

Water and the archetypes of inhabiting

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In a comparison between civilisations an important role is played by those “infracultural” elements which, with some slight variations, with deviations and approximations that limit the precision of those elements but at the same time widen the extremes, are a common patrimony of different cultural repertoires, also very distant in time and space.

Generated to repeat infinite experiences created in analogical conditions, in relation to many aspects of existence, some of these particularly recurrent signs seem to provide a synthesis and an order to an ensemble of incoherent sensorial facts, with a marked disposition to repeat themselves and to adapt to cultural changes. The living space is studded with these archetypal images, verifiable for example in simple subfigures or decorations, geometrical and functional plans of a dwelling, models from which a settlement springs up, with its size varying from a corporal proxemic sphere to one of the landscape (or to a cosmic one, if one includes an imaginary interpretation of space); to each of these images – or systems of images, or processes – one associates a sometimes complex symbology, which often maintains a surprising uniformity despite variations in the cultural contexts.



Fig. 1: Yunnan, China, village and rice-fields.

Of the four elements of the ancient Mediterranean cosmology, water is probably the one to whose control man has dedicated the most time, the one that more than the others has left its mark on human creation.

Its scarcity or excess have been and remain today a common problem for all humanity, with strategies and techniques thought up to solve the problem. In their thousand variants, the digging of a well or the raising of river banks, the building of a roof or a boat, the reproduction of hydric morphologies to build a spiral staircase or install waterworks, have something in common throughout the ages and in every geographical location, and form the foundations of a “global” experience in which the processes are referable to a single original model which never ceases to reverberate.

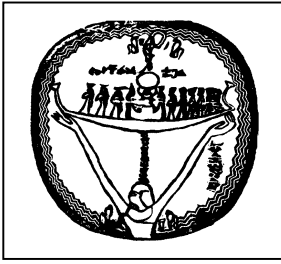


Fig.2: Egyptian papyrus, 1580-1090 b.C., a circle of water surrounds the god of the primitive ocean (Nun) and the sun boat.

The rediscovery of a common infracultural patrimony (like also on a different level a global ecological conscience) can be very useful to the cohabitation of different cultures and the study of it can help the consciousness of architectural designers.

Such motivations encouraged an enquiry – published in 1999 by Electa Napoli with the title *Water Places. Notes on an archetypology of space* – in which a journey was taken, among infinite possibilities, among locations marked by water, not losing sight of the symbolic and material aspects, in search of models and spatial meanings that link yesterday's civilisations to today's.

In this vast area of enquiry one can identify themes, albeit in a non-definitive way:

- the role of water in the cosmogony and religions, in order to understand the quality of imaginary space and the fundamental directions which guide the various cultures in everyday life;
- the urban models in which water reveals itself with particular strength, like "the earth's blood" which flows in every corner of the cosmos and brings food to its inhabitants;
- the permanence of some analogies that have, since time immemorial, linked the world of navigation to that of architecture, such as houseboats that date back to the biblical Ark;
- the transformations and constants of some functional kinds and parts of buildings in contact with water and their hidden meanings, such as roofs, waterworks, wells, bridges, fountains, the architecture of hydraulic machinery;
- the morphology of water: with stagnant water in which micro-organisms recombine, amniotic liquid in which man looks for rest, water games in gardens or polymorphic water which results in shapes and ancestral dynamics that feature in figurative art and architecture;
- water as a soundmark of the acoustic landscape and architectonic spaces.

