

## Strange Attraction

*“Cliff?? What cliff? I don't see no stinkin' cliff!!”* – Jeremy the Lemming

In order to define “chaos”, one need not look further than the confines of my skull. Everywhere I look there are interesting, amazing, and sometimes dumbfounding attempts to quantify spirituality through the mathematical labyrinths of physics – a language so complex that no spoken language on our planet contains an adequate vocabulary to translate much of its meaning. Words used that claim close proximity of the calculated meaning of an equation can often - DO often - mislead the layman into thinking something other than what is true. Still we try to find the substance of the genius' theorem through our limited access of verbs and adjectives. Perhaps I need to go back to school and study math. Now there's a frightening thought!

When a head spins wildly out of control it is almost impossible to isolate the blurred images that race around at photonic speeds. Trying to find the ingredients to the recipe of life's elixir becomes almost impossible. But if we blink at just the right moment, something remarkable happens. A frozen image takes its shape, becoming an epiphany. Don't look away! Let it gel! Allow it to take its form and don't let go!

As I sprint at break neck speed to catch these illusive snapshots in my mind, I can't help but think about my friend Jeremy the Lemming. Am I heading towards another cliff? Or instead might I find a life-transformational truth of our existence? Most often my discoveries are heaped onto an ever-growing pile of wonder and amazement, destined for only the occasional afterthought – rarely dissected much further. This month's short article intends to dive into one such observation, though it feels important enough to give more than a fleeting glance. But in order to gain some insight into this phenomenon, we need to first negotiate some of the trip wires of Chaos Theory. I promise not to bore you... too much, I hope.

To delve too deeply into the web of knowledge that is known as “Chaos Theory” could cause a loss of your interest and attention. So instead I'll only write of a single aspect of this remarkable science – Strange Attractors.

For those who have little or no exposure to this chaotic concept, simply stated (and I mean VERY simply) Chaos Theory asserts that randomness does not exist – that there is form and function borne in the midst of chaotic environments that emerge as an evolutionary condition – sometimes better... sometimes not. A “Strange Attractor” is a representation of these chaotic systems graphed in a multidimensional environment called “Phase Space”. Through this charting method, every possible condition is represented to include thermodynamics as well as cause and effect. It's obviously much more complicated than that, but for our purpose this is about as much as I think we need to understand.

So what do “Strange Attractors” have to do with anything? On the surface their purpose appears to only have meaning for those who would spend countless hours plotting and

evaluating their mathematical qualities in order to gain a comprehensive picture of chaotic reality. Looking at a picture of a strange attractor might only elicit a mild response such as “Oh... that’s nice.” But to create a transformational shift in the way that we think of existence? No, not really.

Of all of the strange attractors I’ve looked at (and there have been many), the one that has captured my imagination the most is called the “Jong Attractor”. This particular attractor is often depicted with fluid and trance-inducing motions with the use of computer animation. While you observe this particular display of chaos-in-motion, you’ll experience an eerie flow of lighted pixels as they dance their way across the screen creating a metamorphosis of amazing and beautiful patterns.

In the following link you can watch (and listen if you like) to the flow and ebb of such a system. I recommend that you spend at least a minute or two to evaluate the system as it plays an important role in the purpose of this article. Just click on the link, expand to full screen, and relax while you try to take it all in. Remember as you watch that these images are the result of “Chaos”.

[http://www.youtube.com/watch?v=1nB2uqC\\_Zeg](http://www.youtube.com/watch?v=1nB2uqC_Zeg)

Absent of context, the Jong Attractor might offer the observer nothing more than a really cool light show. In this “light show”, one can witness the waltz of countless specks flowing through a seemingly choreographed routine. As the spectacle of lighted dots move in unison – some in groups to the south, some migrating to the east, some that reverse direction, circle, and often collide into a single explosion of light as shapes become the sum of all their parts – it becomes impossible to ignore the form and function that their diverse and many paths suggest.

Now if we reintroduce the context of what this Strange Attractor represents, then a greater beauty emerges: the beauty of a shared destiny that affects every system in our environment to include our own selves. If specks of light moving in random fashion can find their way through a harmonious flow of unity and apparent cooperation, what prevents a logical mind from arriving at similar conclusions about the biorhythms of a collective consciousness?

The first time I watched the Jong Attractor in motion, I couldn’t shake the feeling that I had already been exposed to similar images – images floating in space with an unpredictable charter yet still possessing a grace of movement as if orchestrated by an unseen conductor. With my aging memory in “Senior Moment Mode”, I decided to watch the Jong Attractor animation again... and again... and again.

