Cosmos, Chaosmos and Astrology:
Rethinking the Nature of Astrology
By Bernadette Brady
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Bernadette Brady is one of our most accomplished astrologers, well-known as an author and an inspiring lecturer on a whole range of astrological and philosophical issues, her research into the history of astrology has also resulted in a number of key academic texts. In this book she explores the significance of astrology as an enduring cultural phenomenon, which is examined through the lens of chaos theory, a model that engages with both the patterns and the apparent randomness of life, and may also offer a clue as to the ambiguous results in much astrological research.

As with most words, the concept of chaos has many usages, and Brady begins by drawing on Umberto Eco's essays on James Joyce, who coined the term *chaosmos* to describe the multiplicities of thought and language within the experience of lived time. Joyce is a most appropriate originator of this term, applying it to his own life (which was often chaotic, in the everyday usage) as well to the structure of his major works, which are far from being 'chaotic', but artfully planned. Joyce was very taken by the work of the Italian philosopher Giambattista Vico, who explored myth, language and society in terms of recurring cycles - an 'eternal ideal history' as he put it- themes evident in both *Ulysses* and *Finnegans Wake.* However, Joyce did not feel bound by Vico's ideas, stating: *'I use his cycles as a trellis'* though admitting that *'they have gradually forced themselves on me through circumstances of my own life.'*[1] Though it has to be said that Eco ignored Joyce's own reasons for his development of the 'interior monologue', a text containing apparently random observations. Joyce introduced the concept of the 'underthought'; an unacknowledged concern that lay beneath the conscious reflections of his characters, and from which their thoughts emerged, similar to Wittgenstein's claim that *'there is always to be found a dark background, which we are only able later to*

bring into the light and express as a thought'.[2] While there are many astrological references in Joyce's major works, Eco's reflections on the chaosmus take place within literary theories, to which I shall return, and so ignore the mathematical aspect of chaos theory that is being considered here. While I was introduced to the subject of chaos theory by the late Theodor Landscheidt, who included it in his *Sun-Earth-Man*[3], his earlier *Cosmic Cybernetics* also referenced fractals. Interestingly he, too took Joyce as a point of departure: *In Joyce's Finnegan's* [sic] *Wake modern day experience and ancient truths are allowed to coalesce… forces which were part and parcel of the ancient state of being are reviving. In particular the analogical approach, which at the turn of the century was still regarded as a primitive form of perception, is now experiencing an unexpected renaissance… This applies not only to such rigorous sciences as theoretical physics, where the quantum theory can only be linked with the laws of traditional physics by means of correspondence*[4]*.* Unfortunately, his *Sun-Earth-Man* remains something of an enigma as it wove together a range of apparently different numerical approaches which proved to be a mystery even to the most accomplished reader. In his review[5], Professor Percy Seymour commented on its lack of clarity, its absence of a 'clear mathematical model', and also questioned some of its assertions. While the book itself defeated me, there was sufficient for me to wonder if his ideas could throw a different light on the concept of archetype. I touched on this briefly with regard to the 'strange attractor', commenting: *'As it has been postulated that the basic dynamics of the solar system allow for chaotic manifestation, there is the real possibility that astrologers of the future will need to explore the mathematics of chaos with considerable attention'.*[6] While this sounds very grand, it offered zero elucidation. This cannot be said about Brady's work, which explores the theory with clarity and much originality.

While classical physics portrays the solar system in terms of the 'clockwork' analogy of Kepler and Newton, and thus theoretically predictable until entropy has its way, there lurks an unpredictable worm in the bud. The sun may appear to command the planets, but the planets ultimately hold the sun in *their* thrall by influencing the position of the Centre of Mass, around which the sun oscillates. Thus if some unexpected amalgamation of planets, asteroids or the sudden appearance of a comet were to shift the Centre of Mass, as catastrophe theory also discusses, the result could be a dramatic shift in the cosmic order, and all of us on planet earth will have a very bad day. The essence of chaos theory is its emphasis on the interdependence of components within a system. There is a constant, recursive loop

in which the smallest input could result, like the butterfly's wing, in an unpredictable storm of exponential proportion. It is this phenomena that the Julia Set (J-set) and Mandelbrot Set (M-set) illustrates. Having in the past spent many hours avoiding work by experimenting with these algorithms on my old 286 computer, with most falling victim to entropy or error codes, I gave up. Not so, Brady.

