the eyes will lose their sense of colour, and the ears will lose their sense of sound. Thus it is said: “Keep your heart empty-this is the art of the heart through which the orifices can be mastered.”

Deviation above will necessarily cause malfunction below. Do not race your heart like a horse, or you will exhaust its energy. Do not fly your heart like a bird, or you will injure its wings. Never frantically move things around just for the sake of seeing what will happen. If you move things around you dislocate them from their proper place. If you will be calm and patient, everything will come to you by itself.

The Dao is never far away, yet it may be hard to reach. It is within every one of us, yet it may be hard to grasp. If we stay clear of desires, the Shen will enter its home. If we sweep away all impurities, the Shen will stay with us. Human beings all crave intelligence and wisdom, but rarely do we try to understand what the source of their existence is. Alas, intelligence, intelligence-even if you jump over the ocean, it will not just sit there waiting for you! The seeker will be limping behind the one who is without desires. The sage does not seek anything, and thus naturally achieves the state of vacuous understanding [ultimate knowledge apart from fixed concepts].²⁹

From the Daoist classic, Guanzi, prior to 200 B.C.

Here we have a few more hints and important relationships. “As long as the heart remains on its rightful path, the nine orifices will follow along and function properly” indicates the central role of the heart in regulating communication with the “outside” (i.e. extra-corporeal) world, since the “nine orifices” are the (2) eyes, (2) ears, (1) mouth, (2) nostrils, (1) anus and (1) ureter, and their proper functioning ensures a proper balance of accumulation/absorption and dissipation/elimination.

“If the heart's desires become abundant, however, the eyes will lose their sense of colour, and the ears will lose their sense of sound...” It is common for meditators and people who engage in spiritual practices in general to find at some point that sounds suddenly appear clearer and colours brighter. This is a very interesting experience. It demonstrates the way that dissociation (in this case a mild numbing of the senses) is essentially invisible until it lifts. And that dissociation (and its reversal) quickly normalises so that it is impossible to imagine experiencing anything different - until one actually (i) has that experience and (ii) recognises it. The *“heart's desires”* refers to an over-identification with the material, which is itself a form of mild dissociation; and when neurotic desires for love or security or distraction are discarded, the eye begins to see clearly and the ears hear the intention of what is being spoken. Babies of a month old or less can understand the content of simple sentences if they are given enough time (5 or 10 seconds) to process the information. One could assume that they learned language in the womb, but it could be simply that their heart is not cluttered with unfulfilled desires. The Chinese character for “learn” is more literally translated as “to take into the heart”.

“Thus it is said: “Keep your heart empty-this is the art of the heart through which the orifices can be mastered...” is not a million miles from the passage in Matthew 18:2-5

He called a little child to him, and placed the child among them. And he said: “Truly I tell you, unless you change and become like little children, you will never enter the kingdom of heaven. Therefore, whoever takes the lowly position of this child is the greatest in the kingdom of heaven. And whoever welcomes one such child in my name welcomes me.”

The *Guanzi* continues :

“Do not fly your heart like a bird, or you will injure its wings. Never frantically move things around just for the sake of seeing what will happen. If you move things around you dislocate them from their proper place. If you will be calm and patient, everything will come to you by itself...” is really important, and I feel much misunderstood. *“The Dao is never far away, yet it may be hard to reach. It is within every one of us, yet it may be hard to grasp. If we stay clear of desires, the Shen will enter its home. If we sweep away all impurities, the Shen will stay with us...”*

All of this passage refers to the fact that the Heart cannot be forced and still be expected to function empathically. In our forceful and wilful culture there is always temptation to force the heart open, partly because people crave the enhanced awareness that comes with the open heart (called *“siddhis”* in the Hindu tradition). Or because they do not like to think of themselves as having a closed (or only partly open) heart. The damage that results from these hasty actions and inappropriate use of will and forced manipulation of the more subtle fields around the body – can be severe and

quite difficult to undo. Once one has learned how to wilfully, forcefully manipulate the openness of the heart to what it “should” be, then it sometimes becomes very difficult to know how *not* to apply that wilful force – the means becomes automatic and non-conscious, and so inaccessible, and one can only stop doing something that one is fully conscious of. If the Shen (mind/spirit – a relatively non physical, light, fast-moving aspect of consciousness) is cultivated non-forcefully, then it settles back into its home. Any by virtue of this compassionate use of mind the Heart and the mind settle into a state of expansive, spacious and numinous peace. A non-anchored Shen is another aspect of dissociation, and will be re-visited in later Chapters. Relating this again to the Christian tradition, one can see very strong parallels with the experiences of St Theresa of Avila:

Let nothing disturb you,
Let nothing frighten you,
All things are passing away:
God never changes.
Patience obtains all things.
Whoever has God lacks nothing;
God alone suffices.

