

# Fractal Geometry

By Andrew Kemp

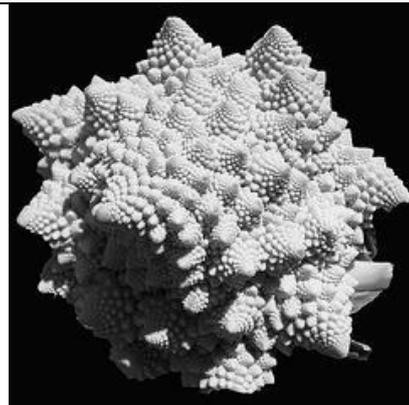
## When a butterfly flaps its wings...

This article contains the practical application of number sequences for the benefit of our health - not the mathematics we were taught at school but fractal geometry, the mathematics of nature herself where straight lines simply do not exist. You will see reference to the Fibonacci sequence and occasionally the Julia set throughout the technical section of this article.

It is a fascinating subject. If I asked you how long you thought the coastline of Britain was, what would you say – a couple of thousand miles perhaps? Try a few *million* miles. In fact, it is longer than that, it is *infinitely* long.

This sounds hard to believe, but we are so used to measuring distances in straight lines that we forget how false this system is. If you walked for a few minutes along a cliff-top path you would probably cover a few hundred yards in a roughly straight line, but you would not have traced the exact boundary. In reality, the edge of the path may curve gently and if you look at the rocks and sand that make it up, you will see hundreds of tiny indentations as the surface seems to weave this way and that in a seemingly random pattern. Look under a microscope and there are even more imperfections within its boundary.

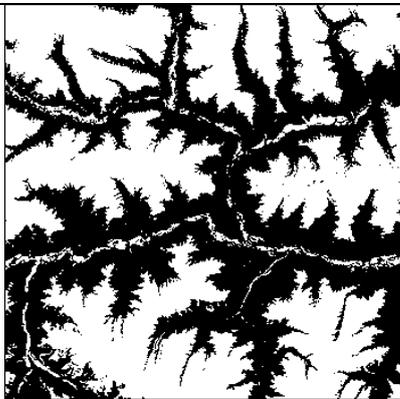
This concept applies right down to the atomic level, then to the quantum level of quarks and beyond into the unknown. This is the essence of fractal geometry – the deeper you look the more you find. There is no such thing as a straight line in nature, so the path truly is unlimited in length. Furthermore, the depth of design that underpins the path, a tree, a lightning bolt, is far from random. There is a core symmetry and mathematical code that underpins all natural structures however scrambled they may look to the eye. Certain mathematical shapes and ratios are particularly suitable for life and have a structure that is both appealing to the eye and practical for survival purposes.



The incredible  
Romanesque vegetable

For example, if trees and plants were any taller they could be blown over by the wind; any shorter and they might have insufficient surface area to catch the sun's rays and for photosynthesis to occur. There is perfection in these seemingly random creations of nature. In mathematical terms, this explains why fractal geometry is based on the addition rather than the multiplication of numbers. If the fractal growth of a plant was exponential rather than incremental, it would grow too fast and its structure would fail to support its extremities. Nature cannot afford to make mistakes, so its growth is always in perfect proportion to the structural strength of what lies beneath. These shared design patterns work at many levels. The deeper you look, the more you find. We know that electrons circle the nucleus of an atom, kept in orbit by some sort of electro-magnetic or gravitational field. This is no more than a mini version of the way the planets orbit the sun, or the way our solar system rotates within the galaxy.

These principles apply across the board, from the smallest snowflake to the largest star system. This is classic fractal geometry, with patterns repeating over and over as we delve deeper into their shape or retreat back in a forlorn attempt to define their boundaries.



As an example of ‘self-similarity’, have a look at the wonderful picture on the left and decide what you think it is – my first reaction was that it is a capillary network in the human body, or perhaps the patterns on a leaf. It could be either of these, but in fact it is a photo taken by NASA of the snow-capped peaks and ridges of the eastern Himalayas. Nature’s constructions follow the same basic laws whether at the micro or the macro level, one is just a bigger version of the other.