She begins her discussion by introducing us to a range of mythological accounts of how order came to be imposed on the ancient experience of the world, effectively resulting in today's scientific cosmology, an approach which she challenges with the concept of chaosmus. Thus two central themes are brought to our attention. The first is the ancient notion of *sumpatheia*: an essential connectedness of phenomena that are *'cyclic but do not return to the same, indifferent to scale or form … a type of stability which is a potential buried within the ontological force of the void… and which binds all to everything'*. Also, quoting Stoic doctrine, this *'is an evident truth by which some further non-evident truth is revealed.'* Echoing Heidegger's claim that western philosophy took a wrong turn with Socrates' valuing theory over the lived experience of Being, Brady contrasts *sumpatheia* with Plato's mind/body distinction later made famous by Descartes, where the ideal world of forms and ideas were dislocated from the richness of mundane life. This conception has led to privileging of theoretical concerns over embodied experience. Similarly Kant, while acknowledging that there must be some sort of 'organising force' in nature, introduced yet another form of splitting with his concept of the *phenomenal* and the *noumenal*; the noumenal being the true nature of things which we, as limited human beings could never grasp. For Nietzsche this further emphasised the western world favouring the pure light of Apollo over the wild abandon of *his* preferred god, Dionysus.

To set the stage for her thesis, Brady gives some clear example of how the ancients in various cultures used astronomical/astrological omens to make sense of their world and as the basis for undertaking symbolic actions aimed at warding off potential disasters. While the modernist would see these as anthropomorphic superstitions, Brady asks the reader to reconsider the whole concept of 'superstition' in the light of both sumpatheia and chaos theory. Starting with the conventional concept of superstition she offers the paradigm of a cricketer who carried a 'lucky' handkerchief because it had been present during a successful game, and that this might ensure further achievements. As she put it*, 'these actions indicated that he subscribed, at least in part, to a chaosmus order'* and that *'scale invariance and self-*

similarity are a requirement for the working of omens [and] *the logic of superstition'*. While this is certainly possible, there may be many other reasons for holding to a belief, which range from the profound to the patently delusional. One of the important aspects of using totem objects is their 'otherness' -it is unlikely someone would claim to have a lucky big toe even if the toe was also present at successful moments. Much 'superstition' can also be seen as a derivative of death anxiety, a warding off of the Grim Reaper - the ultimate strange attractor? In this context it is interesting that the myriad tendrils of the M-set -which go on for ever - are what catch our attention, rather than the dark hole at its centre where over-iterated numbers go to die.

However, it is the unravelling fractal that concerns us here, and the capacity for some to reform their shape without limit. As well as considering the wider, metaphysical issues Brady applies chaos theory to examples which are not in themselves belief-dependant, for they state demonstrable mathematical arrangements, or indisputable social facts. These include the well-attested examples of certain planetary arrangements within a collection of family charts; granny's moon in the same degree as her granddaughter's, but not her daughter's etc. While my own Mars position echoes my grandfather's to within one minute of arc, this is not so in my father's chart. All astrologers who have explored family data will have such examples, and can attest to the fact that, while certain patterns clearly repeat there can be inexplicable omissions. Life histories within such groups also reflect odd coincidences: daughters getting divorced, but not sons, families where the third child is killed, and so on. In my own case, my grandfather, father, brother and myself have all married women born in other countries. Such examples strongly support Brady's claim for the presence of the J-set's 'strange attractor'. While this might reformulate traditional concepts of 'fate', that there is an uncanny drift towards certain situations, the remarkable precision of some planetary repetition hints at the presence of more stable fractals, such as those generated by M-set. Either way, such examples strongly support the paradigm of chaos theory: that patterns repeat but not always, or not quite, and in many ways. At a general level a very good case can be made for understanding astrology in this manner, as much of its practice involves the repetition, via multiplication or division, of various cycles or measurements. In her writing Brady links the various technical terms of chaos theory with the well established practices and attitudes of astrologers; a reinterpretation that is both clear and persuasive, and takes the discussion of fractals into previously uncharted waters. In drawing these connections she reminds us that the underlying

indeterminacy of chaos theory also subverts the astrologer's wish for mathematical perfection, and thus confounds the demands of conventional astrological research, where sumpatheia is notably absent.

