



CIRCULAR ORDER

Geometry: For this order we gather not only the circle, but also the sphere, the ellipse and even the polygons and polyhedra: some precise and finite forms ruled by symmetries. The hexagonal net can be obtained from a quantity of flexible circumferences if we compress them enough. We can find it in natural elements e.g. bees honeycomb, some microscopic structures of muscles and crystals, as in artificial ones e.g. pavements, chicken wire... The circumference can be found either at natural elements e.g. the ripples produced by a stone falling in the water of a pond, some cells or fruits... or at artificial elements e.g. the wheel, the cathedral rose window, the porthole of boats...

Function: Circle and sphere have the minimum border for a given area or volume, so they are most efficient at isolating and protecting from the outside; on the other hand, they roll well and therefore they give mobility to objects and articulations. Their symmetry makes them the natural shape for physical systems subjected to radial forces, as the gravity force, or to surface tension forces, which minimize the area.

Artistic expressivity: Circle and sphere express the perfection of the sublime, the immutability of the eternal return. The union of change and recurrence, in the course of the stars; the fullness and glory at the domes of temples and the triumphal arches; the generous and symmetrical solar irradiation of light and heat. Otherwise the sphere concavity represents a welcoming refuge, the protection, the female world, a space of mystery, maturity and resonances.

Spiritual expressivity: Sphere invites us to think of God as a centre that gives meaning, through which all evolves and from which all proceeds, even though He himself doesn't take part in the sphere surface. It suggests a cosmic harmony, equilibrated and symmetric; a receptivity impregnated of delicacy, as in motherly protection. The circumference makes us think of an engagement ring, or of the rotation of a lighthouse's luminous beam, or of the look of the prodigal son's Father who every evening, from the height of a tower, scrutinizes all the horizon with the anxiety for his son's return.



SPIRAL ORDER:

Geometry: Spiral order includes the diverse families of curves that grow while they turn around a center or an axis. We find the spiral in natural elements as in the sunflower, some horns, cyclones and hurricanes, whirlpools, also the climber plants stems and biologically essential macromolecules as DNA or RNA. We also find it at artificial elements as the spiral stairs or prehistoric decorative art manifestations.

Function: The spiral order allows growing with a conservation of shape; It makes the climber plants stem roll up and ascend around an axis up to heights that they would never achieve on their own; it is resistant to torsion; it converts rotation into an energetic thrust ahead, as in the propellers of boats and planes.

Artistic expressivity: The spiral suggests a cyclic growth: life, death and resurrection. That's why you often find it in column capitals and in funerary monuments; it represents continuity in growing; it suggests the rotation of a dance or the protection of a shelter; the helicoids adds a suggestion of ascension or spiritual elevation.

Spiritual expressivity: Spiral invites you to see God as the center of growing, that allows the incorporation of the newness without denying Himself; a world in movement, an expansion of life forward to wider and wider horizons; a paternal impulse to explore and grow, to move away looking for your own way without losing the links with the centre; a cyclone that swallows up to the heights and captivates the senses.



RACTAL ORDER:

Geometry: Fractal order corresponds to a figure that is submitted to the same reiterated transformation of enlargement or reduction in such a way that its shape is the same at any scale. We find fractal geometry at natural elements as the coasts lines, the capillary distribution in the lungs or the plant leaves. We also find it in artificial elements such as road nets or building sanitation nets and in the internal structure of the Internet.

Function: Fractal branching is suitable for transporting and distributing fluids – blood, sap, air- or for distributing information- the Internet has a fractal structure- and in general to increase contact between the inside and the outside, to increase the porosity of borders.

Artistic expressivity: Fractality expresses spiritual ascent, branching out, exploration, adventure, foliage, a cascade of experiences, and a desire of exploring everything, of going further and deeper, an awareness for the smallest details without losing the global vision.

Spiritual expressivity: The fractal order suggests a God who gives Himself as a vital substance, that feeds and invites to grow; as an inside lightening that illuminates the deepest conscience and that reveals new amplitudes to it. As the Life Tree that never stops exploring, that distributes His richness, that equally loves, the big and the small, that overflows in the immensity and gives itself to the littleness.



DUAL ORDER:

Geometry: Dual or binary order, consists only of two opposite values: 0 and 1, black and white, full and empty, opened and closed, positive and negative, vertical and horizontal. Dual order is used by processing the information in the computers, for the drawing of the zebra's fur, or the tiger's, giraffe's and cheetah's one, in the chess board, in the electric charges, in the succession of nights and days or in the ticking of watches.