As a child, I used to look at the sparks flying off a burning log on the fire and wonder if that was a star system collapsing in another dimension... and perhaps that our own solar system is nothing more than a glowing ember on the fire of some other dimension that exists on a scale way beyond the limits of our imagination. I’m sure we all have had similar thoughts in our time; perhaps these deep truths lie dormant within us all until we suppress them with the limited concepts of Euclidean based mathematics at school.

These theoretical connections suggest that there must be some core building block, some basic mathematical principle that explains the development of a foetus in the womb, the growth of a leaf on a tree and the way planets orbit around a sun. This has been [the Holy Grail of mathematicians](#) for centuries. It appears to have eluded Einstein in his time, but modern quantum physicists are now starting to define these unifying principles. They have found simple equations that seem to explain the geometric proportions of matter and life itself, with unifying proportions that link all forms of existence.



The fern on the left looks spectacular and a fine example of nature. In fact, it was created by Roger Bagula and is the result of 100,000 iterations of the mathematical formulae:

$$x_{n+1} = a x_n + b y_n + e$$

$$y_{n+1} = c x_n + d y_n + f$$

Like all good fractal progressions, the design is selfsimilar; it maintains the same proportions however deeply you look into its design. Each fern leaf is a complete fern in its own right.

If you want to read more on the appearance of Fibonacci progressions in Nature, my favorite website is devised by Dr Ron Knott. It explains the mathematics but also has some wonderful examples and photographs of how they arise in Nature.

The beauty of this type of mathematics is that the core equation is relatively simple. Just as the calculation of Pi (22/7) leads to an infinitely expanding progression, so does the expansion of a basic equation in fractal geometry.

The subject of genomes and DNA is particularly interesting in this context. We have approximately 3 billion base pairs of DNA in all of our 75 trillion cells – which is an

awful lot of DNA. Our genes are the interim step which determine how the DNA is replicated within our cells. Recent scientific discoveries in this new field are raising many eyebrows because it is becoming clear that most variants of life on this planet share a large percentage of our DNA.

How does it feel to know that we share 99% of our genes with a chimpanzee, 40% with some species of fish and 40% with a banana? You can hopefully see where I am going with this. Different life forms can be created with only the slightest tweak in the genetical make-up. The DNA that lies beneath is the ultimate fractal expression, with a structure and strength derived from a simple but fractal core.

It is the expansion of this basic starting point that leads to individuality and the differences between all the occupants of the living world. Fractal geometry explains how this initial position can become infinitely complex and varied, giving the false impression of asymmetry, chaos and disconnection when in truth all is linked.

These concepts really do explain the development of life, while leaving room for the existence of a Divine spark as the trigger behind it, if you wish to look for one. In essence, everything is connected. A butterfly flapping its wings really does echo across the planet and beyond.

<sup>1</sup> [www.mcs.surrey.ac.uk/Personal/R.Knott/Fibonacci/fibnat.html](http://www.mcs.surrey.ac.uk/Personal/R.Knott/Fibonacci/fibnat.html)

## **The mathematical building blocks of life**

If there really is a unifying formula that explains the creation of everything, then perhaps we can use our understanding of it to support our health. To explore this idea further, we need to look at the basic mathematics behind these principles. Our starting point must be a suitable fractal equation, one that is easy to use but is clear enough for our body's intelligence to understand the intent behind its formation.

Some fractals are based on the square root of negative numbers, which takes us further into the conceptual world than we need to travel. For this reason, the Fibonacci sequence is the perfect equation. It uses 'real' numbers, which are easier for our bodies to interpret.

This is the core design behind the equations in this manual. I have occasionally used a Julia Set sequence in some areas, but only when working with concepts outside the basic functions of the human body, like blocking electromagnetic stress, or undoing the trauma of dental work.

So, if we are going to use the Fibonacci sequence as our primary building block, we need to start looking at how it works.

