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Abstracts

II.



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STRUCTURAL EVOLUTION OF THE GOBELIN 'COSMOS' BETWEEN
1968 AND 1988

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Drawing of the cartoon for the gobelin 'Cosmos' was initiated as usual for all fine artistic creations: with instinctive impulses and intuition. After a drawing period of about one and a half years, without any geometric preconceptions, I had the drawing structurally redrawn almost completely. In fact, this was the very time when the drawing was starting to get a structure. After the development of vertical and horizontal axes, the structural order of expanding squares has been evolved, followed by the inner octagon and the diagonal series of expanding squares. Thereafter the systems of curved lines appeared, i.e. the systems of parabolas and hyperbolas, and at last, those of the circles of ever expanding radii. (Figure 1).



A further step was the appearance of sinusoidal curves, representing the directrices of this system. Thus, the concept of dynamic events has been evolved with three principal constituents:

- /1/ **radial movement** ejected from the centre
- /2/ **centrifugal movement** around the centre, and
- /3/ **spiral movement** synthesized from the above two movements.

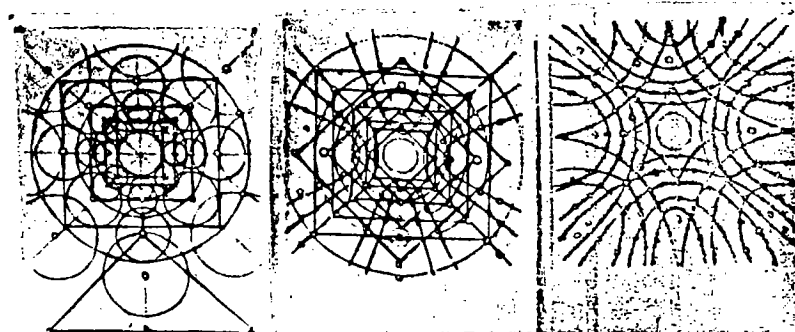


Figure 1

The transformation of square systems to wave lines produced a formation of decisive importance, namely, the vertical-horizontal and diagonal sine wave systems, respectively, reminding of trajectories of potential spaces, common in thermodynamics. Vertical and horizontal wave lines bear equipotential points, while on the diagonal ones there are points of maximal potential differences. (Figure 2).

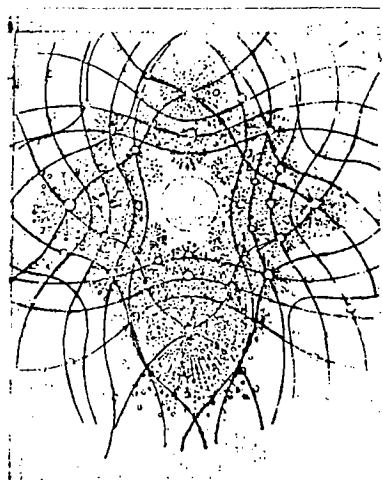


Figure 2

This important structural figure proved to be the key step for further progress. Supposing, this structural formula to be valid for the system as a whole, there should be a corresponding **network of trajectories** around each of the major galaxy centres.

After a structure elucidating work of several years, this has led, finally, to the **evolvment of a biphasic, concentric and ever expanding system of sine waves**. This has been the decisive step in the evolution of structural conception, permitting the interpretation of the entire structure to be expressed as an **oscillating system** around the Central Sun.

At last, recognition and plotting of the **spiral construction** was an important step for the total composition and for each of the galactic stellar systems. The system of counter-moving, dextro- and levo-rotating spiral arms became a general structural formula for both of the whole system and for each of the minor stellar systems. (Figure 3).

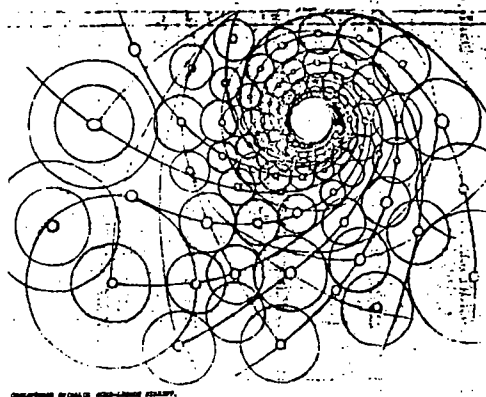


Figure 3

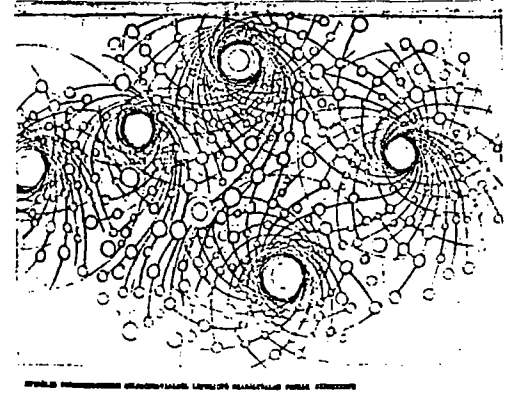


Figure 4

The galaxies are positioned on opposite spiral arms of the total system, at intervals increasing according to the Fibonacci sequence of numbers, as points of a logarithmic spiral. (This is in agreement with the principle of **phyllotaxy**, being a structural rule common in nature.)

