

Group dreams as fractal images

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Abstract

In fractal geometry, a fractal is an object with a complex branched structure subtly, gradually enlarging a portion of the structure are out details that remain the same at all scales of growth. fractals are not expressed by primary forms, but by algorithms. In this sense, the analytic group can be considered, using the theory of chaos, as the analogue of a fractal. The analytic group is the meeting point, the scene where you are replicating primordial collective dynamics and dynamics very personal, the group is the focal point where you go from the collective to the individual.

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The theories of chaos, spelled out in order to explain complex phenomena of various types: temporal, meteorological, economic, physiological, etc., appear extremely useful in the description and understanding of those processes which are ontologically indescribable from a deterministic view, such for example as psychic phenomena.

In a previous work I proposed considering fractal geometry as an important mechanism for the description of certain peculiar modalities of functioning of the mind-brain complex (Zanasi, 1996), and this line of reflection proved useful also for the description of certain dynamic aspects of analysis groups.

A fractal is an object having a subtly ramified complex structure; by gradually magnifying part of the structure, details come to light which are repeated identically at all the scales of enlargement. Accordingly a fractal appears as always similar to himself, if observed at large, small or very small scale. Mandelbrot observed that many apparently disordered natural objects enjoy this property.

Another peculiarity of fractals is connected with the fact that they are not expressed by means of primary forms, but by algorithms, that is to say series of mathematical procedures which are translated into geometrical shapes with the aid of a computer. In this way a great wealth of geometrical shapes is produced, starting off from a quite simple algorithm. The most fascinating example is the Mandelbrot whole, a fractal of exceptional richness.

Invariance of scale finds an important parallelism in the theory of chaos, in which many phenomena, while they follow rigid deterministic rules, as a rule prove to be unforeseeable. Chaotic events, such as atmospheric turbulence or heart beats give similar patterns on different time scales, more or less in the same way as objects possessing a self-resemblance present similar structural shapes on different space scales. The correspondence between fractals and chaos is in no way accidental;

rather, it is the sign of a profound relationship: fractal geometry is the geometry of chaos.

In this sense the analysis group may be considered, using the chaos theory, as an analogue of a fractal.

In fact, as first described by Foulkes, the group's topology is set at 5 hierarchically ordered levels; that is to say that the analysis group may be described as a continuum, ranging from the corporeal level to the social level.

The various levels are self-resembling, since every dynamic communication may be "ascribed" to each one of these levels and read and interpreted in the hierarchical area of reference. It may be said that in this sense the group proves similar to a fractal, since here we find replicated at the various levels and with invariance of scale, the same thematic elements.

The fractal quality of the group may also be found at another level: in fact the analysis group may be read as an initiatory path which repropose in a sort of phylogenetic recapitulation, the collective process of Man's individuation.

The various authors dealing with the process of group analysis, describe phases of development, each of which leads into the next, which represent a critical passage, an overcoming, a growth, and appear teleologically inscribed in a sort of "group project": for example, let us recall here the six phases of development described by Bennis and Shepard (1956): dependence-escape; contradependence-fight; relations of power-authority; enchantment (mating); disenchantment; interdependent work (or work of consensual validation); or else the four phases of Usandivaras (1985): chaotic phase; phase of fusion and disintegration; phase termed of "community"; phase of individuation and of mature problem solving.

This reading in a longitudinal diachronic direction of the group process has many analogies with what in analytical psychology is defined as individuation: according to Jung, the whole process of analysis consists of the successive phases of passage inscribed in the main process of individuation.

Individuation is the personal replica of the great collective path of Mankind as it emerges from primordial undifferentiation; this path is represented in the "prototypal" collective imaginal systems as the myths of Mankind's foundation.

These great mythological-religious sagas describe, with extraordinarily similar thematic and structural characteristics, the process of Mankind's development.

In all of the foundation myths (from the Hebrew-Christian, to the Babylonian, Roman, Greek and Sumerian, etc.) the same shared phases are always represented: at the beginning the world is in an undifferentiated, chaotic, uroboric state. Thereafter a function of separation and ordering of the primitive Chaos appears in the person of a rebelling Hero figure: Prometheus, Marduk, Gilgamesh. etc... This is followed by a phase of regression, in which the hero is momentarily defeated (Prometheus in chains, Jesus going down to Hell, etc...), until finally the process is set in motion again and the hero triumphs once and for all.

As demonstrated by Neumann (1978) these four phases correspond exactly to the development of the individual, in his coming out of the undifferentiated state of fusion with his mother, in his heroically facing up to the problems of separation, in his giving in to depressive and regressive impulses and, finally, in his emergence as a differentiated and autonomous individual. The foundation myths are an echo, a resonance on the collective imaginary plane of this process, typical of the human race, archetypally predetermined and which has always unfolded according to the same thematic modalities.

In this sense the analysis group represents the meeting point, the scenario where primordial collective dynamics and absolutely personal dynamics are replicated: here the group is the focal point ranging from the collective to the individual, and here once more we find a self-resemblance re-echoing the fractal nature of the group.

This peculiar quality of the group may apparently be referred to the strict equivalence between the individual and the group psyche; in fact, as Foulkes notes (1967): "It is possible to speak of a group psyche in the same way as we speak of an individual psyche. Even if we do not manage to get away from the concept of individual in the physical and corporeal sense, however it should be easier for us to overcome our habitual concept of psychic individual in such a way as to grasp the suprapersonal character of group reactions: in other words, the confines of the individuals that can be isolated within the group matrix (which it would perhaps be better to indicate with the name of "psychical individuals") do not coincide with those of physical persons". One author who has dealt at length with this question (Fiumara, 1992) maintained the equivalence between the individual mind and the group matrix, proposing the example of the hologram as an explanatory model: the hologram is characterised by the fact that each individual part of the holographic plate contains all the information on the whole process; and relations between the individual and the group appear in the same way.

