

# Selva

## Research for an Educational Approach Inspired by the Life of Plants

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### Biography

**Giulia Filippi** (IT, 1982) is a visual artist and researcher in the field of education. After studying visual art in Venice (IT) and Lahti (FI), she attended a master in sociology and botany in Florence (IT). Since 2006, she works with different institutions to expand the educational program using the art practice to create connections to knowledge through experience.

### Abstract

**This essay seeks to give poetical expression to the vitality of plants in order to find a new educational approach. It is a research based on the life of plants—and interactions with other entities—suggesting art practice and creation as tool and method. This visual essay narrates all the scene of a metaphorical Selva, below and above the ground, and proposes a workshop to imagine landscapes and interactions, collectively.**

## **Keywords**

**Plants, mutualism, care, informal education, cooperation, anarchy, radical imagination, art practice**

## **Patch**

Selva is a multitude, a forest, a place of the stratosphere that inspires ethereal dreams.

It is a research articulated around the body of the world, the plants, the animals, the insects, the mycetes, the instincts of the atoms and matter, conceiving all bodies as an archive of cosmic relations between Sun and Earth. Plants are artisans, alchemists who turn sun-light and carbon dioxide into volatile forms of atmospheric media suitable for long-distance communications (Hustak and Myers, 2012).

As a matter of fact, all organisms create ecological places in which to live, alternating earth, air and water. In this process, each organism changes the world. Bacteria are the basis of our atmosphere maintained by plants which grow in the ground because mushrooms enrich it due to their ability to digest rocks.

Life is therefore an assembly, and assemblage, an open gathering (Figure 1).

There is no established order but an organized disorder that makes life and its evolution possible.

And there is no opposition between the living and the non-living: life is always the reincarnation of the non-living, a carnival of the telluric substance of the Earth, that continually draws new ways of being out of even the smallest particle of its disparate body.

We are part of a much larger and interconnected form of life. For example, imagine the creation and evolution of *a patch*. Let's imagine it from the beginning, trying to insert all the elements that can compose the assembly. There is something or someone that creates them but



Figure 1. A patch, a multitude, an assemblage, a portrait of the structure of Selva.

there is something that moves beyond them. The plants go everywhere, move and grow even in the unexpected places, radically migrating along with the fungi.

### **Belowground mutuality**

Mycorrhizal fungi and mycorrhizal symbioses are key components of terrestrial ecosystems that contribute significantly to withstand and reduce certain negative effects of global changes.

When a forest tree is endangered, the mycorrhizas communicate to the rest of the forest trees that one of them is dying. At this point all the other trees, through the mycelium, begin to take care of it to try and save it: they feed it, they give it water, they protect it (Figures 2, 3)



Figure 2. Mycelium, sprout, insect and wood.



Figure 3. Robinia—apparently death—fed by the others.

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A caring behaviour by one individual increases the fitness of other individuals. Taller plants receive more sun and shade their neighbours. However, taller groups of plants accumulate more biomass and share it.

Age differences among trees contribute to forest heterogeneity, with variation in mortality rates influencing tree size and age, canopy gap formation, and the presence of snags and fallen logs. In complex systems, openness means that energy, matter and, information are exchanged with the external environment through porous system boundaries. Adaptation is similar to self-organization in that it depends on cross-scale interactions, but differs in that it is externally driven. Complex systems accumulate information from the past that influences future trajectories through persistent change in the system's structure and composition.

Constant care, when exchanged between species is called mutualism; within a species it is reciprocation.

Reciprocal altruism or reciprocity is characterised by an individual who provides constant care to another individual, who in turn responds by providing constant care to the first individual. This reward structure indicates that, the more common cooperators are in the population, the more cooperation will be favoured by the evolution (Dudley, 2015).

### **Aboveground anarchy**

Beyond underground relationships there is an airy world to explore.

The seeds and the spores, for instance, moving in the air open our imagination to another cosmopolitan topology. They fly to unknown places, reproduce between different types and can give rise to new organisms and varieties. In thinking of *patches*, of the landscape, the spores guide us towards the heterogeneity proper to the populations. Collaborations allow for changes and evolutions, overcoming differences and generating transformations from every encounter. The environment is a story of encounters.

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Organisms are self-managed cellular communities that live for themselves and that are encouraged to cooperate to maintain their vital functions, creating real mutual support networks.