Take any two numbers you wish, say 2 and 5. Add them together and you get 7. Add the 5 and the 7 together and you get 12. 12 and 7 makes 19. Keep adding the last two numbers together and before long you have the following sequence:

2, 5, 7, 12, 19, 31, 50, 81, 131, 212, 343, 555, 898, 1453, 2351, 3804, etc.

As the numbers grow, you move increasingly closer to the 'golden ratio' of approximately 1 to 1.618. In other words, every subsequent number is 1.618 times the previous one. I'll explain the significance of this in a minute.

Lets work through another sequence first - the true Fibonacci progression which starts with 0 and 1. (I like the undertones here; first there was nothing, then there was the first act of creation.....)

$0 + 1 = 1$   $1 + 1 = 2$   $1 + 2 = 3$   $2 + 3 = 5$   $3 + 5 = 8$  .... and off it runs...

.....0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144, 233, 377, 610, 987, 1597 etc.

You will see that although the numbers are different, the ratio between them rapidly evolves to the 'golden ratio', the higher the numbers, the more accurate the correlation. The mathematical representation of this sequence of additions looks like this:

$$F_{(n+2)} = F_{(n+1)} + F_{(n)} \quad -\infty \leftrightarrow +\infty$$

All this is saying is that the third number in the sequence  $(n+2)$  is the addition of the previous two,  $(n+1)$  and  $(n)$ . I have added infinity signs  $-\infty \leftrightarrow +\infty$  to show that the fractal should be computed in both directions, as in nature where there is no beginning or end to the depth of the calculations.

I have also added the words '3 dimensions' wherever the basic formula is shown, to make absolutely sure that our bodies absorb the equation as a three dimensional concept. By adding a starting position for  $(n)$  and  $(n+1)$ , we arrive at a unique fractal progression:

$$F_{(n+2)} = F_{(n+1)} + F_{(n)} \quad -\infty \leftrightarrow +\infty \quad \text{3 dimensions}$$

Starting  $(n) = 5$  and  $(n+1) = 8$

You now have the key formula that appears within the technical section of this manual. The core formula appears unchanged but the starting points vary in line with the needs of each specific application. To the intelligence of the body, this represents the subtle difference between the shape of a liver or a kidney. They are both built subject to fractal laws, but the tiniest variation in design creates a totally different outcome when iterated thousands of times, exactly as we have just seen with DNA and genomes.

## Fractal healing of the body

This basic mathematics may not spark your imagination, but this is where it gets interesting. These equations represent the growth cycle of life itself, expanding from the outside, just as branches and leaves appear from the extremities of the plant or tree.

In line with all of nature, the human body is a continually evolving explosion of these equations. Our DNA, cells, organs, facial dimensions all obey basic laws of fractal progression.

There is evidence of the 'self-similar' nature of fractals within the human body. The lung is an excellent example of this, with a clearly repeating design at many different levels of analysis. The airway divides and re-divides like the branches of a tree, or the tributaries of a river system. Each segment of the lung divides into a bronchus and then into bronchioles and finally into alveoli where the gaseous exchange takes place.

If we take these concepts further, there must be a different sequence for each of the progressions in the human body. Could an illness be a sign of a progression gone wrong? If a liver has become congested with heavy metals and undernourished by a nutritionally deficient diet, could we not return it to its perfect state by re-applying the original fractal equation?

I believe we can. When a computer goes wrong, we reboot it to re-install the uncorrupted master version. The human body is a bio-computer so why not apply the same concept, using a language we know it understands – fractal geometry? After all, we are made from one of the most inspiring fractals of all – DNA – so we simply need to speak its language.

In doing so, we are not simply repeating the embryonic development of our bodies from the first original cells. Our bodies are in a continual state of decay and rebuilding, with most structures and organs fully replaced every few weeks or months.

If we can make even a slight adjustment to this process in a positive way, even a diseased body has the potential to heal. If the organ itself is not damaged beyond repair, a 1% improvement over many cycles of regeneration could eventually lead us back towards our perfect original design, or at the very least improve the natural recovery time.

