



'Ever look at the swirls of frost on a window pane and discover similar patterns in the curled shoots of a fern? Or maybe wonder why an insect is leaf-shaped? Or why brain coral and the human brain look alike?' (Antonio Lima De Faria)



Isomorphology is the study of the shared forms of animal, mineral and vegetable forms (morphology) through drawing. Scientists study morphology within the distinct kingdoms of animal, mineral and vegetable, but there is no holistic study of the morphology that connects the three. I have identified 16 geometric forms (these are mathematical forms, some of which are symmetries) that can be found in animal, mineral and vegetable species, which I will describe in this manifesto.

Isomorphology is a study, which has developed after years of observational and intellectual enquiry. Through drawing, Isomorphology interprets the mathematical, the animal, the mineral and the vegetable holistically, as interdependent: Drawing the natural language to all.



シンネビ 2 . $\overline{\bigcirc}$ regetable mineral animal Frangipani Aragonite (Shell) Spiral valves Spiral valves (human + shark) Polymentide DNA Sulphosalt Ferns Convulnus Teelite Polypeptide DNA Banana Ceares Cylindrite helical structure Shells - nautilus pompilius Honeymulile Sheep horns



mineral

animal

bacteria dog tooth forsik echinoderm Blastoidea (Starfith)

Quartz calite formaline dioptage

conundum

regetable

Shanwock

Trifolium repens Begma (oraries) (transvere rectim)





Is Isomorphology Scientific?



Isomorphology is not a science, a theory or a belief system, it is a creative study. Saying this, it is important not to underestimate the Endeavour, as there is contemporary research, which indicates that a holistic study of forms and symmetries inclusive of animal, mineral and vegetable species has both scientific value and meaning.



Antonio Lima De Faria (Professor Emeritus, Lund University, Sweden) has made significant research into the 'Atomic Periodicity' of animal, mineral and vegetable species (The Atomic Origin of Structural Periodicity, World Scientific, 1995) and believes that 'there are no accidental or analogous processes but only homologous phenomena', he states 'periodicity provides an explanation for 'the recurrence of a given pattern in completely different families or even in different phyla' (for example, the recurrence of the 5-radial symmetry of the petals in flowers belonging to quite different plant families and the reemergence of this symmetry in the starfish). Lima De Faria has proposed a mechanism of evolution based on a rigid internal atomic organization in 'Biological Periodicity. Its Molecular Mechanism and Evolutionary Implications', (1995).



Antonio Lima De Faria has an obsession with the forms, symmetries and patterns that occur in nature and his scientific research is of great value to the development of Isomorphology.

X: MS D (C Ó >) animal vegetable mineral Japanere knot weed graphene fibre rematode knot tree (+roots) formed nematomorphs DNA placental growth proteins ×4 Q (7 \frown

×: regetable animal mineral Poppy Carsitente Dragonfly & Vitaceae Rutile Wasp Aquifoliaceae Zerron Bee Comaceae Blastoidea (fossil)

X: MS D (C \bigcirc S animal > regetable mineral Hematite (reniform) dichondra repens kidney guard cells (stomata) human brain (cross rection) prothallus (gametophyte) human ear the Chi \frown

animal

mineral

• •

regetable

human

most mammals bipinnaria larra

(Starfith Asteroidea)

gypsum trilobite fossil rutile (turin crystals)

Orchid Gingko biloba fruit of acer pseudoplatams Arum hygrophilum

Isomorphology as an approach to classification.



I began to wonder why I was interested in proposing an alternative model of understanding and classifying the natural world; what was it that I felt the scientific taxonomic model was missing; what was it 'not' doing? As I understand, scientific taxonomy is not founded on analogical thinking; it is not instinctive, not holistically comparative across kingdoms, not imaginative, not artistically creative.



The model of Isomorphology I am proposing is 'not' the scientific model, but it does share an important method, the close observation of specimens. Isomorphology is not an aberration of meaning, it is not clear if it is discovered or invented, rather it is the opening of the 'not' of scientific taxonomy, a liberation of form, a way of understanding the world and relativizing abstraction; effected through the artist's trained judgment in observing morphologies and identifying patterns.

×

animal

jellyfish Starfish - Luidia cilians (7) Brisinga mediterranea (9) Crossaster papposus (13) Freyella sp. (13) A can thaster (14) Odinia elegans (19)

vatente (SEM) malachite warellite

mineral

regetable arabidopiis thatiana napoleona imperialis paniflara caerulea Aesculus hippocastanum (7) Lupinus leaf (9) Tropaeolum majors (leaf 10) Drosera rotundifolia

シン教と · · animal mineral regetable leaf epidermis Lily Elder Rore female genetalia colortomy stoma human month barnade Shell (avagonite

X

mineral

animal

Spider legs Leptarterias hexactis (starfish)

water crystal Beryl Quarty Aragonite Cerussite Arsenopynte Hematite

regetable

Blockell (Includes floness with 24 petals)

Scilla autumnalis

Plant roots (cross rection)

Damasonium alima (fruits)

ancient greek Reflections on the possibilities of Isomorphology. rans morphology ology if forms shared between the Animal, Mineral and Vegetable Kingdoms; evidenced through nal drawing (observation-hybridity-instinct-indicholds, comparison-joining-operation) dary crossing Cat After marking the 16 conventions of Isomorphology, I went for a walk in my garden to observe the forms and symmetries in the plant life around me. I Ar began to see bilateral leaves, branches, bilateral leaves on branches, and ns ... Lu pondered the possible combinations of the forms and symmetries. It is such a In: pleasure to deduce something meaningful (other than beauty and wonder) from direct observations, and to have this study, which has become an outlook, Plane hc that is joyfully developed through the combination of observation and intellect, Ini geometry empirical and abstract at once. Sp c Spiral Egonies convolvulus, banana sheep teelite eaves, honeysuckle, mar from ker (timprotein) tendrils (sweet pea) cm be maple leaves. Human (most animals) Orchid (etc..) Gypsum_ netry Trilopite fos nirror Pacteria, dog tod th (3 Quai netry The possibilities of how Isomorphology may open my own understanding and approach to creative work is very exciting, especially of proposing letry DI 'Isomorphology' as an educational model, through which a student can learn, W through drawing, about the mathematical, the animal, the mineral and the ietry St vegetable simultaneously, and most importantly, a study they can develop for je themselves in their own garden. etrv with 24 petals) /Sadd wartz. er dise op radia 01 s anatomy for more symmetry within humans um-animals (red,green, blue) birds have 4th U.V (Bey no bue), bees have U.V but phallographic Smi infa-red. ld symmetry- hepatron- 50p seven sided shape. is will be operated on through drawing- i.e wings of bee will be considered without the ke flowers/petals without Nant body lassification that we use but when are not scientific- e.g- pests, weeds, useful, medicinal, iceartity who absorbed old symmetry but get 4 fold tw a- apatite, animal horns- mineral, biominerization, mollusk shells, coral expand on

シン教と phallus mutimus caninus phallus impudicus animal male genetalia (human + animal) calcarea mineral stalagtite calite stalagnite

X vegetable animal mineral Dendintie Copper Human lungs Branching plants Denditie Silver Animal lungs Trees Dendritic Gold Fern Coral Cow Panley Arterial system