Life is, essentially, a matter of relations. The inner parts of a living body are made inseparable by a combination of economic relations; they do not exist for themselves but for the cells and the various atomic elements that make up the structure. In fact, all life emerges from an associated system where every element, living and not, is free and at the same time dependent.

The composition blooms from the decomposition (Figure 4).



Figure 4. A mushroom grown on a log.

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An emergent and expanding multi-layered cacophonous web of mutually constitutive, living, and growing thoughts promote a greater sense of interconnectedness between humanity and nonhumanity. Selva is a form of thinking about the world that grows out of a specially situated intimate engagement with thoughts-in-the-world (Kohn, 2013).

The world of living beings is neither just a continuum nor a collection of disparate singularities waiting to be grouped: it is a choral performance where ages and species are involved to compose and decompose life.

In ecosystems such as forests, heterogeneity encompasses the vertical, horizontal and temporal dimensions of stand composition and structure. Each vertical stratum has a unique microclimate and provides a different set of resources to sustain plant, animal, and fungal biodiversity (Brokaw and Lent 1999).

The interaction between live creatures and environmental conditions is the very process of living; those information, through the bodies become experiences.

### **Informal education. From plants to humans**

Selva imagines an educational approach that is transversal, horizontal and cosmological, focused on care relations; it considers human inclination to exchange knowledge by experimenting, in order to stimulate curiosity in every field and place where informal education happens.

It is therefore important, first and foremost, to restore children's awareness and deep belonging to their own environment, as well as the awareness that they can play an active role in shaping their environment.

It's not about feeling in the world, it's about feeling the world.

It's the environment and not the place that matters. Teaching and learning must take place in any kind of environment, through resourcefulness and creativity. Creativity and the practice of art, as an expressive language, enables us to make use of all our senses in resonance, like plants

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do. These aspects are crucial in the educational field including our own idea of childhood, breeding, growth and community.

We can learn from the world, and therefore perceive it, only when we understand it as an open system. So we go back to acting, to the idea of creating our life, to the act of becoming animal, of becoming plant and becoming substance. Reality is extraneous to any kind of abstract concept; it is a total organic experience in which the image and the data of perception are not clearly differentiated.

Life must be directly experienced not from a mental distance. At best we could recover a consciousness innate in art and its organic vitality.

The purpose of education should be to preserve the organic totality of bodies and mental faculties, so that, passing from childhood to maturity, the unity of consciousness, which is the sole source of social harmony and individual happiness, is maintained.

From a broader social point of view, it is asserted that a way of life based on knowledge of organic relations (to use Plato's phrase) is a safer guide, in social organization, ensuring that the law of development is inherent in the universe and manifest in natural kids (Ward, 2018).

### **Art and radical imagination**

The purpose of imaginative education was described by Plato: to instil a complete and sensuous awareness of the harmony and rhythm which enter into the constitution of all living things, and are the formal basis of all works of art, so that the children, in their life and in their activities, may share in the same grace and organic beauty (Read, 1962). Understood as an original creative impulse, art constitutes an experience of radical and integral creation, a direct confrontation with reality that highlights all its communicative energy, freeing itself from formalisms and dangerous forms of competitiveness leaving instead room for collaborative interactivity.



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Artistic gestures are similar to natural relationships that intersect in the wilderness.

No other discipline, in fact, is capable of giving the child, not only a consciousness in which image and concept, sensation and thought are connected and unified, but also an instinctive knowledge of the laws of the universe and an attitude or behaviour in harmony with nature. The process of building an environment (by nature and all the abovementioned actors) is similar to the process of making a work of art.

Both are wholes composed of meaningfully interrelated parts and both function as agents of changes. Education through art is a means of developing creative and flexible forms of thinking, and training critical consciousness that support awareness and harmonious community life. Art is a lens that teaches how to see and a tool that draws possibilities.

It is necessary to dream, imagine and create new conceptual instruments with unexpected properties which consider all phenomena and dimensions beyond the human and forge relationships in transition.

Selva is a multitude of plants, a multitude of people and a multitude of experiments and exercises that uses art practices to trigger individual and collective transformations.

### **How to think like a plant?**

*Selva* | 3 (the third exercise) proposes a workshop where participants are invited to think like a seed, like a branch, like a root, like a plant and to experience the connection with others in a game of imagination and relationships.