By accessing universal intelligence through muscle testing, I have found what I believe to be the basic sequences behind the core elements of the human body. This provides quick and effective support for the physical body while we work concurrently on the more subtle underlying causes using other sections within the manual. Our symptoms offer lessons and guidance to us. If we ignore the core messages we merely delay the return of the original disease.

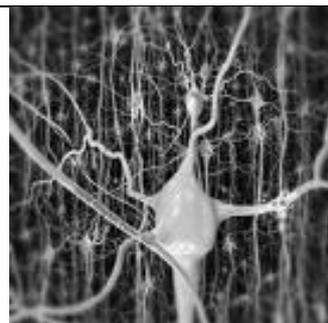
A very intuitive friend of mine, Annie Maysmith, was guided to describe the fractal process as follows:

*“The body knows best. It is far too complex and inter-related for the brain to understand. Fractal equations map this complexity. They set the body in motion and correct any blockages.*

*Fractal healing works. Try it and see. It might not make sense but we cannot understand complexity on this scale. But we can feel it when our body responds. It will love the movement to a block free buzz. It will soon be purring. This is the state of homeostasis.”*

This is a good summary of the main point here; we do not need to fully understand how this process works, we just need to give it a go with an open mind and feel the response.

## **The fractal nature of the mind**



The link between fractal geometry and the physical development of the human body is largely accepted and I believe it is reasonable to advocate the use of these principles to influence our health at the physical level. Of greater challenge is the justification for using fractals to support emotional and energy healing. For this to work, subtle energy must move with a symmetry that conforms to these natural proportions. Is there any justification for this view?

I believe there is. The brain and the central nervous system are awe-inspiring examples of fractal growth, with a network of neural pathways that are the key to our memories and emotions. We cannot, however, say that these pathways *hold* our memories or emotions. This is still the subject of much debate. We have long since moved away from the proposition that they reside in a particular part of the brain, but there are now suggestions that they are not held in the brain at all. Recent authors – Rupert Sheldrake in particular - suggest that they are actually held in the Zero Point Field and our brains are merely the tool we use to retrieve them.

Studies with MRI scanners have shown that different areas of the brain light up when we access our memory bank, but is this their source or their point of retrieval? There is also a lifetimes work by pioneers like David Bohm, Karl Pribram and Michael

Talbot suggesting that the brain is in fact holographic in nature; a concept that explains the brain's incredible capacity for data storage.

Regardless of where our emotions are actually held, we know that the brain is the conduit to them and it is fractal by nature. Both the physical structure of the folds of the brain and the brain wave patterns, as measured by an EEG (electroencephalogram) have fractal properties. Mikiten, Salvingaros and Hing-Sing Yu at the University of Texas raise the interesting proposition that the brain's complexity hides a simple fractal origin:

*“Our essential thesis is that when a fractal system generates a new system, it has the same attributes and characteristics as the generator - especially hierarchical linking. Thus, mental associations that would appear at first to require enormous lengths of code (and consequently be termed complex) may in fact be handled by very short codes. If that is indeed the case, then the human mind could be using fractal encoding as a standard way of coding enormous chains of related thoughts into a single fractal entity”.*

Other investigators, like Alan Watts, have researched the way the brain works under the influence of psychedelic drugs and identified a fractal response in its constructions.

There is further evidence for this type of thinking. University of Oregon physicist Richard Taylor is studying fractal equations in an effort to understand how and why some of them give us a mental boost, in particular those that are most often found in nature. He is investigating whether our innate recognition of fractals is learned or instinctive. If we can truly understand our relationship with them, we can start using their properties in designing buildings and city environments.

So, it is fair to say that the concept of our brain working in a fractal way is under investigation. As Lyall Watson allegedly said, “If the human mind was simple enough to understand, we would be too simple to understand it”. I find it reassuring to think that there will always be some mystery about the way we work, but this should not stop us from attempting to stretch our boundaries.