The regulation of boundaries is carried out by several mechanisms, most of which are not usually conscious. In TCM the heart is protected specifically by a dedicated organ – the Pericardium (or “Heart Protector”), a second Yin fire organ that surrounds the Yin fire heart.

Polarities

The Yang organs are hollow (intestines, gall bladder, etc), whereas the Yin organs are solid (heart, spleen, Liver etc), reflecting the more ephemeral and reactive nature of the Yang and the deeper more juicy and sustaining nature of the Yin. But the Yin/Yang system is a set of relative (as opposed to absolute) polarities, with anything more external being Yang relative to anything more internal. As with all systems of polarity, Yin and Yang contain and balance each other. So the Yin Metal organ of the Lungs is higher (more Yang) and as a Yin organ it is fitting that it should *take in* (Yin) air, air being pneuma, Prana or Heavenly (Yang) energy. On the other hand, the Yang metal organ of the Large Intestine is lower (more Yin) and likewise it is fitting that it should expel (Yang) waste back to the Earth (Yin). Metal is a particularly important element from our perspective, because one of its functions is that of a boundary or interface. The Yin lungs interface with (Yang) Heaven/Air, and the Yang Large Intestine interfaces with the (Yin) Earth, and the Metal-natured skin interfaces with the whole world in a way that shifts its balance point between between Yang (armouring, repulsive, separating) and Yin (softness, embracing, meeting, connecting).

Polarities are very different from the usual western view of opposites. Opposites usually contradict each other and often end up in conflict. But polarities are usually complementary. One would not exist without the other, and their interplay is hugely creative – indeed, there are many esoteric descriptions of Creation that ascribe the formation of everything in existence to the infinitely fertile dance of polarities.

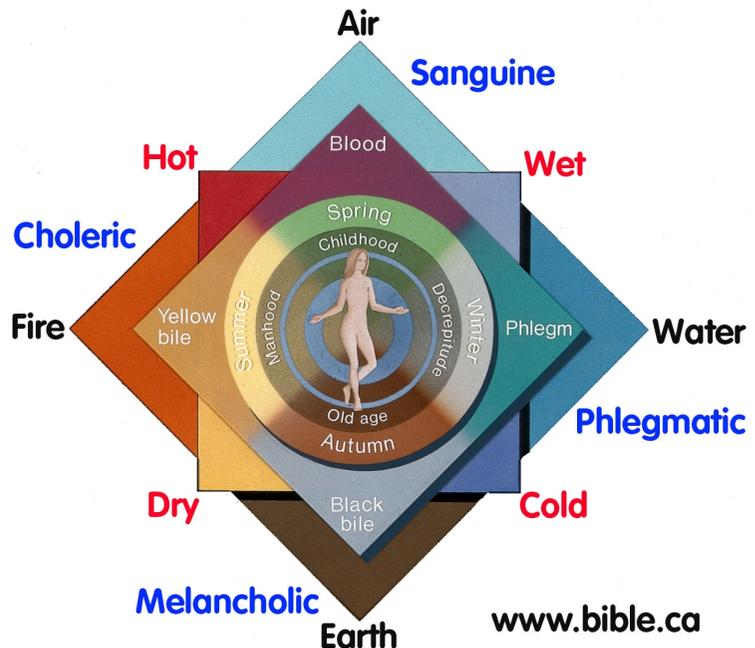
In the beginning was the One
Then came the Two
Then came the Three
Then came the ten thousand things
(adapted from) Lao Tzu

Polarity is in turn an emanation of a more fundamental force that underlies everything, and if we are to stay for now with Chinese terminology, this is called the *Dao*. The *Dao* is the primaeval, fundamental ordering force of the cosmos – we could equally have used “Zero” or “Infinity” instead of *Dao*, because whatever This is, it is beyond our comprehension and beyond the capacity of words to describe. *Neti Neti* – “Not this, not this” is how it is described in the Upanishads.

The *Dao/Zero* has also been called Chaos. We usually think of chaos as being destructive, but the Chaos described by these early creation myths is one that is fecund and pregnant with potential... “*Heaven and earth were in chaos like a chicken's egg.*”³⁰ In ancient Hawaii, the original stuff of Creation *He Kumulipo* was darkness – again, not the darkness of night, but something that when compared to our existence can only be described as a non-existence; yet it contains the potential of everything. However the original One is envisioned - and who are we to think we can Know this kind of thing in detail? Intrinsic to its essence is an ordering force that is Health, creates harmony in Nature, and is Wisdom. The physical laws of the universe we have wrested from nature (and on which we base our technology) are incomplete ways of describing aspects of how that Order works in a very physical manner. We see this Order all around us, but it remains indescribable except in the small aspects of its detail that so fascinated Goethe. The unfurling of leaves in spring, the presence of Life in a beetle, the play of sunlight on the upper atmosphere – producing auroras and ozone, the ripples and eddies in a stream, the structure and texture of a piece of rock. These are all expressions of that Order, and the dance of polarities is the most fundamental (and original) expression of that Order. Wellness – and its offspring, resilience – are a measure of the proper relationship of polarity and of the capacity of those polarities to express (i.e. to move and shift rather than stagnating).