Ultimately, the general dynamic formulation has been developed. Combination of explosive movement out of the centre of galaxy core, and of the circular movement, results in spiral movement. With junction of spiral arms from two neighbouring galaxies at the inflection point, sine waves are produced. Spiral movement from the centre of one system continuing in the corresponding spiral arm of the other system, so to say, 'coils up' on the core of the other force centre, then is 'ejected' by a newer explosion in the form of an opposite spiral movement toward the direction of the original, a second or an n-numbered galactic system, respectively. (Figure 4) This way, all the systems are interconnected in a 'frog' path of an endless loop.

Thus, a system of **transmission belts** originates, crossing each other in the space, wriggling under and over each other, assigning energy paths for every force centre. However, not only 'belts' but also 'plates', 'lobes', multiple curved surfaces evolve, interpenetrating, crossing each other and coiling upon the centres.

The background, so to say, basis and mounting frame of this complicate simultaneous, 'organic' type dynamic construction is a structural formula of relatively simple geometry: the edges of fundamenteal configurations, that is those of triangles, quadrangles, octagons and other basic ones, representing the crystal structure of the Universe, as well as, the system of rotating

quadrangles, octagons, etc., representing its dynamic structure, are constituting, in a curious way, a 'planar' Universe based on Euclidean geometry. The Universe Lines are radii crossing the absolute centre, representing the Radii of the Universe. Thus, the entire system is axial symmetric, and the axes of reflection pass the Origin vertically, horizontally and diagonally, respectively. (Figure 5).

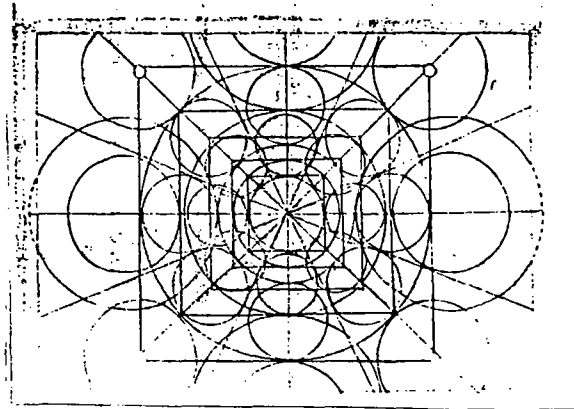


Figure 5

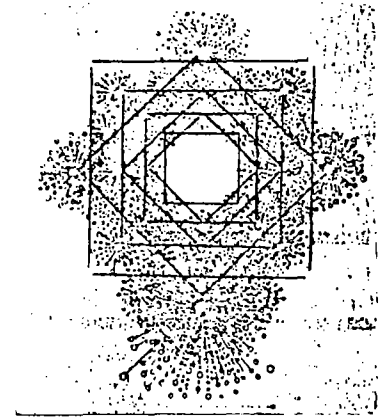


Figure 6

Nevertheless, the principle of regularity, arrangement and symmetry does not prevail for all the structure of gobelin 'Cosmos'. The principal symmetry-violating element is that there is a preferred direction, namely, the vertical axis, assigning the direction of gravitation. The other dissymmetric moment is that the most significant star, positioned under the Sun, is at a lower position than the corresponding other three stars. The 'amorphous' stellar points, condensed quasi as 'flood of light', not only tend downwards but seem to be collected, then ejected by the star of distinction. In this way, this star is representing a separating and, at the same time, a connecting role between the upper and lower spheres, and so, can be considered as a 'point' where the envelope pregnant with stellar material is ruptured, burst open, and the 'cosmic crop' is thrown out like from a poppyhead or other plant capsules. (Figure 6)

This dispersion, though, represents only an intermittent period, the centripetal force prevails again, so to say, arranges the arrays of dispersed material, bending then crumpling it under itself, and producing the spherical symmetry again but, at this time, as a sphere of larger radius.

Thereby, by this conception, born in the field of artistic creativeness and based on visual evidences, a model of Universe is outlined with the intrinsic nature of periodic expansion (then, possibly, of retraction) in the space and time.