

Temptations of the tree

A perennial image of life, history and enlightenment.

Geir Hestmark

Children seem to know that we belong in the trees — that climbing is the natural thing to do and that, safe up there among our primate relatives, there is a suitable branch for everyone.

At this time of the year, many people the world over bring a Christmas tree into their living room to celebrate life. The tree is one of the most powerful images in human thought and worship, a feature of human environments from taiga to rainforest, and a symbol of persistence, fertility, life, descent, destiny, purification and strength, a vertical link between the Earth and the heavens, a place to seek knowledge.

Siddharta Gautama experienced Enlightenment under the banyan tree (*Ficus benghalensis*), and became the Buddha. The seven-branched candlestick of Judaism, the menorah, symbolizes the expansion and illumination of consciousness in the image of a tree. According to the *Hávamál*, Odin, the ruler of Norse and Germanic gods, hanged and sacrificed himself for nine nights in “the tree, of which no one knows the origin of its roots” to learn the secrets of runes, language, wisdom and action. St Justin Martyr said that the Lord “reigned from the tree”, meaning both the tree of the Cross and the Tree of Life. In Eden, man was denied the fruits from the Tree of (eternal) Life to prevent him from becoming entirely like God after eating the fruits of the Tree of the Knowledge of Good and Evil.

The idea of history as a tree dates back at least to the twelfth-century mystic Joachim of Floris, who conceived the Tree of Life described by St John in the Book of Revelation as a continuous unfolding of three ages: of the Father, the Son and the Holy Spirit, under the reigns of Law, Church (Faith) and finally Love. Uprisings against the Church followed when common people asked for the speedy realization of phase three. The three-phase template of history was inherited by the German romantics and their materialist and Marxist descendants, as well as by the positivist philosophy of Auguste Comte.

From the late Renaissance, noble families in Europe had their pedigrees drawn in the form of trees — genealogical trees. By a giant leap of scientific imagination and analogy, these family trees became the prototype for a new theory of humanity’s place in the Universe: “I believe this simile largely speaks the truth,” wrote Charles Darwin in *The Origin of Species* (1859), imagining evolution as a tree branching through time.

In 1776, the German–Russian naturalist Peter Simon Pallas proposed in his *Elenchus Zoophytorum* a systematic arrangement of all organisms in the image of a tree; and in 1861 Heinrich Bronn presented such a tree based on fossil evidence. But it was Ernst Haeckel, in his monumental *Generelle Morphologie* (1866), who drew the first tree of the common descent of all life on Earth. Haeckel also coined the term ‘phylogeny’ from the Greek words for tribe or race and origin, and presented phylogenetic trees for all major groups of organisms.

One might expect a German to draw thick oaks and beeches, a veritable Teutoburger Wald where the legions of Rome would lose their nerve among the mighty trunks. But Haeckel’s trees look more like slender kelps — after all, he was mainly a marine biologist — that allowed him to show more detail. The German entomologist Willi Hennig subsequently created cladistics (from the Greek word for branch), a method

of taxonomy emphasizing the branch-splitting sections of evolutionary trees.

Phylogenetic trees are common in today’s scientific journals, but there it is seldom realized how speculative they are because they look so real. This rhetorical power was significant in the popularization and triumph of evolutionary theory. Yet phylogenies are only sketches of historical hypotheses, constructed from imperfect historical evidence: fossils; morphological and anatomical similarity; biogeographic patterns; and, recently, comparison of different molecular sequences. Some phylogenetic trees are certainly more probable than others, but the inherently imperfect nature of the evidence seems to guarantee that we will never be able to reconstruct, except perhaps by accident, the true phylogeny of life on Earth.

Yet the need for belonging and fitting in, for creating order and enlightenment, ensures that we will spend new millennia searching downwards for our roots and upwards towards our branch in life. What better ending then, than to quote the final lines of Patrick White’s epic novel *The Tree of Man* (1956): “So that in the end there were the trees. The boy walking through them with his head drooping as he increased in stature. Putting out shoots of green thought. So that, in the end, there was no end.” ■

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Phylogenies evolved from genealogies, such as this one from seventeenth-century Germany.