The Yin/Yang arrangement has already been introduced using slightly different language when describing the behaviour of Proxemic space; in that it is a direct expression of the fundamental polarity of attraction/merging vs repulsion/separation. The physical experience of the proxemic boundary is – when its is strong - like entering a zone of slightly over-pressurised Air. A very similar experience can be found by starting with the hand held about half a metre away from the bud growing on the end of a tree branch in spring, and then bringing the hand gently closer until it comes into contact with a soft, springy, expansive and repulsive field. This is the external expression of life energy of the bud through the Air element, and its soliton-like form was described by Steiner and demonstrated by Lawrence Edwards (Chapter 8.2). External repulsive “pressurised air” Qi is also cultivated in Chinese martial arts. It can be employed to sense the local space so that one is aware of movements and presences even if they are not in the field of vision; and can also be strengthened to the extent that it can exert a powerful repulsive force at some distance from the physical body, and some great Chinese martial artists were famous for being able to repulse people (push them away strongly) without even needing to touch them. However, most people do not deliberately cultivate this kind of effect, and therefore have conscious control over it. When there is no conscious control, then it cannot be switched off. Therefore an over-expanded Qi or proxemic field usually results in energetic and physical depletion, and is often accompanied by many problems affecting interpersonal relationships – boundaries being either too porous allowing in abusive relationships, or too strong so that they prevent relationships even starting in the first place. Note the previous warning that wilful conscious control is not necessarily a good thing when it comes to heart energy. In my professional experience, the deliberate development of wilful control of Heart Qi as the only remedy for this kind of over-expanded heart Qi is the wrong remedy, and will almost always lead to much worse problems.

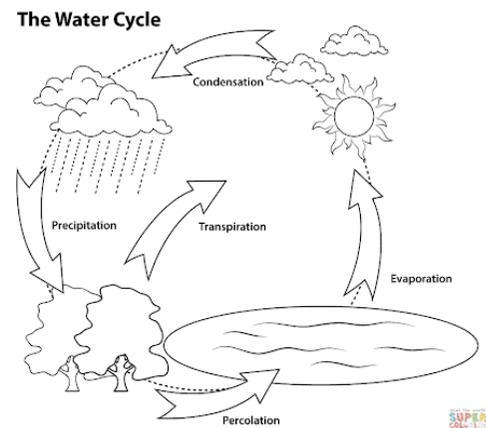
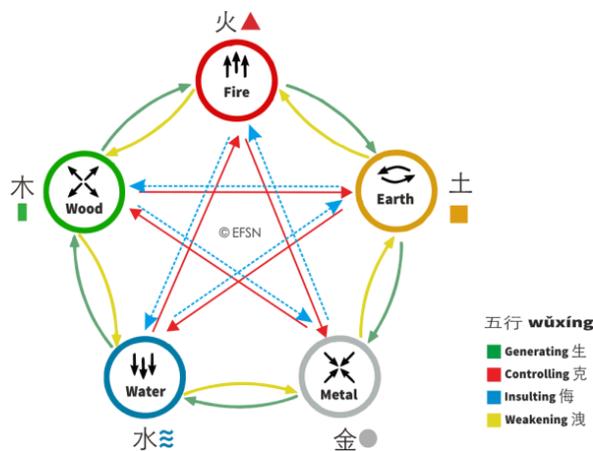
**The Four Humors of Hippocratic Medicine
450 BC - 1858 AD
Melancholy Blood (depression)**



Four or five elements?

The four elements and humours familiar in Western herbal, medical (“Hippocratic”) and alchemic traditions cannot be directly related to the five Chinese elements³¹. So, for instance, the Heart is usually described in the Western tradition as an organ of 4-Air, because it embodies the qualities of communication. But the expansive nature of the 5-Fire Heart process is also one of communication, going out into the world with an emotion of quiet Joy and Gratitude. The regulation of 4-Air (emotive and communicative heart) induces its opposite, 4-Earth (dense physical body) – a process of contraction/ condensation and hardening. Should this protective hardening progress far enough, it eventually results in a “Heart of Stone” (or glass, according to Blondie³²).