In both modern and traditional practices we find a plethora of pristine mathematical divisions, encompassing harmonics, midpoints, house systems with their attendant rulerships and planetary hours, etc. All represent the imposition of immaculate geometries, all quite alien to nature, but pressed into the service of discovering, or imposing, a sense of sublime order onto life within the solar system. Astrologers, particularly those working in the financial markets, know all too well how significant correlations can repeat for a period of time, and then suddenly cease. Those wedded to a more complex use of harmonics might explain to their disgruntled clients that a familiar pattern had been unexpectedly negated by a combination of minor sub-harmonics all phased to the detriment of more significant planetary arrangements. Just as fractals can repeat themselves in ever decreasing replications so does Addey make the claim (also fundamental in Hindu approaches) that each of the Zodiac's twelve signs contains its own zodiac, and within that, etc., etc. However, much of Addey's work on the interplay of harmonics rests on relatively simple examples. How the vast potential of harmonic interactions might operate within the circumstances of life would demand a far more complex algorithm than exists within Mandelbrot's $Z=Z^2+C$. While I can understand why Brady did not wish to explore this –I don't know how this could be realistically achieved, given that no formal example of such interactions has ever been given – I did feel that Addey's thought should not have been omitted from her discussion, as his theory did at least imply how the interweaving of harmonics might make apparently random findings explicable, even if Dean holds it all to be as naught[7]. But here we return again to her central theme: the application of integers, found equally in Addey's work and in mainstream science *vs* the messiness of everyday life in which, nevertheless, some form of fractal order might be found, if one knows how to look. As most of our 'looking' is dependent on the language that frames the manner in which we proceed, and mathematics is no less of a language than any other, for even the most complicated formula is ultimately explicable in the everyday, so we should also consider how the structure of everyday language itself plays a part in our enquiries. Interestingly, this reveals some similarity with the themes discussed so far.

In his *Wholeness and the Implicate Order*, the physicist David Bohm emphasises how the subject-object-verb structure of scientific discourse has created a false

picture of our world *'so that the divisions implied in the language structure are then projected, as if they were fragments, corresponding to actual breaks in what is'*[8]. In terms of Brady's work I would understand Bohm's 'what-is' to be akin to an undifferentiated chaosmus that pre-existed all attempts to define its nature. In the myths and legends that Brady draws on we can also consider other approaches. For example, Levi-Strauss coined the term 'mythemes' to describe key moments within mythologies - hero's journeys, quests, marriage, floods, famine, etc. He assumed these had a universal, though fluctuating nature which *'enable one to discern beneath accidental variations certain stable and well-structured systems of meaning'*[9]. Similarly Wittgenstein drew attention to what he called 'family resemblances': that we recognise connections within the world that are hard to state precisely, just as we can note similarities between family members (same hair colour, shape of nose, mannerism, etc.) that do not require *all* factors to be present for membership to be established, and indeed one feature might be lacking, or another present which is not shared, but this does not remove the general sense of 'family membership'. He also used the idea of a rope; made up of millions of fibres that do not run the full length of the rope, but nevertheless contribute to making the shape of the rope unmistakable –an image of self-replication that has also been pressed into the service of supporting fractal theory. Might fractals be involved in genetics? A language researcher quotes a village blacksmith: *I have a lot of my grandfather's features... I have the same hands. Hands last a long time, you know. A village sees the same hands century after century*.[10]

Wittgenstein's view of language has much in common with sumpatheia. Slightly updating his example[11] we can consider what connection can be made between written notes on a sheet of music, the grooves of a gramophone record, the distribution of magnetic particles on a tape, the sequence of digital codes on a CD, the way the pianist moves her fingers, the vibrations in a loudspeaker's cone, and the waving of the conductor's arms. All these, if they refer to the same moment of the same music, must have something in common, for their variant languages all portray the same, precise moment in vastly differing ways. It would be nonsense to suggest that they had nothing in common, but who could say what it is? The nearest we can come to linking these disparate examples is our perception of them as *being connected*. It is our *thought* that links them together, but there can be no formula for describing the nature of that linkage. We see it, or we don't.