According to Fiumara still, the group's mind and the individual's mind are overlapping, with both of them tending to individuation on the psychodynamic plane. The fractal nature of the group implies a further possibility of utilising the theory of chaos to metaphorically describe the group's action: in this sense, the analysis group may be considered as the analogue of a strange or chaotic attractor.

While classic mechanics is highly suitable for the description and foreseeing of simple systems, complex systems are characterised by an intrinsic unforeseeability. It is this aleatory element that makes their behaviour unforeseeable, requiring a different conceptual approach, which is provided precisely by the chaos theories, drawn up for the description and explanation of unforeseeable phenomena such as those of nature; and the mind and human behaviour is the most complex of all natural phenomena.

A simple system, such for example as the motion of a pendulum or the lunar orbits, may be perfectly described by a few equations of classical mechanics; these descriptions belong to the so-called theory of dynamic systems. A dynamic system consists of two parts: the characteristics of its state (that is, the essential information on the system) and the dynamics (a rule which describes the evolution of the state in time). If the evolution of a dynamic system is represented in geometrical (graphical) form, it will be seen that a system tending to immobility, for example a pendulum liable to attrition, sooner or later will stop, and this may be represented graphically in the form of an orbit tending towards a fixed point; this fixed point being known as attractor because it attracts the orbits of the dynamic system. Very roughly then, an attractor is that towards which something stabilises and towards which the behaviour of a system is attracted. A more complex system may possess several attractors; even more complex systems have toroidal attractors. For systems of extreme complexity, such as those pertaining to chaotic dynamics (which are in fact those of the psychic phenomena and in particular mental phenomena), the attractor is called chaotic attractor or strange attractor; and in this case the orbits of the system are continually overlapping, folded back, mixed up until the initial information is completely eliminated and replaced by new information. The process of folding occurs several times and produces folds within other folds ad infinitum. In other words, a chaotic attractor is a fractal. Chaos mixes the orbits in the space of the states in exactly the same way as a baker kneads dough.

The unforeseeability of complex systems (those dominated by the laws of chaos) is connected with the amplification, by the strange attractors, of small, very slight initial fluctuations.

Thus it is clear that no exact solution, no causally determinable link with the initial states, can exist.

After a short time interval, the undetermination corresponding to the initial extent covers the whole attractor.

Very likely this process may represent the functioning of complex systems, such as the brain, and it is extremely effective to describe what happens in a group when several persons interact summing, at the various levels, the equivalents of their orbits of the dynamic systems, represented in this case by the networks of relationships which are structured in accordance with an orbital network managed by the chaotic attractor constituted by the group.

The group which, as remarked earlier constitutes a continuum in which various levels of human experience are unfolded, by means of its function of attractor permits the passing and exchange between the various fractal planes, in such a way that the personal and collective experiences are continually mixed up and modified, giving rise to a new information and, basically, to change and transformation.

Accordingly we may say that nature uses chaos in a constructive manner: thanks to the amplification of the small fluctuations, it may enable the natural systems to have access to novelty.

Starting off from these considerations, we may now draw on this conceptual pattern also for group dreams: as we said at the outset, the fractal is the graphic transposition of an algorithm; similarly, the dream may be considered as a graphic transposition of this fractal nature of the group.

In dreams we find represented the various levels of the different planes of expression of the group's continuum, which at the different levels of self-resemblance and invariance of scale always expresses the same theme, namely: Mankind's journey in drawing away from the chaos of the presymbolic and prelinguistic condition, the group's coming out of the state of initial fusional chaos, and the emergence of the individual from the chaos of his/her own conflicts.

Thus it would appear that group dreams could be grouped into two categories: those most directly expressive of the interactive and transferal dynamics between the various members, and those which stand out directly against the collective background and that anticipate and describe the main themes of individuation; by means of these last, archetypal images emerge from the collective unconsciousness.

These are characterised by mythological, archaic religious, alchemical, theriomorphic themes and other archaic symbolisms, by their remoteness from daily events and by the intensity of the affections associated with them. These characteristics differentiate them from the "Personal Dreams" which show a preponderance of ontogenetically based images concerning above all the personal doubts and conflicts of the dreamer.

The archetypal dream may also be better defined as the way of the symbolic approach in contrast to the semiotic approach which regards images as signs.

These dreams, in analogy to what happened in the history of Mankind for the collective systems of representation of the universe, are the generators of the group myths and cosmogonies, veritable systems of explanation, communication and signification of the common experience which make it possible to face up to the first difficult phases of contact with the chaotic and fusional elements.

In other words, these group myths carry out a similar function to that of the myths and religions, whose purpose was precisely to "relegate" the data of the real in an understandable whole, that is, to provide an explanation and an ordering of the dreadful and uncontrollable realities of nature.

These mythico-religious constructions constituted the departure point for the progressive development of thought which has led to the birth of the individual in the modern sense.

So that the group would appear as a true initiatory path enabling the individual, in a journey outside of time, to experience the journey of the Hero and the birth of Self; a journey marked out by the images of the great mythological and religious sagas which come to life once more in the dreams of its various members.

Thus the task first and foremost of the analyst will be to listen in carefully to these components rich in meaning and of invaluable utility for the evolution of the group itself, by filling them out with the elements most directly connected with the individual stories of the various members, in an overall picture of great scope and profound heuristic value.

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