



THE HIDDEN GEOMETRY OF FLOWERS: LIVING RHYTHMS, FORM AND NUMBER

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Nature and Life and Spirit

- Nature is alive with spirit - (*pneuma*)
- Life is the most sacred thing in existence
- “All flesh is grass” – Isaiah 40:6
- Our bodies are fueled by vegetation



Four Perspectives on a Flower

- Material level
- Social or psychological
- Cultural and mythological level
- Inspirational level



The Eternal Verities and Anamnesis: Plato

- The Eternal Verities of Plato as seen in flowers:
 - Teacher of symmetry and geometry, the “eternal verities”
 - Remind us of the geometry that underlies all of existence.
 - Remind us of timeless verities, reflections of a universal truth
- Anamnesis
 - Sources of remembering (*anamnesis* = deep memory), recalling our wholeness and that of the natural world
 - Qualities of a flower awaken the mind to inner secrets or intrinsic permanent ideas
- Plato’s *Timaeus* – sameness, otherness, and essence are the principles of existence
 - The first two numbers can represent sameness and otherness. Their interrelationship is ‘Essence’ or wholeness, or Being. The circle itself represents the quality of essence or the whole.



How Do We See a Flower?

- A flower is the celebration of the fulfilment of a plant
- A plant communicates through its flowers
- The experience of color
 - A profoundly deep experience,
 - Beyond physics



What is Life?

- All life is one
- Everything is interrelated



Modern Science, Truth and Beauty and the Soul

- Relative and Absolute – two worlds
- Says Plato: The soul is the third factor that is a bridge between the domain of absolutes and relatives. The relation between the certain and the uncertain is the domain of the 'Soul'.
- Integrated consciousness unites relative and absolute
 - The human mind takes things apart with its analytic habits of reasoning but the human heart puts things together because it loves them.
- Pythagoras pursued:
 - The True
 - The Beautiful
 - The Good
- What we have to say about flowers is grounded in the True, the Beautiful, and the Good, ever true and life-supporting
- Our minds require Beauty, and our wholeness, or soulness requires the ultimate good.



Viewing a Flower Geometrically

- Arithmetic and geometry - humankind's consistently universal languages
- Pythagoreans held number in the highest regard – it was the nearest the human mind could get to participating with the Divine Mind
- Philosophical numbering was originated by the Pythagoreans, archetypal numbers, usually referring to the first 9 numbers.
 - Philolaus was believed to have had direct contact with Pythagoras and he left us doctrine of numbers



The Socratic Vertical Line of Consciousness

- The Ladder of Knowing
- Socratic vertical line of consciousness or knowability – the Socratic Divided Line *(Republic Chapter XXIV)*
 - *Eikasia* – conjecture
 - *Pistis* – belief
 - *Dianoeia* – thinking objectively
 - *Noesis* – reaching permanent truths
- Mathematics and Geometry are in the world of understandables



Where Does This Lead Us?

- Understand the role that order has on the human mind
- Recall the debt you have to the green world
- Awakening of mathematical consciousness is anamnesis or remembering
- Pattern
 - Without pattern, we cannot make sense of anything
 - Pattern is synonymous with recognition and the power of consciousness
- Flowers are the emissaries of the 'ever true', making the world we live in a cosmos not a chaos.



The Study of Flowers Over Time

- In the Vedic tradition, flowers are represented as part of the continuum from the physical to the metaphysical
- Hildegard of Bingen also talked about the metaphysical qualities of the plants themselves. Herbs were made up of body, mind, and spirit.
- The study of plants should show a respect for Essence, the combination of reasoning and intuition, that offers us a glimpse of the Divine



The Traditional Perspectives on Wisdom

- Love of wisdom – *Philos + sophy* = Wisdom – Pythagoras
- The distillation of knowledge is what we call wisdom
 - Wise thought integral with wise action
- Unchanging qualities
- Universal language
- Hierarchy of Consciousness or Levels of Knowing by Socrates
 - *Eikasia* – the dirt, the ground, the clay
 - *Pistis* – opinion – the root
 - *Dianoeia* – the stalk – the leaves of knowledge
 - *Noesis* – The *Nous* – the flowering of wisdom