While Wittgenstein's view might make immediate sense to the astrologer, who can similarly link disparate phenomena, science tends to demand that something is either *in* or *out* of one set another, even if its own discoveries simultaneously suggest that life may be more complicated. Evolution, for example, is declared to be random and arbitrary, but the closer the building blocks of life are examined the more it appears that they are artfully arranged, as Fibonacci observed in the 13th century. In his award-winning paper on the Golden Section (GS), published in journal *Cycles*[12], Theodor Landscheidt offered considerable evidence for the influence of fractals in a variety of time-series data (market movements, rainfall, etc.) as well as within the Gauquelin data. Here he offered an explanation as to *why* the familiar graphs peak 10 degrees or so after the angles - the claim being that they are exactly phased from the rising and culminating points in accord with the GS ratios. Particular attention was paid to the GS because it is fractal and, most importantly, its spiral unwinds logarithmically as in the M-set. He comments that *'none of the professional 'chaos' researchers seem to recognise that this finding suggests a close connection between cycles, the number five, the golden section, and the logarithmic spiral'.* Attention is drawn to the number five because a pentagram contains the GS ratios in various ways.

While Ertel was critical of Landscheidt's examples of the GS 'effect' in the Gauquelin data[13] other more recent contributors to *Correlation,* Robert Currey (Vol 29.1) and Nick Kollersrom (Vol 27.2) have offered examples of GS ratios in a variety of planetary cycles. Such findings have considerable implications for the ideas that Brady presents, which in the main draw on fractal theory to support a thesis of indeterminacy. While there is little doubt that the picture she paints with fractals captures much of life's unexpected variations and makes a good case for why this might be expected, there is another way of looking at this. As she puts it, *life will appear to occur randomly in a manner which looks like, to the person embedded in classical science, as being unpredictable, Nevertheless… the movement, far from being random, actually orbits around a set of multi-dimensional foci.* Thus randomness may not be as random as it might appear at first glance. The M-set contains coherent repetitions and the strange attractor is involved in '*directing these events in what appeared to be random but instead falling into a precise set of patterns'.* Within the natural world and the human body there is abundant evidence for fractal scaling, with leaves, rivers, mountains, arterial and neurological arrangements branching and replicating in accord with one or another seed moment. In digital photography fractal transforms identify coherent similarities within a picture

and create the ubiquitous JPEG file. Within the M-Set and the J-set we find ways of describing phenomena that hold both the possibility of accurate prediction as well as the potential for dramatic change. To add further complexity, Brady suggests that there may be 'personal fractals', and 'verbal fractals', though was less clear as to what these might be. While life may re-Joyce in such sheer abundance, its very multiplicity demands that close attention is placed to the manner in which such mathematical exuberance is investigated, to avoid the charge often levelled at astrologers that they will always find something to explain either their successes or their failures. As with the problem of archetypes if, as some Jungians suggest, that an archetype lies behind *every* phenomena, then there is nothing special about an archetype, and one might as well engage with what is perceived and experienced for nothing can be usefully learned from knowing that it merely reflects its own, identical format. So where does all of this leave the issue of astrological research?

Brady quotes Michal Shallis' claim that astrology and science *'come from different world views and one cannot validly be regarded in the light of the other*, and suggests that with this statement he 'drew a line in the sand'. Not quite. While the Gauquelin's work certainly moved off into endless arguments involving statistics, magnetism, resonance theory and what have you, their research initially demonstrated the existence of certain patterns within data sets, make of them what you will. This is an approach astrologers have always used: the idea that there is significance to be found in repetition, a view Brady also draws on. Noting when repetition *fails* only serves to emphasises its importance. More importantly, we have to ask if a division between science and astrology is cut and dried. Consider the many earlier scientists such a Galileo, who made no such distinctions. Similarly, Richard Dawkins and Rupert Sheldrake are both accomplished scientists with little but their initial education in common, for their theories diverge much as the hopf bifurcation suggests. The label of 'science' claims Feyerabend along with the various scientists quoted by Brady in support of her work, as well as the many contributors to the *Skeptical Enquirer,* who perhaps comprise a set of 'strange detractors'. While Brady shares the view (and here I would include myself) that conventional science can never supply astrology's ultimate paradigm, any more than it can explain the complexity of human behaviour, we should not overlook the fact in attempting to apply chaos theory to astrology Brady is caught within an intriguing paradox. Whilst eschewing the work of those astrologers who seek scientific support she is nevertheless advocating an approach that is deeply rooted in a calculus only made possible by the computer, and is being offered here as an hypothesis for astrology's inability to

demonstrate consistent veracity. It would seem that astrology still need to draw on the scientific paradigm to support its philosophy.