For me, the key is to make practical use of these fractal concepts within a healing framework. If this understanding of the core design of our brains is correct, it is logical to deduce that our traumas and emotions must fit within these fractal structures. This is not to say that the emotion itself is fractal in nature, only the way it is used within the brain to determine our core beliefs and behaviors.

Suppose a young boy develops a sense of abandonment due to being left with a nanny during much of his childhood. This may well create an imprint that affects his ability to form future relationships, his self-esteem and his own behavior as a parent. Each issue in turn will branch off with influences of ever increasing complexity. He might be a nervous flyer, homesick when on holiday, or unable to hold down lasting relationships of his own. Just as a virus infiltrates healthy cells, so an emotion can corrupt an otherwise healthy belief system. As soon as he focuses on any of these issues, his fractal mind will find those links and determine his behavior.

This trauma might therefore lie dormant and isolated in his memory bank, but could be dramatic enough to influence a whole variety of future experiences. In essence, one core incident has created all of these tributaries but with the repeating pattern of abandonment underpinning them all. This is truly fractal, with an explosion of ever more complex implications each bearing the coding of that original seed.

The model that appeals to me is that of an enormous series of isolated memories held

in a two dimensional format. Our minds have the key to our personal list and as soon as we apply conscious thought to any person, event or memory, we access this simple list and develop fractal associations through our neural pathways. As soon as we shift our attention elsewhere, this fractal development fades, reproducible whenever we re-engage with that same point of focus.

Our memories could therefore be isolated points of reference, stored as matters of fact even if they are false perceptions of what actually happened. They are open only to reinterpretation, not to change. It is our conscious focus that expands this potential and reveals our true essence as complex human beings.

One other interesting aspect arises. If our minds are fractal in nature, and fractals are unlimited, we are at risk of overloading our neural pathways and crashing our internal computer. This is particularly relevant for those who constantly worry or are under stress as this could lead to spurious associations in the mind and potentially obsessive or compulsive thoughts. The safety valve for this appears to be Rapid Eye Movement (REM) either by day through daydreaming or by night through sleep.

At the physical level, the growth of dendrite and synaptic pathways within the brain is controlled by synaptic pruning that helps keep everything in order. These concepts are perhaps our brain's equivalent of bush fires and the predatory hierarchy in nature that stop plants and animal species from unlimited fractal growth.

Moving on from this starting point, we need to explore what happens when a thought process is repeated. If an experience is revisited often enough, the continual repetition of the same fractal grid could end up creating a fixed neural net that would then be hard-wired into the brain. The fractal fades but the memory starts to become firmly linked to a particular emotional response.

If the response is a pleasant one, this hard wiring could then lead to addictive behavior as the same program is repeated over and over again. We have an element of choice about our response when the program is first played, but as it is repeated we lose that free will. The receptor sites in our new cells develop to receive neuropeptides triggered by that particular emotion and we rapidly become hooked on that type of behavior and the chemical rush it produces.

This addiction could apply to love, sex, shopping, whatever creates the rush. If you want to see this visually, the film 'What the bleep do we know' has a wonderful animation of this process and is well worth a look.

If the behavioral response to the memory is a bad one, perhaps accompanied by fear, guilt or anxiety, then this too can become hardwired into the brain. A phobia can develop, or perhaps a more general state of unease about any experience remotely connected to this core issue.

As an example, someone with a fear of meeting strangers in the street could have that fear develop into a constant state of anxiety if repeated often enough. The neural pathways could become so well used that virtually any activity is dragged down its tracks. Clients I see with phobias and past traumas often have a core underlying level of anxiety, with the specific issue creating a general sense of unease.

This process can go one step further. A series of connected negative incidents can lead to the development of negative core beliefs. In clinic, I find that working with these core beliefs is a powerful way of undoing a series of unhelpful hard-wired neural pathways.