The four element system is a direct expression of polarity in two (or more) dimensions, and appears to have existed in an almost unchanging and universal form for as long as humans have conceptualised the natural world. The five element system or *wuxing* (五行 wǔxíng) is more recent, having been in use since roughly the first or second century BCE, the height of both the Chinese Han dynastic empire and the Roman Empire in Europe. It should be very carefully distinguished from the superficially similar four-element (and four humours) system used in traditional western herbal medicine. The four element system polarities are fixed, and movement is a matter of shifting balance between them. The five element system is a cyclic process of qualitative and progressive movement – it is a description of the natural cycle of movement. For instance, the hydrologic cycle can be expressed as rainfall (5-Water), running water (5-Metal), groundwater (5-Earth), water rises to the surface as a spring (5-Fire), evaporation (5-Wood). Or conversely, can be clouds (5-Earth), condensation (5-Metal), falling rain (5-Water), evapotranspiration from vegetation (5-Wood) and rising moist air (5-Fire).



Earth in the wuxing is a quality of warm, moist, fertile, potently energised ground that is perhaps most easily compared to rich, moist, fertile soil or the internal state of a healthy single-celled organism. Whereas four-element Earth is hard, cold, heavy and solid, in its mundane form, contrasting to Air which is diffuse, light, moist and warm. However, once a more alchemical level of 4-Earth/Air is considered, perhaps it is not so dissimilar to wixing 5-Earth, since Alchemical 4-Earth represents randomly potent life (maybe think of a *Scleranthus*, or a jar of “friendship cake”, or maybe even cancer) - as opposed to the Spirit of Air which provides order and structure and form, but is inherently dead. In contrast the *entire* 5-element cycle is an expression of the process of Life.



The Element of Metal

The secondary regulator of the Heart is the Metal element, whose job is enclosure, condensation and armouring; and Blondie was right in that one example of 5-Metal is the (quartz) pebbles that can be found on the bed of a stream³³ (quartz is silica, and is the basic ingredient of glass). This

contractile glass-like hardening of the skin and/or the core of the body can be experienced somatically by very firmly and congruently saying “No!” If the hand is held out firmly in a “stop!” gesture, that adds to the subtle but nevertheless definable somatic experience of a transitory deep contraction and superficial armouring. The qualitative nature of this armouring is hard but brittle if the “No!” is violent and forceful. If the “No!” is more of a loving affirmation of boundary, there is more of a leathery expansive feel to the gesture. Both of which, interestingly, fit the TCM 5-elemental description very well³⁴ (and leather has also been used as a material with which to construct body armour).

5-Metal is, amongst other things³⁵ the element of the interfaces with the external world. The Yin 5-Metal organ is the Lung, which takes in Heavenly Chi as air³⁶ and the heavy cloudy energy that has been used by the body is returned to Earth through the Large Intestine, the Yang 5-Metal organ. It is somewhat curious that the lungs have been recently discovered to produce about half of the red blood cells of the body, and so therefore must naturally accumulate iron for the “manufacture” of haemoglobin. Metal has traditionally been used to forge both weapons and armour (as in medieval armour. 5-Metal is associated with the skin and the immune system, which systems also act as boundaries between the body and the external world. It is also the



element of will (hence “an Iron will”)³⁷. Body psychotherapy calls the hard rigid response made by muscles to defend the body “armouring”; and it is remarkably common that people with absolutely no knowledge of TCM or body psychotherapy jargon describe their rigidly armoured muscles as feeling “metallic”, or when experiencing them with their inner vision describe something composed of metal, often steel. Sometimes this is polished steel, sometimes rusty. If rusty, almost always the visualisation progresses to bright polished metal. And then as the condensed metallic visualised fragment re-integrates into (usually) the immune system and disappears as a definable entity in its own right, it often transforms into a quality more like 5-Earth – warm, moist, soft, almost succulent and potent with a richness of health, perhaps as one might “experience” the inside of a very healthy single-celled organism.

Again I must issue a warning on this matter, in that these visualised³⁸ progressions only create lasting and ecologically balanced changes leading to positive changes in internal health or external relationship – if they are allowed to proceed in their own way at their own pace with no preconceived agenda as to what they “should” do. Having observed and facilitated many of these inner visualisation processes over the years, I believe that the five element system is inherently experiential, says something important about the qualitative and more archetypal processes that occur in the body-mind, and is *not* merely an arcane or meaninglessly esoteric theoretical construct from an unfamiliar culture. Anyone working with the body-mind should have at least a basic understanding of 5-element theory, as one of their tools to understand and track internal body-mind processes.

Outside of the lungs, 5-Metal in the body is inherently Yang, even though it is (also) expressed by the Yin organ called the Lung. 5-Metal condenses water (think of mist touching metal on a cold winter’s day, or steam coming into contact with a cold glass window pane – glass also being silica, smooth brittle, reflective and inherently “metallic”), and the greatest natural location of this condensation is on the outside (the superficial layers of muscle and skin) of the body. In the cycle of the year its condensing contraction represents the withdrawal of Autumn, when the air becomes crisp and clear. Perhaps the fact that seasonal changes are different in different climatic zones results in archetypes being allocated slightly different times of year. Some of these Autumnal metal qualities are incredibly evocative of the Capricornian qualities such as clarity, heaviness, contraction, leaden-ness, restriction, and dogged determination that traditionally characterise the month following the European winter solstice.