This quandary goes back to Plato. As Derrida pointed out[14] there is always something lurking out of sight, something 'other' and overlooked that nevertheless demonstrates its importance when discussing the necessity of its omission. Plato rejected the blandishments of writing and mythology but used myths to support his philosophy and also wrote extensively, specifically claiming that truth was '*written on the soul'.* In many respects chaos theory is Plato's worst nightmare, a viper's nest of the very irrational numbers he refused to acknowledge. But chaos theory can also be seen as portraying something akin to his philosophy. While our computers, whether my old 286, or the latest Cray, can continue to calculate the M-set until they reach the limits of their capacity, the M-set is implicitly infinite, everything is present from the start. Only in the mundane world do error codes emerge or silicone chips melt. Nothing portrays this better than the Koch snowflake, which unravels its fractal perimeter to infinity while its volume remains finite. But we live in a finite world and have to engage with the implications of the ideas that emerge within it.

In offering her radical reappraisal of how astrology might better be understood Brady has produced a work that attempts to rephrase ancient readings of the sky in the light of one current theory. It is a profound, original and challenging text with a message that questions the technical assumptions of innumerable schools, and should be read by all who hold fast to their techniques. But it is also a view that contains the potential for its own subversion, for it is based on a calculus in which both stability and the unpredictable are equally in play. If fractals can clearly be shown to operate with consistency within the physical world, then what of their presence within the flow of time? Might they be mapped within the individual life or glimpsed within some larger datasets, as some initial work already suggests. To date much research into astrology attempts to substantiate the astrological assumptions that Brady's work questions, and is often seen to fail when it does not verify them. Despite her emphasis on the indeterminate - for which there is much evidence – not *all* is random. There may be *consistent* omissions within the inconsistencies of the fractal world. If so this book might mark the first step towards their discovery. While I recognise that this may not be the primary aim of the author, her suggestion that the unpredictable is always with us leaves open the door for the unexpected.

I would not like to conclude this review without commenting on the quality of the book itself. Unlike many texts published under the aegis of the academy, the publishers have matched Brady's creativity with a beautiful designed volume, where cover, illustrations and typography complement each other. *Other publishers please note.*

Mike Harding

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[1] *James Joyce*, by Richard Ellman. OUP, 1982, page 554.

[2] *James Joyce's Concept of the Underthought* by Mike Harding, in the *Journal of the Society for Existential Analysis*, Vol 19.1, 2008

[3] *Sun-Earth-Man* by Theodor Landscheidt, Urania Trust, 1989.

[4] *Cosmic Cybernetics: the Foundation of Modern Astrology*, by Theodor Landscheidt. Ebertin-Verlag, AAlen, 1973, page 7

[5] *Correlation*, Vol 8, No 3, The Astrological Association. 1988

[6] *Hymns to the Ancient Gods* by Michael Harding, Peguin/Arkana, 1992, page 67

[7] *John Addey's Dream*, by Geoffrey Dean, in *Correlation* Vol 16, No. 2 1997/98

[8] *Wholeness and the Implicate Order*, by David Bohm. Published by Routledge & Kegan Paul, London, 1981, page 32

[9] *Semiology*, by Pierre Guiraud. Published by RKP, London1975, page99.

[10] *The Body's Recollection of Being*, by D.M. Leven, Published by RKP, London 1985, page 146

[11] See *Philosophical Investigations*, Part 1, by Ludwig Wittgenstein. Published by Blackwell, 1997, for various discussions on his concept of 'language games'.

[12] *The Golden Section: A Building Block of Cyclic Structures* by Theodor Landscheidt. In *Cycles*, published by the *Foundation for the Study of Cycles*, May/June 1992

[13] *Scrutiny of Theodor Landscheidt's Planetary Claims*, by Suitbert Ertel, Correlation Vol 18 No1 1997

[14] *Plato's Pharmacy*, by Jacques Derrida, in *A Derrida Reader*, edited by Kamuf, published by Harvester/Wheatsheaf, London,1991