The Rhythm of Life and Numbers

- The doctrines of Pythagoras, never written down, are reflected in Plato's *Timaeus* dialogue.
- The profound meaning of "Two"
 - Twoness is a profound study and a fundamental experience
 - Closely associated with Fourness and Eightness
 - Don't confuse "two of something" for "twoness"
- The circle naturally suggests 4
 - Life is rhythmic
 - A cosmic rhythm affects all things on earth
 - Dawn, day, dusk and night
 - The 24 hours of a day



The cultural and mythological perspective

- Flowers for special occasions
 - Weddings
 - Proms
- Symbolism of Flowers
 - Symbolism is a conveyer of the truth
- The Lotus flower is pre-eminent among many cultures as the mythological symbol of the flowering of the human soul
- Flower mythology



Roses and Wreaths

- The wreath as a symbol of attainment
- Observe the effect on a person of having a wreath on their head
- Garlands
- The Myth of Chloris, the goddess of flowers, creator of the Rose
 - Chloris collected a diadem of dewdrops and crowned the new flower, a Rose, the queen of all flowers



The Inspirational Perspective on Flowers

- Flowers have a long history as sources of inspiration for human beings
- Regard the fourfoldness of the inspiring forces
- The Four Inspirations of Plato: (Phaedrus)
 - The inspiration of the Prophet – Apollo
 - The Mystic – Dionysus
 - The Poet – Muses
 - The madness of the Lover – Aphrodite and Eros



The Inspirational Perspective: When beauty descends to earthly existence

- Flowers show:
 - Truth
 - Goodness
 - Beauty
 - Harmony
- Plotinus
 - Seek beyond the beautiful to experience 'Beauty itself'.
- Proclus – Three Hypostases of the Divine
 - Faith
 - Truth
 - Love
- What is the relation of flowers to the inspirations?
 - Embodiment of Beauty
 - Feed the intellect with symmetries, colors, geometries and forms
 - Hold much in common with musical proportions
 - The soul's very nature is proportion – Plato's Timaeus



The inner purposes of flowers

- The things that are symbolized in a flower:
 - **Symmetry** – balanced and poised activity
 - **Geometry** – structural
 - **Gravity resistance** – impulse of life toward light
 - **Insect interaction** – collaborative fertilization and nourishment
 - **Fertility** – regeneration
 - **Color** – attract attention
 - **Pollination** – fertilization
 - **Fragrance**
 - **Medicine** and natural health
 - **Nourishment** – service and sacrifice



The Seed as a Point of Origin and Potentiality

- The seed sends its first shoot to move towards the darkness of mineral nature
- The second shoots move heavenward
- Principles:
 - Life begins in darkness
 - Water and minerals are needed from below
 - Life resides between heaven and earth
- The desirability of the fruit increases the distribution of the seeds in a mutual collaboration



Seeds and Spirals

- The seed is the ultimate contraction into intense potential
- Unfurling to the light
- Another pattern of life is the spiral
- Spirals are a metaphor and symbol of energy or botanical Consciousness
- Spiral figures are a metaphor of controlled growth
- In the bud stage, we have the opportunity to look at the early expression of the spiral motion that characterize so many unfoldings
- The sequence of the unfolding of the sepals of a rose is in the shape and direction of a pentagram
- The profundity of the blossoming world and its integrality with human life
- Flowers nourish us at all levels



The Orientation of the Face of Flowers

- *Fax, facis* – Latin for torch – implies a light-emitting quality of the face – as in her face shone with happiness
- Flowers are the bearers of brilliant ideas



Archetypal Geometric Form and Spirals

- Platonic figures from Timaeus:
 - Tetrahedron Fire Square root of 3
 - Cube Earth Embodies order
 - Octahedron Air Square root of two
 - Icosahedron Water
 - There is a golden rectangle between the opposite sides
 - The internal diagonal proportion is called the golden ratio
 - Kepler called this proportion a jewel
 - Dodecahedron – held in special awe by Pythagoreans who were reported to have been forbidden to divulge its form, potentially explaining Plato's silence on the subject.
- Platonic School at Chartres
 - All masons educated in the seven liberal arts