For instance, someone who has a series of negative relationships with the opposite sex may develop the belief system that 'relationships are not worth the trouble' or 'love hurts' or 'I cannot express my true self'. When I load these concepts into a muscle testing circuit I can send healing energy through the whole series and hopefully undo the negative results of thousands of isolated incidents. Using this manual has the same effect.

These concepts can apply to all associations and memories, but are particularly relevant when we are either stressed, angry or depressed, as this invokes the primitive part of the brain. This is the part of our brain that evolved to protect us from direct danger by reminding us to run when appropriate or turn and fight. This type of pattern matching is intrinsic to our nature and it may be thousands of years before we evolve past it. In the meantime, it continues to form our belief systems and influence our reactions to life's events.

Even if a bad memory is not adversely influencing future beliefs and behavior, it is still a bad memory that festers in the unconscious and can eventually harm our health. It still needs releasing.

I think it is worth summarizing the key points and suppositions here:

1. Our memories are held as simple, unlinked points of reference.
2. Our brains continually access memories looking for experiences that can act a reference point to determine future behavior.
3. The neural pathways in our brains that process these memories are fractal in nature.
4. If a fractal is repeated often enough, the associated behavior becomes hard wired into our neural net.
5. We then lose some element of choice about how we respond to future experiences, especially when accessing the primitive part of our brain.
6. Perceived good experiences can become addictive.
7. Perceived bad experiences can become phobic.
8. Enough bad life experiences can lead to negative core beliefs.
9. Even isolated negative emotions need to be healed.

## **Fractal healing of the mind**

We have two parties to the mental processes I have been describing, the core emotion and the process by which it is developed. It is important to recognize that the emotion is the problem, not the manner in which it envelops our wider behavior, feelings and thinking. In other words, we should look to heal the train, not the track on which it runs.

If we take this analogy further, to heal a negative emotion in a fractal manner, we must send a healing vibration along the tracks. That is the beauty and simplicity of this system, we do not need to trace every tributary, just find a suitable point to hop on and an equation that will chase down the damage done by the emotion or trauma we are looking to heal.

This process helps release that trapped emotion. This can be quite a difficult process and my clients sometimes revisit these feelings temporarily as they leave, followed by a deep sense of relief as they finally let go of their old traumas.

It is important to mention at this stage that there are no bad emotions as such. Our 'ups and downs' are what define us as a unique species on this planet. We cannot truly understand love unless we have experienced loss; happiness unless we have been sad.

These emotions only cause damage when they become repressed and fester within our unconscious, creating negative neural pathways as they are reinforced over time.

Release them when they arise and no harm is done. I often think that to be happy and healthy in this world all we need is a friendly ear when we need one and a punch-bag when talk is no longer enough.

Along with most complementary healthcare therapists, I try to find and heal the core issues that have gone within. In doing so, the unwelcome tributaries can be released.

The use of fractal equations to do this is a very precise tool that treats like with like. A seed to treat a seed. We simply need to have a broad enough range of remedies to cover the core issues life may throw in our path and ask the higher self to draw what is needed.

There is already evidence for this thinking within the healing model. Bach flower remedies are based on taking the vibration of plants, (fractal in nature) and using them to heal our emotional issues (also fractal in nature). Homeopathy works in a similar way, using distilled vibrations from many natural sources to heal mind and body, right down to our genetical inheritance.

Even the concept of astrology supports this view. This branch of science attributes emotional standards to people born within certain positions of the fractally proportioned planets within the solar system. Again, it infers connection between the micro and macro and the shared principles that underpin our physical and emotional existence.

With any system, we cannot always identify the starting point of the emotional block, so we may have to work with an echoed trauma from later on in life or the core belief that resulted. That is totally fine and I referred to 'hopping on' the tracks earlier for good reason - which will make more sense if we look at the core process behind a negative emotional pattern:

Event \_ emotion \_ reinforcement \_ core belief

We can heal this sequence by working either with the emotion triggered by the core event, or future incidents that reinforced this emotion, or the core belief that resulted.