The rigid metallic tissue-response called “armouring” ideally takes place in the superficial muscles and dermis. I suspect that armouring on a muscular level involves the contraction of Titin – an immunoglobulin (!) that is the largest of the three basic

building blocks of muscle fiber. However, connective tissue is also contractile, and so the dermis and fascial structures forming pockets that enclose muscles are also capable of participating in this metallic condensation. The presence of a universal **interstitium**³⁹ – fluid vesicles in connective tissue throughout the body – represents another possible mechanism for this armouring. Fluid may be contained or free-draining, and when contained may undergo very large changes in osmotic potential for very small changes in ionic composition of either the fluid itself or (in the case of an elastic container) the containing structures. Or, as 5-element theory would say, 5-Metal supports 5-Water. I don't think that the particular elements in the five-element cycle are "accidental", and Pollack's "4th Phase of Water" suggests that this metal-water condensation contractile hardening might come about as a result of a fluid phase change and increased degree of binding between water and hydrophilic tissue.

When the mental will is activated and strengthened and engaged, this metal-water condensation accumulates round the kidneys, gently squeezing them and the spine local to the kidneys, rather like a soft and almost furry protective muff. And if the external armouring is overwhelmed (see chapters on PolyVagal theory and overwhelm), the body continues to attempt resistance by shifting its resistance from outside to inside. So the more self-resourced external armouring goes to "Plan B" and manifests as a metal-water condensation / contraction deep around the spine in the mid to upper thoracic region (above the kidneys). Another way to think of this is to say that the person has retreated into the very core of their body – the pre-spinal fascia - because this is the safest place to retreat to, even the final refuge. One cannot in fact retreat any further from the outside world and still stay in the body. In addition to migraine, various additional symptoms can accompany this reactive core tightening and retreat-to-core, including restricted peripheral circulation. In TCM that might be diagnosed as something like cold or damp or dry Lung chi accumulating (remember that the pre-spinal area of the thoracic is in fact just behind the lungs, trachea and heart); and since blood follows chi, the blood will tend to be directed deep into the core of the body rather than into the peripheral limbs. From a survival perspective, a retreat to core is more or less a sacrificial abandonment of the periphery – the limb extremities – as might need to be invoked in extremes of starvation or hypothermia or extreme physical assault. So external factors conspiring to cause overwhelm push the resistance inwards, resulting maybe in emotions resembling passive-aggression, endurance, reluctant compliance, leading to the Dorsal Vagal "Plan B" dissociative states.

In summary, the internal enduring resistance to an over-riding of normal boundaries causes tightening around the anterior upper thoracic spine, and is one of the main causes of migraines. It is regrettable that many therapeutic interventions for migraine attempt to suppress this tightness, thinking that it is a problem, and that curing the migraine is the main issue. In fact, where normal boundaries are so invaded and

violated, the main issue is normalising and strengthening boundaries, which in turn “cures” the migraines as a secondary effect. With a more resourceful capacity to maintain personal boundaries, the metal-water condensation thus re-emerges and becomes a *Yang* surface armouring phenomenon rather than an internalised Yang contraction. Yang being naturally external, Yang and Yin then lie in their proper relationship, and health returns.

Cold water also causes a Yang contraction of superficial tissues and an increase in blood flow (and therefore Qi) to the (Yin) core of the body, so cold water immersion has been used successfully to cure some instances of ME/CFS and other depleted pathologies. The Wim Hof method has become a particularly popular⁴⁰ version of this way of shifting body-mind state. In some ways this effect is not dissimilar to Acupuncture (albeit a very unsubtle and shotgun version), in that it resembles a needle on a vinyl LP being lifted up and placed down onto another track of music to cut another healthier groove. Again, my clinical experience is that there is a threshold of severity above which these forced shifts in energetic state do not have a positive health effect because they are interpreted by the body-mind as yet another insult and threat to its integrity. So the method will work very well for some, maybe most people, but will not work for others. The fact is that there are very few - if any - universal solutions to any health problem. Surgery is never 100% effective, and is never 100% safe for everyone, though it can be made nearly so if there is a pre-screening process to identify who will benefit and who might benefit most and who might be particularly at risk. So any medical system that is both safe and optimally effective has to identify a compatible relationship between the *individual* and the proposed intervention – rather than having an intervention that ignores the individual and simply matches the cure with the symptoms. Similarly, pharmaceuticals never affect everyone equally. I know several adults who take child-level doses of medications and still sometimes they are too strong. This effect is well recognised in the less prescriptive forms of medicine, and traditional herbalists (Western, Ayurvedic and Chinese) use several different diagnostic approaches to decide exactly which herb is most suited to an individual.

