ERNST ZÜRCHER

Cosmic trees and chronobiology – Potentials for innovative scientific research and bio-compatible applications

World trees, cosmic trees

In many ancient cultures, trees are objects of worship, or there is a mythic Tree of Life, World Tree or Cosmic Tree that plays a central role.

The adoration of trees is well known from the Celtic culture. Several tribe names are an expression of the dimension taken by trees: the *Eburones* and the *Eburovices* contain the word *ibor* (yew, *Taxus baccata*), while the *Lemovices* took their name from the elm, *lem* (*Ulmus* sp.) (De Vries 1977).

Norse or Germanic mythology is built on a tree called *Yggdrasil*, thought to be an ash (*Fraxinus excelsior*), although some commentators have suggested it may be a yew. There are few symbols in myths as challenging or as rewarding as this tree. Chetan & Brueton (1994) describe it as follows:

[1] Modified and completed version of the article »Lunar rhythms in trees: traditional knowledge under a new scientific light«, IUFRO, Arnhem 2003. Also published in »Moving Worldviews«, COMPAS, CDE, StiM, ECDPM, Soesterberg/NL 2005.

»Yggdrasil is the guardian tree of the gods who maintained the fabric of the universe, and the axis that binds together the three worlds earth, heaven and underworld. From here the gods preside, and from his seat Odin can look into all three worlds at once. Yggdrasil rises to the sky, and its branches overspread the whole of creation. Three roots support it; one stretches to Hel, the world of the dead, another to the world of the frost giants and the third to the world of humans. At its feet are several springs tended by the goddesses of fate, the Norns, and also the wells of Mimir and Hvergelmir. (...) The waters of the well of Mimir are the source of wisdom. (...) Hvergelmir's spring is the source of eleven rivers, and serpents lurk nearby. Around the base of the trunk is coiled a huge serpent who continually gnaws the roots ...«.

A deeper study of other myths and cosmovisions shows striking similarities, as mentioned by J. Narby (1995). A South Americanshamanic description under the influence of *ayahuasca*, a hallucinogenic drug, depicts almost the same World Tree, as a living spiritual column between Gods, Heaven and Earth, linked to waters and surrounded by a giant serpent, the Anaconda (*fig. 1*).

These similarities, which cannot be explained by direct or indirect cultural influence, must have an explanation in a common psychospiritual constitution of human individuals, expressed in similar archetypes, as described by C. G. Jung.

One important aspect of this central role of trees in human culture and in our individual perception of nature is that they are embedded in different types of physiological cycles. These life rhythms are linked to the day-night-alternation, to the seasons (both from the apparent movement of the sun), and are also synchronous with cycles of the moon, of solar activity, of planets and with the zodiacal/stellar constellations. The cosmic dimension of life has always been mentioned in old cultures; scientific research (chronobiology) is now progressively discovering some of these rhythms related to the astronomic periphery, in plants and animals as well as in human life.

The present article mentions some examples of traditional knowledge of this type linked to trees. It presents some corresponding, pioneering scientific evidence, to demonstrate that the relationship between man and nature has also deep, far-reaching and unexpected dimensions.