It was at the 2:40 point on the fifth consecutive viewing when my synaptic boycott ended. The memory of it hit me like an old brick-sized Minolta Camera upside the hard spot of my head (which is just about any spot of my head). The required images dumped themselves into my vacant memory with clear cinematic grandeur. In a tidal wave of recollection, I knew exactly where I had seen this behavior before. No, it wasn’t in a

science book, not an obscure graph of plotted mathematical points, and not in a child's over-used coloring book. The place I had seen these amazing patterns was in a natural phenomenon known as "Murmuration".

It was late last year when my father had sent me an internet video link that showed a Murmuration of Starlings in Ireland. I was stunned the first time I watched it. Now, a hundred views later, I find myself no less mesmerized than on that initial showing. Hungry to learn more about Murmuration, I've since discovered that this phenomenon happens globally. But the most compelling images captured on film are of European Starlings after they've migrated to the skies of the United Kingdom due to its cooler climate in the late autumn and winter months.

There, as the sun sets, offering its own magnificent display of reds, blues, and oranges, the darkened silhouettes of hilltops and tree lines are soon accompanied by fashionably early black dots of Starling murmurers. At first there are just a few, then a group, and eventually a flock that sometimes numbers over 100,000 and fills the English, Irish, and Welsh skies. Their breathtaking aerial show can be seen for miles on the horizon, compelling many to halt what they are doing and take pause while trying to find their jaws, dropped somewhere on the ground.

Scientists have studied the behavior of Starlings for decades without a clue to their amazing capabilities. However, in recent years with the advances of computer simulations, it has been determined that the patterns created in these European skies are represented by cutting-edge physics. It is known today that the art created by this feat is equivalent to a "Phase Transition" event, such as is the Jong Attractor.

I've said too much without giving you the benefit of witnessing Murmuration for yourselves. So below I've provided another link for your enjoyment. Take a break, pour a drink, then come back and prepare to be sucked into a display of what (to me) can only be described as eye candy for a searching soul. Turn up the volume if you want an appropriate dose of classical music to accompany this very pleasing video.

<http://www.youtube.com/watch?v=eakKfY5aHmY>

If you aren't saying "Wow!" about now, then you must be a Starling and thinking to yourself "What's the big deal?" But just in case I'm wrong, here is another link of Murmuration that I've enjoyed as much.

<http://www.youtube.com/watch?v=4LDtvU8kymg>

If you are like me, you'll find that it is impossible to tire of looking at the many internet videos posting these birds in action. There are several out there that will draw you into their hypnotic web as these marvelous birds respond with flawless timing and harmony. That they be in total harmony is absolutely, for if even one of them were to move out of harmony, the result would be a massive collision in which hundreds of birds would

probably die....yet they flow through the sky, seemingly effortlessly, always in perfect flow with each other.

What does any of this mean along neurological pathways of thought? No one really seems to know. Many scientists dwell in the concepts of connectivity beyond our ability to truly understand. Some will attribute the Starling behavior to chemical synchronicity akin to Malaysian Fireflies in their late June display of simultaneous flashing. But proof of either assumption sets sail before we can board its “vessel of enlightenment”. And now here we stand at the water’s edge, products of our own assumptions – eager for knowledge, we settle instead for educated guesses and wild philosophical dreams.

As my fingers take their final taps on this month’s thoughts, I’ll leave you with my own impressions of Strange Attractors and Murmuration.

Each day it seems that everywhere I look, and just inside the periphery of my vision, I can perceive “my” God jumping up and down, beating His chest and wildly waving His arms, begging for our awareness. His loud and visual attempts to gain our attention manifest themselves in the beauty of a desert sunset, the eruption of a pupated caterpillar emerging a butterfly, and the steady rhythm of crickets whose choir seems to resonate with nighttime’s sparkling stars.

But in the instances of Chaos Theory’s Strange Attractors in science and the Starling Murmuration in nature, I get the sense that this God I’m searching for is trying to make His presence known using Def Leppard’s sound system. And in much the same way that I might leave a rock concert – with pounding ears and adrenaline racing through my veins – each time I view the magical qualities, as I’ve described in this post, I leave with my heart pounding and electricity racing through my head at a dizzying pace. Witnessing such a call for awareness, what do we really see and hear? A bunch of points of light moving in unison? A sky filled with black dots? Or instead, are we looking at the ethereal signature of an enigmatic and unimaginable force of spirituality?

I’ll report, you decide. See you in August.

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