It is an assembly and an assemblage, an experimental protocol based on a series of actions aimed at questioning our object-oriented approach, in order to promote a systemic view of life and communities. Underground structures and processes, fruit and seed systems, multilevel cooperation are essential for the development of adaptive strategies to safeguard the biodiversity of all species and safeguard them for the future. *Selva* | 3 suggests to explore the plants circle

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Figure 5



Figure 6



Figure 7

by using fruits as trigger for the workshop. From the germination of seed to the maturity, then flowering and fructification. Dehiscent fruits, once dry and mature, let their seeds escape naturally. The seeds will thus be dispersed as far as possible from the mother plant. Fleshy fruits are essentially designed to be eaten by animals, which help to disperse the seeds but those fruits can provide a nutrient-rich environment for the seed itself to begin germinating. And the cycle will start again.

Seed are compresses of future. *Selva* | 3 pertains to the natural experience of fruits and seeds, roots and plants as metaphor of the relation in human life, ages and experiences. Everyone is called to act, to imagine and re-think the representation of reality, as we perceive it, concerning the graphic representation of bodies through drawing.

The artwork takes the form of a fruit banquet, a drawing session, a construction of bodies gathered in an imaginary collective garden growing in a 'spacetime' continuum. This exercise is designed to be repeated many times in different context, following the instructions below to participate.

Ingredients: fruits, paper, pencil, scanner Choose a fresh fruit preferably picked from the garden (Figure 5).

Carefully eat the pulp and isolate the seed (Figure 6). Observe it carefully and draw it on paper with a pencil (Figure 7).

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Imagine and draw the shape of the plant growing from that seed: the roots, the trunk, the branches, the leaves, the buds... (Figures 8, 9,10, 11, 12, 13 peach trees from previous workshops).

When you feel satisfied with your drawing, scan and send it via email to [selvacollectivegarden@gmail.com](mailto:selvacollectivegarden@gmail.com). It will be “planted” in the collective evolving garden called Selva | 3 (Figure 14).

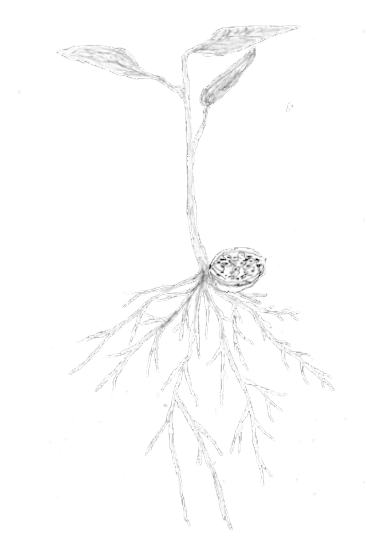


Figure 8. Peach tree by Giulia.

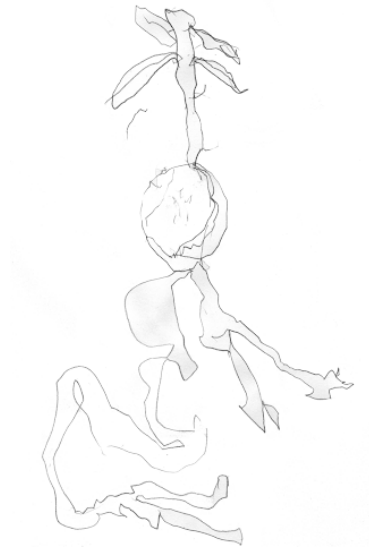


Figure 9. Peach tree by Andrea.

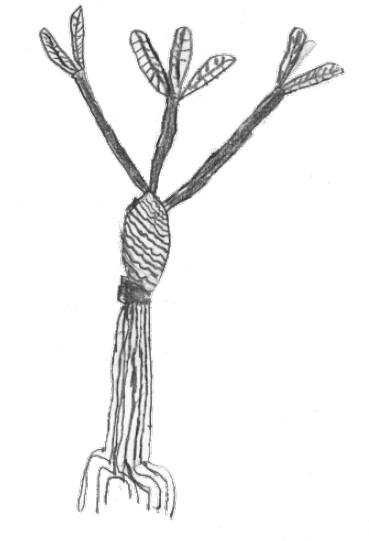


Figure 10. Peach tree by Benedetta.