Wherever we join, we can send healing through all the tributaries, in both directions. If you remember the structure of the Fibonacci equation, I added the following sequence for good reason:

$$-\infty \leftrightarrow +\infty$$

This confirms that we are sending healing through this fractal pathway in both directions for as far as it needs to go. We can catch the train at Paddington, Temple Meads or Cardiff, it doesn't matter where we get on provided we send healing along all of its tracks.

In a practical sense, I have applied these concepts to all the core areas of imbalance I have detailed in the technical sections of this book. Some of the issues have a fractal equation of their own, some are governed by the master fractals at the beginning of the section. Whether by individual or generic formula, we need an equation that can chase down all the tributaries connected to a specific trauma and overlay the tracks with a more constructive message, vibration or statement of intent.

Sometimes, we can even combine physical and emotional healing by working on both

a general emotion and the organ fundamentally involved with its expression. Here is an example from the technical section:

• *Restore natural instinctive functioning of the amygdala. Ensure normal processing of frightening stimuli at an unconscious level in the ventral region of the amygdala and at the conscious level in the dorsal region.*

*Fibonacci Sequence:  $F_{(n+2)} = F_{(n+1)} + F_{(n)}$   $-\infty \leftrightarrow +\infty$  3 dimensions Blue B,G Major Octaves C5 and C6. Starting  $(n) = 2$  and  $(n+1) = 4$*

In other situations, we simply need to send positive energy from harmonic sequences through the fractal pathway. Again, there will either be a specific harmonic for each issue or we will rely on the overriding sequences at the beginning of that section. In effect, the fractal defines the track; the harmonic or intent is the healing train that runs along it.

As in nature, this fractal explosion does not have to rigidly follow the Fibonacci sequence of 0, 1, 1, 2, 3, 5. It can start with any numbers so long as the equation grows by the addition of the last two in the sequence so that the golden ratio, or Phi, emerges as the progression expands.

Before moving on, it is worth quickly looking at the wider benefits of healing these emotional issues. The world renowned author and neuroscientist Candace Pert is at the forefront of this line of work and her book 'Molecules of Emotion' explains our chemical responses to trauma in great detail.

For me, there is no contradiction with the views I have expressed here as the fractal nature of the mind generates the emotional response and behavior, which is then followed by a physiological response in the body.

In identifying the physical responses to emotions, Candace has proven that the body is directly related to our emotional selves. We have known this for thousands of years, but the discovery of neuropeptides, endorphins and receptor sites has proven exactly how this process works. We know that a nervous mind leads to a nervous stomach, now we know why.

Even more astonishing is the discovery that endorphins can be created and received by other organs as well as the brain. For example, eating triggers a neuropeptide CCK. It tells our brain when we are full, it stimulates the gall bladder to release bile to digest fats and it even tunes down our immune system so that we do not attack all the foreign molecules in our undigested food.

The brain and body therefore act as one unified team, with the body extremely active at feeding signals back to the brain – in complete contrast to the mechanistic view that used to be widely held, that our organs simply react to the instructions coming down from the all controlling brain.

For this system to be in balance, we must have positive emotions triggering neuropeptides and endorphins. If we do not, our mind and body both suffer. This is the basic science behind psychoneuroimmunology, that brain activity can downgrade the immune system just as positive thoughts boost our immune system by releasing endorphins that fill the receptor sites and leave little room for viruses to take hold.

Our chain of thinking is therefore a simple one; find the core negative emotion or belief system, send healing through the fractal mind and in doing so heal the body.

Before moving on, I can't resist one final thought on this subject. The 5 element theory has underpinned oriental therapies for millennia, based on the concept that

each of the elements – fire, water, earth, wood and metal, are connected to different organs and each organ can express different emotions. The liver, for instance, is commonly associated with anger, bitterness and sadness.

Candace Pert has already found a high concentration of neuropeptide receptor sites around the chakra centers, so perhaps we could take this extra step. Wouldn't it be interesting to see if the liver had receptor sites specifically geared towards the neuropeptides released when those emotions were expressed? We may be close to proving the mechanics behind this timeless knowledge. What fun!