Geometry Begins with a Circle

- The circle is the most elemental and profound geometrical figure
- Profound image of oneness
- A symbolic 'universe'
- Proclus
 - The Circle regulates all things for us down to the humblest bounty, as it dispenses beauty, homogeneity, shapeliness and perfection.
- Euclid's First proposition – makes a diagonal which gives us a vesica and an equilateral triangle



Oneness and the Quality of One Itself

- It is the recognition of repetition in life that offers security
- Our whole existence is based on repetitive rhythms of cyclic time
- Unity is the evident whole of life, duality in its pulsating expression
- When we come across such simplicity, we ascend the ladder of consciousness and become aware of the profound simplicities contained in principles that apply universally.



Petal Geometries and the Principle of Radiance

- Most wildflowers are fivefold
- Sixness is the most familiar and naturally occurring pattern – the six petalled geometrical flower – an example of profundity in simplicity – it is the the intrinsic movement of the life of a pair of compasses
- The center point represents the heart of the circle – the mystery of the hidden creator



The Primary Symmetries – 3, 4, and 5

- The 3/4/5 triangle
 - Immortalized in the half-equilateral triangle
 - Given a special symbolism by the Pythagoreans and Plato
- The wisdom tradition from Pythagoras was confirmed by Plato's trip to Egypt and embodied in the Timaeus dialogue.
 - Plato says the universe is based on proportional principles
- 3 is the first number that can make a shape – i.e., a triangle
- 4 is the number of worldly order in the spatial direction –
 - Tetraktys – venerated by Pythagoreans
- 5 – the number of life – embodies the golden proportional
 - 5-fold structure of cross-section of DNA molecule
- Many petals take on a basic vesica form
 - A certain symmetry 'controls' the petal curves
 - Different symmetries influence different movements in flowers
 - Classical square root of three proportioning series



Participating in the Eternal Through Geometry

- Concept of 'participation' popular with later Platonic philosophers such as Proclus, Iamblichus and Plotinus
- Where the human concerned becomes the instrument participating in an objective and philosophical proposition not merely by contemplating it but by participating in it.
- Where the human mind participates in a higher or superior intelligence. This is the realm of ideas, the noumenal realm.
- Socrates felt that geometry, the 'art of the ever true' was of immense benefit to the soul as it is one of the most reliable reminders of its origin and goal.
- Drawn geometry is only an introduction to the deeper timeless meaning of order and the cosmos itself.



Leaves and Photosynthesis.

- All grass is essentially the transformation of light
- Leaves have a profound relation to the vesica
- Intelligence as a 'generator'
- Leaves offer themselves to the light just as flowers do
- One of the most mysterious functions of the plant is its taking water up a journey that is quite opposite water's natural tendency



Photosynthesis and Light

- Consciousness flows through four worlds
- Fire, air, water, earth
 - Life harnesses the four elements and harmonizes them
 - Radiant state, gaseous state, liquid state, solid state
 - Light or Fire is inspiration itself – it is a metaphor for ‘the bringing down of light’
 - Air is the established domain of the intellect
 - Water symbolizes emotive or social relationships
 - Solid state – materiality of the world - food



Trees

- Trees exert influences on people
- Bhagavad Gita advises us to resort to secluded places, particularly in a wood
- Phaedrus – leave the city for a rural setting to talk about philosophical matters
- Sacredness of seven types of trees – G. H. Mees
 - The Book of Signs
- Buch – Beech
- Runes



Universe – unus + vertere – turned into one

- The thing that holds all things together is love
- Plato – metastrophe – turning the soul inward to its original remembered state



What is Life that Flowers Represent So Magnificently?

- Life is a miracle
- The scientific definition of life should be 'that which is miraculous'
- Vedic philosophy (Rupert Sheldrake) the instrument of the ideas is integral with the emergent ideas themselves
- When realization reaches into the ineffable
- The story of the Lord Buddha when he arrived for a sermon in front of a large group of devotees and he simply held up a flower and spoke no words that day.



Things We Need to be Human – Fundamental Metaphors or Archetypes

- Trees
- Flowers
- Light
- Water
- Earth
- Air
- Seeds
- Change



Wonder and Wisdom

- Without wonderment,
we are as dead people. –
Albert Einstein