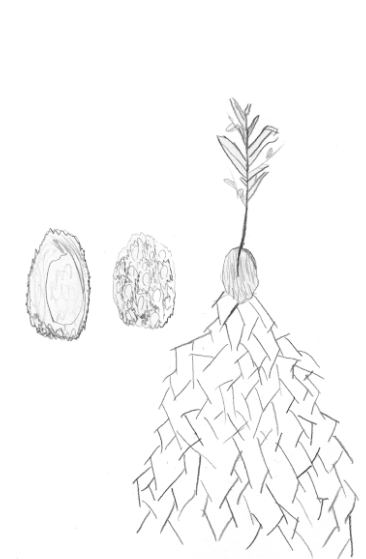


Figure 11. Peach tree by Federico.



Figure 12. Peach tree by Vittoria.



Figure 13. Peach tree by Davide.

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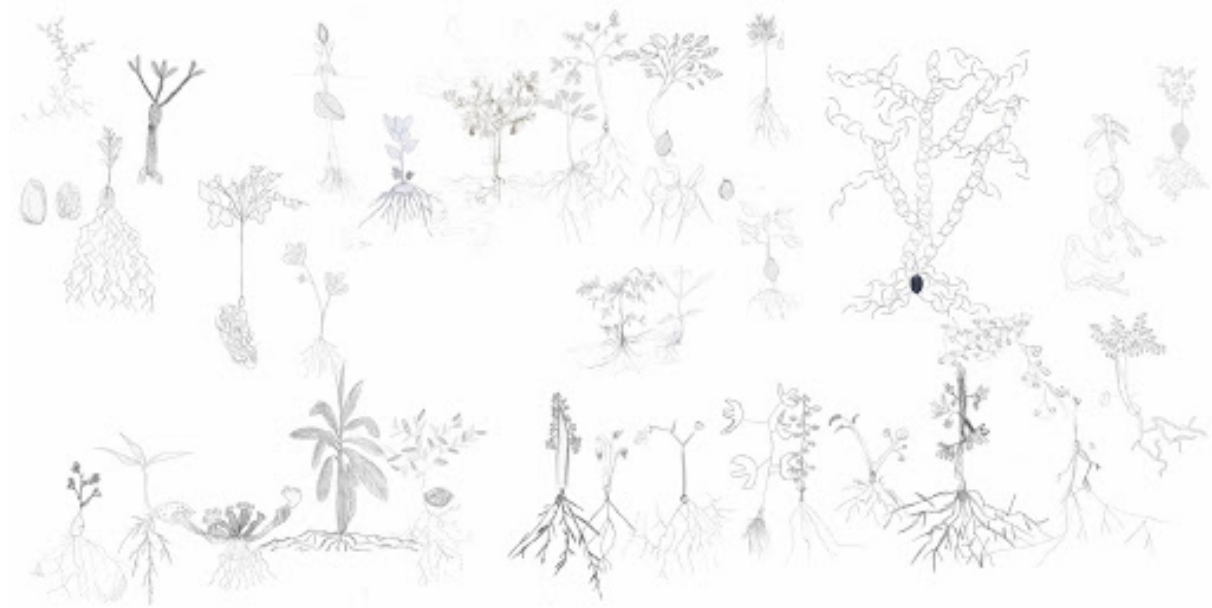


Figure 14. It will be planted...Selva | 3, map of the imaginary collective garden growing in a 'spacetime' continuum.

### **Sidereal roots**

This practice exposes people to a greater understanding of ecological processes and to a more complex physical structure and biodiversity, rediscovering our wild nature. It wants to generate awareness through poetry, it wants to interrogate the research and make it flourish in the path of observation, care and discovery. Like a patch, Selva stages and weaves a network of mutual relations between humans of all ages, plants, insects, animals, fungi. It trains our primitive gaze to become athletes of perspective and imagine ourselves as different bodies.

Plants are sessile organisms with very sophisticated strategies to communicate, to exchange nutrients, to defend themselves from external attacks, and to spread their pollen, their seeds and messages.

There are plants, like the *Celtis occidentalis*, which coat their seeds with opal: a tree produces rock and rock feeds fungi and plants. So, back to the crucial point: environment is always

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an assemblage, a community.

It is only from the light which streams constantly from heaven that a tree can derive the energy to strike its roots deep into the soil. The tree is in fact rooted in the sky (Weil, 2012). The plants act continuously above and below the ground to transform the energy of stars into terrestrial matter, sheltering and nurturing relations of different individualities in a common life. Education is a transformative performative act, a process that happens within us.

Selva is the place where we came from and it's the multitude, the network to build for. We are all part of the wild nature.

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