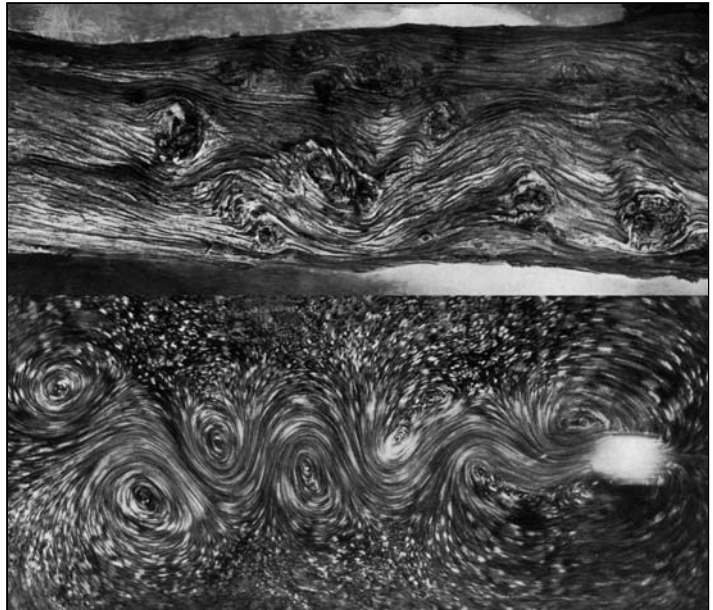


Fig.3: a tree and running water (from T. Schwenk, *Il Caos sensibile*, Edizioni Arcobaleno, 1992).

At this point we suggest taking a look at two of the topics listed, the smallest hydric morphology, with its contribution to the collections of man's own images, and the primordial meanings of roofing.

The chapter dealing with water morphology has a strange title: "Morphology of fluttering aggregates".

The model of fluttering aggregates is one devised by physicists to describe water behaviour. The link between water molecules is a weak "hydrogen link" temporarily uniting one of the two hydrogen atoms of a molecule with an oxygen one belonging to another molecule.

By joining and disjoining with one another in a completely asynchronic way, these continuously form new groups of complex molecules (thousands of billions per microsecond in a water drop).

The unimaginable sequence of changes of these fluttering aggregates gives birth to those characteristics of change and permanence, adaptability and regularity, variety and continuity that are prerogatives of this fluid par excellence. Thus water morphology owes its extraordinary versatility and continuous performance to this molecular structure.

In his *Description of the Deluge*, Leonardo gives a set of examples of distinguishable forms in a violent storm: mist, drops, whirlpools, foam, mud, waves, rings, intertwining, twists, surfaces, flat flow, waterfalls, columns, waterspouts, hollows, spurts, fringes, globules, atomised water, clouds, and so on.

Hydrodynamics, however, presents a great deal of constant shapes within fast and complex phenomena. When the river water meets a rock, a wave is generated which stands still and, at the same time, new water crosses it ; the same happens with the whirlpool and other shapes that are created by running water. On a surface of a lake that is stirred by the wind or other elements, it is the ripples that move whereas water stands still in the same place.

We can see that since prehistoric times man has tried to picture water in many ways. One of the earliest maps we know of is the one engraved on a mammoth bone found at Meziric, Ukraine, which is about 15000 years old. The main features of the landscape are represented by a series of segments that are arranged in various ways; two parallel lines mark a river and its course is reproduced by longish engravings that are cut by more oblique ones and evolving in zigzag lines.

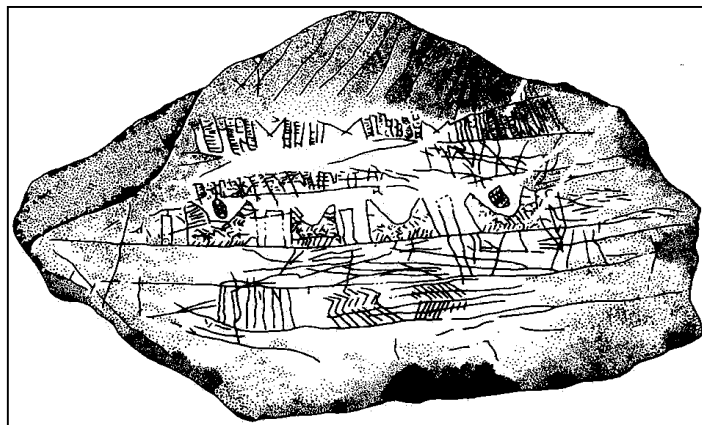


Fig.4: Ukraine, 15000 b. p., engraving featuring a landscape.

The same widely used sign is found in the Aeneolithic culture of Walternienburg-Bernburg, as in the first Egyptian hieroglyph meaning running water and since then is also generally used in the figurative arts.

Something similar can be said about the spiral, for instance.

Novalis states that water is the origin of all substances on account of its wealth of shapes; it is not a body like all the others, it is the "sensitive chaos" containing in it all kinds of life.