## **Fractals and our spiritual selves**

There is one final area to discuss – fractals and our spiritual self. In many ways this is the hardest of the trilogy of mind, body and spirit. Our physical bodies are *visibly* fractal by nature, that's the easy one. We know we have a mind, albeit with some questions about where it resides, and can *deduce* its fractal nature through observation of its output and the structure of the neural pathways through which it flows. The very existence of a spiritual dimension to our being is disputed, so how can we begin to assess its nature and structure?

In truth, it's not easy. It has to be speculation and I make only three points here:

1. It must be fair to presume that everything that lives within a fractal Universe obeys its basic laws of construction. If not fractal in itself, spirit must be able to operate within this framework and be influenced by it.
2. At a more fundamental level, our subtle energy body depends on our chakras for its balance. Our chakras are vortices that obey fractal laws.
3. I have dowsed into Universal Intelligence and found that fractal equations can help with spiritual issues. When I use this system in therapy sessions, these remedies test well and seem to work. That's good enough for me.

## **Using sound**

The fractal sequences alone are powerful enough, but if we add the vibration of color and sound, we magnify their resonance and increase their healing powers.

So why use sound? Restaurants play classical music because it makes customers spend more money. Orchestra conductors have remarkable longevity. Pop stars the reverse. The basic truth is that harmonious music is comforting and healing, while discordant sound is irritating and harmful. When applying sound to this system, it is important to use the soothing major chords, leaving the minor chords to writers looking to add some angst to their music.

Of course, this manual does not play the note out loud. It relies on your internal intelligence to recognize the vibration and resonate it internally.

You will also see that I have introduced octaves into the sound element. Again, the more specific we can be, the more accurately we can communicate with our cells and our inner intelligence. Some octaves are discordant to our bodies, even if the chord is correct, so it is important to be exact. I have used the normal 6 octaves found on a keyboard, plus 4 others that I suspect go higher than our auditory range.

As a final point on sound, John S Allen has written an interesting paper exploring the relationship between music and the Fibonacci sequence. The sequence 2,5,7,12,19,31 onwards has musical significance. 5, 7 and 12 represent the number of pitches per octave in pentatonic, diatonic and chromatic scales as well as the number of black keys, white keys and keys per octave of the traditional keyboard.

Is it any surprise that our bodies respond to music when they share the same fractal language?

## Using color

The colors I have used are based on the chakras, (the subtle energy vortexes that connect our physical to our energetic bodies) along with all encompassing white light.

This conveys further information in a language we can understand and is well proven as a powerful healthcare modality. The chakra colors are the same as the colors of the rainbow, i.e. red, orange, yellow, green, blue, indigo, violet, plus white.

The combination of this mathematical progression, the colors and the musical chord is similar to the energy created by the passing of a bow across a violin string. Each item is incomplete on its own, but together they create a perfect resonance.

I hope I have now explained the whole fractal process and how I have created the complete equation, using sound and color to enhance its vibration. A complete example looks like this:

$$\text{Fibonacci Sequence } F_{(n+2)} = F_{(n+1)} + F_{(n)} \quad -\infty \leftrightarrow +\infty \quad 3 \text{ dimensions Green C} \\ \text{Major Octaves C1 and C3. Starting } (n) = 5 \text{ and } (n+1) = 8$$

This may all sound complicated, but please remember that you do not need to understand, or even believe in, these concepts for this system to work. I could not tell you exactly how the myocardium muscle in my heart is stimulated into contraction by the sine-atrial node, but my heart still keeps on beating. Our internal intelligence knows what to do and that is all that matters.

The same applies to the concepts I am trying to explain here. It is our inner intelligence to which I am appealing. Conscious understanding is a bonus that carries the potential for some placebo based healing, but no more. All I ask is that you keep at least an open mind, as complete disbelief will exercise your creative powers and bring into being the very negative outcome you are expecting. The power of intent cuts both ways, which is why a positive person tends to heal quicker than a negative one.