Function: The dual order gives references and produces movement, allows codifying and transmitting digital information – with 0 and 1 of the binary code or lines and dots of Morse's code-. It describes attractions or repulsions between charges; it permits the cyclic impulsions with expansions and contractions, systoles and diastoles, breath with inhalation and exhalations...

Artistic expressivity: Duality suggests struggle, a dynamism, danger, opposition, conflict between order and disorder, between life and death, the material and the spiritual, between winners and losers, good light and evil darkness, between the whole and the nothing. It suggests desire and conflict between the male and female; the symmetry between the object and its reflection in the mirror. It is the rhythm of the music that accelerates the heart and shakes it with intensity.

Spiritual expression: Duality suggests to see God as a vital option, as bifurcating ways and freedom to chose, as a breath of the world and the spirit, as a secret and deepest rhythm, as a supreme exterior and an intimate interior, as a doubt and fear against the bad and a dazzling in front of the good and the beauty, as a silence of abandon and listening of a silent word that fills with meaning.

CONCLUSION:

From a collection of images we have discovered in the shapes not only some immediate figures, so evident and close, but also a subtle and deep foundation of reality.

Science: From the scientific side, we have seen concrete geometric shapes in objects or organisms in which every shape has a function. The cold and abstract perfection is incarnated in the world; it becomes slightly imperfect but useful, in a trembling of atoms, of cells, of a meander, of reflections, humiliating itself in the imprecision and defects of approximation, but becoming efficient as a support, protection, channel, column, movement.

Art. The imperfect presence of geometry in the world gives to it the warmth of a new dimension, the artistic expression. Thus, it arouses an appealing resonance, it constitutes an emotive code that strengthens the links and the proximity between the author and the contemplator of the art work; it helps to express the inner agitation of anxieties and passions and it remits, across symbols, to overflowing and ineffable realities.

Religion. From the objects and the feelings, the shapes ascend again, as resuscitated after having passed through the world; they become a symbol that approaches us to an abstract universal dimension, but not with the abstraction of the geometrical purity, of the elegance of pure rationality, but a richer one: with a communicative palpitation, receptive, warm, as impregnated with comprehension and patience. From the sensitive and geometric immediacy that surrounds us we reach the expressivity of a Creator who, beyond the physical laws and the geometrical shapes, manifests Himself, translucent, in the beauty of the world:

- as a centre of the cosmos and of the person,
- as a fatherly stimulus to explore and grow, respectful of freedom;
- as a glance of the Father that longs for the return of his son,
- as an space of protection, maturity and maternal warmth;
- as a Mother that feeds with delicacy her baby;
- as a Father and Mother of all humankind.



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THE EXPRESSIVITY
OF CREATION

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THE EXPRESSIVITY OF CREATION
Science, art and religion

This exhibition invites you to contemplate several forms of art and nature and to let them surprise you with their beauty. The surprise is enhanced by the association of images of similar forms but belonging to very different objects. Geometry, nature, art and religion join in speaking together, everyone with their own voice.

From a **scientific** point of view, the tension between similarity and difference of these images makes us ask ourselves why the same geometric shape can be found in so many different objects: cells and rose windows, kidneys and rivers, marbles and butterflies, skyscrapers and snails. The answer is with the function: minimizing the area for a specific volume, increasing the effectiveness of fluid transport, growing and expanding around a center, branching out for rising in contact with the outside...

Parallelisms between natural shapes and art forms bring us one additional question: Which intentions move artists to use geometrical shapes? Artists go further than functionality and search in the shapes an **expressivity**, a way of emphasizing the most intense or subtle aspects of their experience, of impregnating their work of shared resonances to approach the viewer of their work. Spiral can suggest a paused or systematic growing or the turbulent spinning of a whirlpool; the dome solves an architectonic problem and also symbolizes a cosmic order...

If, after having experienced the fascination of art, we open ourselves to the **religious** horizon, we ask ourselves whether the natural shapes, besides the function, do also have a spiritual expressive dimension. We wonder what does the nature express and we may feel invited –if we want to follow the invitation- to let us go towards a Creator who, through the mathematical rigor of natural laws and geometric shapes, expresses himself as an Artist. He reveals himself in the warmth and proximity of the things around us and he gives himself in the effectiveness and beauty.