Theodor Schwenk, a pupil of Rudolph Steiner, was an extraordinary observer of water shapes. In his opinion water tends to be spherical in shape (as in a drop, for instance), and it tries to keep that shape even when it is subjected to the Earth's gravity and is forced into a linear movement; then we have twisted surfaces that overlap while flowing, with a changing rhythm and at different times.

This helicoidal and undulatory morphology of running water generates the static and dynamic shapes of the life forms that live in it; the water whirlpools mould the unicellular organisms, the conch shells, the fins of fish.

The movement of the ray fish is a perfect hydrodynamic mould, while the jellyfish, which is almost entirely made up of the liquid it lives in, with the water jet it produces to move about, creates a series of images reflecting its own. Also the shape of the organs crossed by liquids shows the same origin, while a number of animal and vegetable tissues bear the signs of the flowing movements that have structured their growth.

The phenomena of the flow existing in the living tissues, as happens for the water masses, are more or less fast and in their play of ebb and flow they reproduce either linear or globular bodies; Thus we can say there is a similarity, for instance, between the morphogenesis of the embryonic forms in the human uterus and the gushing of a water spring within a linear flow.

These observations of Theodor Schwenk explain a deeply rooted symbolism associating water with the surrounding circular spaces like a mother's uterus (static circular space) or the spiral and the boat (moving circular spaces).

The spiral is an individualised and constant kind of formation that is generated by running water and included in a continuous water mass (like a single organ within a living body).

The conch - a "petrified" spiral - develops round itself without changing its shape, along with the mollusc living in it. The curvature is such that every increase is similar to the previous one and doesn't change its original shape. If the "being is round" -as Bachelard states - it is no wonder then that the spiral symbolises "the order of being inside change" (G. Durand).

Among the endless possibilities of liquid space that is not subjected to the geometrical stability of solid bodies there is the presence of various movements in the same place: for example, high waves may overlap or intertwine with low waves coming from different directions, they may find a whirlpool on their way or may overlap a backwash.

The labyrinth, which is the archetypal image of a dwelling, is the outcome of interfaced patterns of the intertwining and the spiral.

Another image, much more common, that provides a synthesis of dwellings all over the world, is the roof.



Fig.5: Bangkok Imperial palace.

The first houses were indeed only for shelter, as were the caves, which accommodated nomadic and semi-nomadic groups dedicated to hunting and food collection and often confined to a low covering that started at ground level. Drawings of hut roofing, considered to be feminine symbols by Leroi-Gourhan, already appeared in the Paleolithic painted caves. On the higher part of the dwelling, the roof rises up like a mountain and so deviates water, spreading it over one or more surfaces.

A complex covering gives rise to a series of ridges and gutters similar to those found in the geographical structures mountains and valleys, so much so that both in the English and Japanese languages the word that indicates the peak of a roof (respectively *ridge* and *mune*) also indicates the crest of a mountain.

In the architecture found in arid places, meteoric water which falls upon the roofing of buildings is drawn into rivulets and conserved in water tanks; in the Nile Valley a jar has been used to collect rainwater from roofs since Neolithic times, while in successive ages throughout the Mediterranean, especially on islands such as Tera, Santorino, Delo and wherever the phreatic strata are too deep to dig wells, a common situation in Greece and Sicily, collecting rainwater from roofs is the principal method of collecting water. In ancient Olinto and Priene the system consisted of out and out guttering and drainpipes that carried the water from the roof pitches to large amphoras situated in the corners of the courtyard inside the dwelling; on the other hand the Greek dwellings like their Roman counterparts seem thought out precisely for this exploitation of rainwater, which was collected from the roofs in tanks called *impluvium* (where rainwater also entered directly), and conserved in underground tanks in which it was allowed to sediment. This system, very common in popular architecture throughout the ages is currently taken up again in fortifications in order to provide water during sieges. In some Oriental cities the exploitation of rainwater collected from coverings has spread to an urban level through an out and out network of small canals that start from the gutters and reach large collection tanks and from there the fields outside the city walls. However one can still apply the same principle on a territorial scale as happens in Lipari, where the highest crater has been completely paved over – in modern times with concrete – to collect the rain and transfer it into an enormous water tank, which provides water to the whole island. So a traditional technique that has been used for centuries also in this island's buildings, is projected on an entire landscape.