... the dance ...

The topic of this chapter is “resilience”; and in fact, if these five-element condensing, contractile metallic processes are occurring on a level of *wuxing* and have not progressed in a chronic stage to cause physical pathology of physical organs – what is being described above is indeed an expression of resilience in the face of overwhelm. Cultivation of Jing, Chi and Shen in TCM based on Daoist philosophies increases the reserves of physical, physiological, mental, emotional, and spiritual resilience so that overwhelm occurs less often. The five-element system is a process, a continuous cyclic movement of expressed form and gesture that interweaves in a distinctive pattern. The

five elements are in fact a more sophisticated description of Stanley Kelemen's principle of pulsation as the foundation for life, and a differently formulated expression of the twelve signs of the zodiac that underly traditional (as opposed to modern) Western medicine. Pulsation is, after all, a continuously moving transition between external (Yang) and internal (Yin). Life is movement. Ultimately, much of resilience boils down to the capacity to move and respond freely, and for those movements to progress, to evolve⁴¹ in a "dance of becoming". Health is the dance itself. When there is no dance, pathology is visible in its many diverse forms, and the apparent multiplicity of these expressions confuses the observer into thinking that they truly are distinct. Instead, what is being seen is a loss of movement and a response that is frozen on a fixed agenda and is no longer *response-ive*. Resilience is the *participation* in the dance of Life. It is also the small dance that leads from the stasis of overwhelm and results in re-joining of the bigger dance. Whatever might encourage that dance – be it stores of energy, or time (the time to find a suitable movement), or connection to other dancers and dance-ing in the living world, or an internal freedom to express its more physiological movements and processes – is the foundation of resilience.

In a moment of activation, it can seem as if things are falling apart inside and around us, that we are under a cascading waterfall of repetitive, claustrophobic feelings and voices. The default mode is to spin into shame, rage, and blame, enacting earlier conduits of self-abandonment... bailing out of the body and attacking our holy vulnerability.

While these strategies have provided some safety and relief to a tender ripening nervous system, a new pathway is lighting up and presenting itself now for conscious discovery, integration, and revisioning.

The invitation is into a new world, by way of the slower circuitries of curiosity, attunement, and warm, empathic presence. The doorway into this realm is encoded with mercy, prayer, and an embodied surrender - at times receptive and yielding, while at other times active, alive, and requiring fiery action.

While we may always play hide and seek with the beloved in each of his or her infinite forms, it is this dance which rotates and multiplies the stars, galaxies, and oceans... as it simultaneously structures the miracle cells of the human heart.

Sometimes we feel "lost" and other times we will seem to be "found." While we may have a bias for certainty and knowing where we are, the beloved will equally provide the experience of "lost" as a special emissary which only serves to pull us closer. In this way, "lost" is not evidence of error or mistake, but of the thread between ourselves and love.

The nature of this cosmic enactment is revealed in the crucible of the body, the soil of the earth, and in the sacred electricity of the nervous system. While it contains the seeds of creation and preservation, it is equally the activity of destruction, the poetic reorganization of the divine in the world of time and space.

