

It is lovely to have this opportunity to share some thoughts with you today on Light with particular reference to Light and the plant kingdom. Humanity has a great responsibility toward the evolution of the lower kingdoms of nature and in helping these lives evolve. And so it is relevant to reflect on how our Triangle service, with its evocation and distribution of soul light, relates to the natural world and in this case, the plant kingdom, as well as to the upliftment of the human kingdom.

First it is inspiring to recall the prophecy that the Christ will fuse and blend within Himself three principles of divinity; and when he appears: *"the light that always has been will be seen; the love that never ceases will be realised, and the radiance, deep concealed, will break forth into Being" ... "We shall then have a new world – one which will express the light, the love and the knowledge of God in a crescendo of revelation."*ⁱ These are the three divine principles which we are attempting to visualise and circulate in our triangle service and build into a flourishing network of distribution. Light is the path for His planned work of bringing love and radiance into the world.

Focusing on this first principle, the principle of light, it can be refreshing to turn one's eyes towards the plant kingdom and see the light reflected through this kingdom, since their life is dependent on light received from the sun. Photosynthesis, the chemical translation of sunlight and air into coalbased sugar and oxygen, is after all that which expresses the creative genius of this kingdom. Photosynthesis, which the cyanobacteria brought to the algae, and the merging of cyanobacteria and algae, has been such an evolutionary success that the vegetable kingdom which grew out of this collaboration and synthesis between two different organisms, has been spiritually recognized to be the one gift that the planet Earth has given the solar system, so far.

The story begins : *"A billion and a half years ago, an alga-like cell swallowed a cyanobacteria. That alga-like cell was the early organism from which both animals and fungi would later evolve, and the cyanobacteria is an ancestor of the unthinkable diverse bacteria that flood our world today. But together they were the start of a new branch of life entirely. Afloat in the murky waters of the Precambrian, this single sentinel of a new kingdom began to photosynthesize. It took sunlight, and alchemized the spare materials of its environment – water, carbon dioxide, maybe a few trace minerals – into sugar."*ⁱⁱ

This is a quote from the brilliant and suggestive book *The Light Eaters, the New Science on Plant Intelligence* by environmental journalist Zoë Schlanger. Here, she tells the drama of creation in a new way, finely weighing and following up on both sides of science. On one side, there are those scientists who argue that plants have intelligence and agency and on the other side there are those who argue against it. From this and her own study and experience of plants she is wrestling a vision of the future of plant life. This vision is open to give plants legal status, so that they can have a voice for protection from extinction and the destruction of entire ecosystems necessary for their survival and further evolution.

She argues, together with many scientists in the field of botany and evolutionary ecology, that plants have agency. The word vegetable has been used as a word for brain-dead human beings. But the root meaning of the verb vegetare means to animate or enliven. Vegere was the very state of being alive, being active. The activity of plants and their behaviour are now studied by behaviour research teams and the same study design which has been used for animals can be applied to plants, in almost all cases. There are even personality research going on with sagebrush.

Agency can be defined as flexibility in behaviour, which plants no doubt have. In spite of their immobility they can respond creatively to the environment, and provide for their own need to grow, regenerate and survive harsh conditions with the production of a great variety of chemical compounds that attract or repel as the need may be for the moment. By interior regulation of the pressure in the veins in different parts of the root system or other parts of the plant they can stimulate growth or stop provide for a non-productive part that cannot photosynthesize enough for the well-being of the whole plant.

The divide between scientists and philosophers in the Western world can be traced back as far as the ancient Greek philosophy. Aristotle placed in his ladder of life, *scala naturae*, plants on the bottom and humanity at the top. Aristotle argued there were no intelligence, nor sensation at the bottom. One rung up he gave animal sensations. Rationality was kept at the top for humanity for the instrumental use and rule over the natural world, while giving up earlier ritual acts to have peace with and show deference to the elements and the nonhuman creatures. It was Aristotle's thought model that came to dominate the natural sciences and Western morality, and as we all know, this hasn't changed much. But there were exceptions.

Aristotle's had an outstanding student named Theophrastus. When Aristotle died, he left his school to Theophrastus, who had a special interest in plants. He published the first known book about plants and their behaviour. Plants, he wrote, were not passive, but were constantly moving, seeking after their desires and they showed both likes and dislikes.

Also Charles Darwin, after his *On the Origin of Species*, dedicated his interest to plants. Together with his son Francis he observed their movements, why they moved and the way they did it, and considered plants as subjects that had activity and purpose. He studied their root systems and the incentives for growing roots in one direction or the other. He found that the tip of the root, the root cap, functioned as a brain that could sense moisture, nutrients, obstacles and dangers and direct the the growth of the rot from this information. He called the root cap a "root-brain", something which no botanist at that time believed in. Since then modern science has collected more evidence that plants are sensitive to touch, hearing, vision, have memory and can perform intelligent social behaviour even though they cannot explain how they do it. They are alert, awake to the world, spontaneous, responsive, collecting information and making constant decisions of how to act for their survival. They are communicating across complex family relations and with other species.