- Matt Licata

Notes : Chapter 9.1

- 1 Ohio State University (February 17, 2020) Facial expressions don't tell the whole story of emotion. Neuroscience News <https://neurosciencenews.com/emotion-facial-expression-15719/>
- 2 <https://www.businessinsider.com/microsoft-4-day-work-week-boosts-productivity-2019-11>
- 3 There is a glaring disparity between German office practices and UK culture for similar (engineering) jobs. A person who regularly works overtime in a German engineering office will be called in by the manager to be asked if he is competent at his job – whereas many UK and US engineering consultancies expect their staff to regularly work extra hours.
- 4 With a little thought it is possible to realise that these beliefs are all outside the realm of personal experience, being either personal opinion incapable of being validated, or being a repeat of someone else's opinion.
- 5 This kind of belief usually has some kind of internal logical consistency. So the idea that the sun rises must usually indicate the Earth is static and the Sun mobile – which in turn leads to the sun being small compared to the Earth, and the Earth is then stationary and could then be of almost any shape. Making the experiential arrangement to a belief system causes this arrangement to be fixed – rather than it being open to questioning. It is somewhat ironic that the idea of the Earth rotating round a fixed Sun was originally a belief, and it was initially a very poor substitute for the observationally verified Ptolemaic system used for calculations for about 2000 years. Now the idea of the Sun rotating round the Earth is not only a scientific theory, but a “fact”, which has been hardened into a belief system. Whilst – given the physical evidence that has been accumulated – one cannot really argue against the Earth being a near-spherical lump of rock rotating round a vastly bigger Sun, “believing” that this is the case so that all other options are necessarily false/heretical is not really science. It is based on a need for certainty. Science is naturally (science being the study of Nature!) uncertain. There are a set of observations that are filtered through a prior belief and expectation as to what is (and is not) important to observe, and what the meaning of the observation is. Given those already heavily biased observations, an interpretation of them is called a “theory”. Science can never step beyond theory to “absolute truth”. The theories that are used to successfully create technology may be “truth” or they may simply be fortuitously conceived black boxed that happen to give the right answers to the particular set of questions we ask of them. It is society that converts the science into something more fixed – a belief, because it would be too unwieldy and uncomfortable and too time consuming to question the veracity every time the subject was raised. Without these beliefs that form a 21st century “*Mapa Mundi*” or map of the world, the structure of the world, the world becomes less navigable. It is also ironic that medieval people understood the allegorical nature of the *Mapa Mundi* and did not consider it to be an absolutely true picture – but rather, a largely symbolic means to navigating. So it is arguable that the 21st Century world is at least as bound by belief systems as was the 13th Century world.
- 6 This is a true Gestalt. Our sensory system assumes (through analysing the visual experiences of early years) that light comes from above and therefore dark shadows must lie below. The conversion of visual information into “meaning” then uses this Gestalt, and without thinking about it, or even without knowing that we are applying this rule of thumb, lightness is thought of as being indicative of “up/top/convex”, and darkness is seen as “down/beneath/concave”. Which is why many animals have a pale belly – an artefact designed to fool and confuse the Gestalts of predators. If we come across an object that is dark on top and pale underneath it is possible to “see” it, but some effort is required – which may give the prey a half-second extra reaction time. It would clearly be silly to make this “rule” of lighting into a belief system.
- 7 This is accompanied by a cynical tendency to dismiss belief in general – including other people's beliefs – another destructive tendency that is based on a paradox (“I believe that rational logic is ultimate [sic], and I also believe that belief is illogical [sic#2],

Notes : Chapter 9.1

therefore I believe that belief is bad [sic#3]).

- 8 So beliefs have something of a life of their own. They create a perception of stability within chaos, and are yet another way on which Entropy can be reversed. However, if the belief is not congruent with the real world, that reversal of Entropy is imaginal.
- 9 John O'Donohue (1997) *Anam Cara: Spiritual Wisdom from the Celtic World*. Publ. Bantam ISBN-13: 978-0553505924
- 10 Richard Epworth (2014) *Bottleneck - Our human interface with reality: The disturbing and exciting implications of its true nature*. Publ. Goforich ISBN-13: 978-0992672812
- 11 From the lyrics of "Fragile" by Sting <https://www.youtube.com/watch?v=uQGkzqtQiOI>
- 12 Technical University Munich (February 26, 2020) Biodiversity increases the efficiency of energy use in grasslands. Phys.org | <https://m.phys.org/news/2020-02-biodiversity-efficiency-energy-grasslands.html>
- 13 Andrea Kuhn (Thu, 26/03/2020) Gaia and the coronavirus by Stephan Harding. Schumaker College blog <https://www.schumachercollege.org.uk/blog/gaia-and-the-coronavirus-by-stephan-harding>
- 14 CUNY Advanced Science Research Center (March 3, 2020) Reef-building coral exhibiting 'disaster traits' akin to the last major extinction event. Phys.org | Biology <https://phys.org/news/2020-03-reef-building-coral-disaster-traits-akin.html>
- 15 Kaneshiro, K.R., Rechtsteiner, A. & Strome, S. Sperm-inherited H3K27me3 impacts offspring transcription and development in *C. elegans*. *Nat Commun* 10, 1271 (2019). <https://doi.org/10.1038/s41467-019-09141-w> and <https://phys.org/news/2019-03-effects-offspring-epigenetic-inheritance-sperm.html>
- 16 University of California - Santa Cruz (17 Oct 2018) Study documents paternal transmission of epigenetic memory via sperm. Phys.org | Cell & Microbiology <https://phys.org/news/2018-10-documents-paternal-transmission-epigenetic-memory.html>
- 17 Michel Odent (1999) *Scientification of Love*. Publ. Free Association Books. Hardcover, 130pp, ISBN-13: 978-1853434761
- 18 Viktor Frankl (2006) *Man's Search for Meaning: An Introduction to Logotherapy*. Publ. Beacon Press, Boston, MA ISBN-13 978-0-8070-1427-1 (originally published 1946), available online at https://edisciplinas.usp.br/pluginfile.php/3403095/mod_resource/content/1/56ViktorFrankl_Mans%20Search.pdf
- 19 At the resolution and scale shown the tiling has at least four different scales of interwoven patterning; with the largest almost filling the entire image (as a green flower)
- 20 Excerpt from : Benedictus <https://johnodonohue.com/>
- 21 David Graeber (2011) *Debt: The First 5,000 Years*. Publ. Melville House ISBN-13: 978-1-933633-86-2 also available free online at http://libcom.org/files/_Debt_The_First_5_000_Years.pdf (and see Wikipedia entry for more links)
- 22 Viktor E Frankl (2011) *Man's Search for Ultimate Meaning*. Publ. Rider ISBN-13: 978-1846043062
- 23 Daniel E. Moerman & Wayne B. Jonas (2002) Deconstructing the Placebo Effect and Finding the Meaning Response. *Annals of Internal Medicine* | Perspectives 19 March. 136(6) pp471-476 <https://doi.org/10.7326/0003-4819-136-6-200203190-00011>
- 24 Benedetti, F., & Amanzio, M. (1997). The neurobiology of placebo analgesia: from endogenous opioids to cholecystokinin. *Progress*