To give a few very brief examples of agency, plants like tobacco, sagebrush, red alder and willow respond specifically and exclusively to the sound of its predator, for example the chewing of a leaf-eating caterpillar. The sound triggers the plant to create chemical compounds that can sicken or kill the caterpillar. Other sounds can make the same plants fight off harmful fungi infections or begin to prepare for drought conditions. Plant roots can hear the sound of running water under the dirt and orient its growth towards it.

In the light spectrum, plants absorbs the red and the blue wavelengths. The green we see in a plant is the wavelength they do not absorb, but reflect back. This is also used by plants when they decide the size and quality of a nearby plant, and adjust their hight, in order not to relegate a close family member to exist in the shade. Botanists have found various light receptors in plants, so plants can evaluate the changes in the colour and quality of the sun light and see if and where the light has passed through a nearby plant.

Plants have evolved kin recognition. If sunflowers are grown in rows packed together, they avoid growing roots aggressively at patches in the soil with hight nutrition. Instead, they adjust the growth of their root systems to leave nutrients to their siblings. They tilt their stalks at alternating angles not to shade their kin-neighbours. There are many more examples of social behaviour that give a sound

proportion to the old belief that plants always compete aggressively for food and sun light. Plants can adjust to complex variations in their habitat, and show true social skills.

Due to our modern life style it is rarely remembered, nor gratefully acknowledged, that the plant kingdom is an older brother, without which our life on Earth would not be possible. We could not exist without their ability to photosynthesize light and carbon dioxide. Neither animals nor humans would be able to find sustenance or build bodies. Compared to the vegetable kingdom the human kingdom is an infant and therefore vulnerable because we cannot survive without our brother. They preceded us and now amount to 80 percent of Earth's living matter. Scientists calculate that due to photosynthesis there are more living cells in the world than grains of sand or stars in the sky.

When we take the next evolutionary step as a human family we will not be alone. We have hitherto been working in co-dependence with the lower kingdoms of nature. We share the light from the sun, the qualities that has built the minerals in the earth, the water and the oxygen plants breathe out into the atmosphere, and the coal-based sugars the vegetable kingdom produces which is making it possible for plants, animals and humans to grow bodies and find sustenance on the earth.

Our dedicated attention in the triangles to the divine energies synthesized by the Christ at the center of each triangle answers to the call of the human kingdom to draw nearer to the Hierarchy. We might see the exuberant and creative biodiversity of the plant kingdom as a pre-vision of the spiritual creativity and ingenuity that a soul-infused humanity will be capable of creating from a fusion with the kingdom of soul light and love.

In spite of being the more evolutionary immature of the human and plant kingdoms, we are on the verge of giving birth to the Christ principle of love-wisdom within the human consciousness, and therefore to the coming into manifestation of one more kingdom in nature, the fifth kingdom, the kingdom of souls. Our work with triangles is laying the etheric foundation for the coming externalisation of the spiritual Hierarchy on the material plane.

Sometimes, and perhaps when it is least expected it happens that we are struck by wonder. The plant kingdom can give many such moments, but so does the spiritual world. I would like to close with a quote from a poem with the title *WONDER* by poet Mei-Mei Berssenbrygge. Like Zoë Schlinger she balances delicately between scientific observation and a spiritual vision in dialogue with the world, which to her includes the land, plants and the stars.

SHOW PP9

WONDER

One summer night, walking from our house after dinner, stars make the sky almost white.

My awe is like blindness; wonder exchanges for sight.

Star by star comprises a multiplicity like thought, but quiet, too dense for any dark planet between.

While single stars are a feature of the horizon at dusk, caught at the edge of the net of gems.

Transparence hanging on its outer connectedness casts occurence as accretion, filling in, of extravagant, euphoric blooming.

Then, being as spirit in matter is known, here to there.

I go home and tell my children to come out and look.

The souls of my two children fly up like little birds into branches of the Milky Way, chatting with each other, naming constellations, comparing crystals and fire.

They exclaim at similarities between what they see in the sky and on our land.

So, by wonder, they strengthen correspondence between sky and home.

Earth is made from this alchemy of all children, human and animal, combined with our deep gratitude.ⁱⁱⁱ

This poem made me think of when our triangles and the planetary network can be seen through etheric vision in the future and its dynamic transmitting Light will be revealed as a wondrous creation. In the same way that plants have evolved the genius to alchemise light from the sun, we have the creative genius to seek out every ray of light from the soul, from the heart of the sun, and higher still as our spiritual creativity evolve. And in the process we will not only give form to a new kingdom on earth but also to a new culture of the soul and a more enlightened civilisation. In preparation for this we serve, and build and pray for the love that never ceases and for the radiance, deep concealed to break forth.

Thank you for listening.

- i .*The Reappearance of the Christ*, p.94
- ii *The Light Eaters, the New Science on Plant Intelligence* p.26
- iii A Treatise on Stars p.69