Notes : Chapter 9.1

in neurobiology, 52(2), 109-125. [https://doi.org/10.1016/s0301-0082\(97\)00006-3](https://doi.org/10.1016/s0301-0082(97)00006-3)

- 25 Sally Donatello (2015) The Superhuman World of Wim Hof: The Iceman (Documentary) <https://www.youtube.com/watch?v=VaMjhwFE1Zw>
- 26 Bruce H Lipton (2016) *The Biology of Belief: Unleashing the Power of Consciousness, Matter & Miracles*. Publ. Hay House (10th Anniversary ed. edition) ISBN-13: 978-1401952471
- 27 And most probably Islam and Judaism, and Hinduism, but I'm not directly familiar with those religions.
- 28 Dr. Daniel Keown MBChB MCEM LicAc (2014) *The Spark in the Machine: How the Science of Acupuncture Explains the Mysteries of Western Medicine*. Publ. Singing Dragon ISBN-13: 978-1848191969
- 29 <http://www.itmonline.org/5organs/heart.htm>
- 30 "Historical Records of the Three Sovereign Divinities and the Five Gods", attributed to the Three Kingdoms period Daoist author Xu Zheng. tr. Birrell 1993, p32. See http://en.wikipedia.org/wiki/Chinese_creation_myth
- 31 The four elements (4-Air, 4-Fire, 4-Water, 4-Earth) are found in all cultures around the world, including China. The 4-element system is one of qualities that add together and complement each other. 4-Air and 4-Earth are pairs of opposites, as are 4-Fire and 4-Water. The Five element system in TCM is not a set of constituent properties – but rather a series of stages in a cyclic **process** that have associated properties, organs, etc. In fact, Chinese medicine and Daoist philosophy also use the four element system. This distinction between 4 parts and 5 processes is quite fundamental. The five process-elements change according to circumstance, and indeed, should change according to season etc. But although the four the constituent elements do also change with seasons (the four humours in Western herbal medicine) they do not change so easily. One can usually readily see similarities between 4-element Water and 5-element Water, but *also* the entire 5-element process describes the cycle of water. One way of describing this cycle is to say that 5-Metal condenses (think of air meeting cold metal) and falls as rain, then 5-Water flows, then it rises in plants (5-Wood) through the process of evapotranspiration, expands (5-Fire), forms clouds (5-Earth), and then enters another cycle.
- 32 <https://genius.com/Blondie-heart-of-glass-lyrics>
- 33 5-Earth (soil/rock) supports 5-Metal (Quartz pebbles), supports 5-Water (in a stream), supports 5-Wood (by watering the plants), supports 5-Fire (wood burns), supports 5-Earth (burnt wood turns to ashes) ,, , etc.
- 34 My general sense is that all of 5-element and acupuncture theory is derived primarily from deep experiential introspection / interoception, and has been fitted into an intellectual framework only as an afterthought. The archetypal way in which it matches experience suggests that the framework is a true archetypal reflection of the underlying reality.
- 35 This is not intended to form a complete description of Chinese five-element theory(!) I have selected certain aspects of the five elements (Heart/Pericardium of the 5-Fire element and Lung of 5-Metal as it affects Kidney/5-Water) specifically because they tend to be more obvious in internal experiences reactive of boundaries.
- 36 Here there is a distinct similarity with European/Western traditional medicine – hence the German word “Himmel” refers to both heaven and sky.

Notes : Chapter 9.1

- 37 And interestingly, Hollywood also presents us with an indescructable Hulk (made of stone/Metal), an Iron Man, and a Man of Steel.
- 38 ... as in “perceived by observing an internal process through the inner visual sense” – as opposed to “making up through wilful imagination”...
- 39 Bruce Schonfeld (July 22, 2019) The Secret Life of Fascia: Part 1. <https://vimeo.com/ondemand/secretlifeoffascia>
- 40 <https://www.wimhofmethod.com/>
- 41 Stuart Heller (1993) The Dance of Becoming: Living Life as a Martial Art. North Atlantic Books ISBN-13: 978-1556431104