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CULTIVATING LIFE: REGENERATIVE PRACTICES IN THE VALENCIAN *HORTA*

A CONVERSATION BETWEEN XAVIER LUJÁN AND CHIARA SGARAMELLA

C.S. Thank you for your time Xavier. I would like to share with you some reflections on our relationship with soil and its inhabitants, based on your research and practice. In 2010, you started an agroecological project named Vorasenda in what is known as Horta Nord, in Valencia, Spain. The Horta landscape is a periurban agricultural area created through to an eight-century old irrigation system adopted since the Islamic period that made it possible to grow fruits and vegetables in this dry region. This distinctive network of ditches and canals is built in such a way as to allow water to circulate only by gravity and is collectively managed by irrigation communities that share access to this common resource. Despite being recognized as world agricultural heritage, this complex agrosystem is constantly threatened by urban development and infrastructure. The change in land use could cause the irreversible loss of fertile soil as well as the destruction of an invaluable ecocultural heritage. By adopting a community-supported agriculture approach, your project Vorasenda aims to protect this productive land by establishing a direct relation between citizens and farmers, as well as promoting agroecological production in the Horta ecosystem.

My first question revolves around the creation of an agroecological farm in a context dominated by industrial farming, and the knowledge needed to begin such a process. You studied environmental engineering at university. The agroecological approach questions the epistemological bases of modern science, promoting a non hierarchical pluralism between knowledges and practices, focusing on relationships and emergent properties. In this regard, I would like to ask: how helpful was academic and technoscientific knowledge in the implementation of agroecological cultivation methods in your fields? Did you have to deconstruct or unlearn some of the assumptions, notions and practices that you had assimilated earlier in your life?

X.L. First of all, though agroecology criticizes certain aspects of conventional science, I believe scientific research is important and necessary in this field. However, in industrial agriculture, scientific evidence is often used as a discourse to implement practices that lead to the plunder of resources and the accumulation of privilege. Certain scientific findings and aspects of the scientific method are emphasized while others are ignored in order to justify these policies. From my point of view, in recent decades, science has often been applied

in the agricultural sector under biased premises in order to maintain specific power relations[1].

As for my university education, an interesting thing has happened to me lately and I think it is relevant in relation to your question. While reading and experimenting with agroecology and soil science, I have been recovering some of the theoretical notions I studied at university. When I came into contact with these concepts in the early 2000s, I internalized them but in a totally decontextualized way. At university I felt we were exposed to these ideas but they were far removed from our experience. As I was saying, I am now in the process of rediscovering everything I had learned, in relation for example to ecological successions in altered ecosystems. Not only plant successions, which are very well known, but also the microbial ones that are relatively less explored. Now, after almost two decades, I am coming to terms with what I studied back then. However, this happened after my human and professional experience developed in ways totally detached from academia. Rather than unlearning, then, I have had to disengage from the academic setting and develop my own thinking framework in close relation to the land and the development of an agroecological project.

Your words resonate with Arturo Escobar's reflection on the need to move beyond the detached and objectifying perspective of academia and incorporate knowledge emerging from the relation to the phenomenal world – and the struggles to protect the land and the life in it[2]. Talking about knowledge and practice, agriculture has been in your family for several generations. Were you able to draw on your family's knowledge or on neighboring farmers' traditional practices in the creation of your project?

Naturally, we learned all about irrigation or how to till the land from other local farmers but, having chosen an agroecological approach, we found out that very few of the practices used in the conventional model were useful for our work. This is not a judgment against those involved in industrial agriculture. I think it is important to underline that farming is not easy, even in the conventional sphere. We should not underestimate the efforts of farmers who try their best to keep the countryside and their families' economy alive, even within a line of production that is quite aggressive towards the territory and the ecosystem at large. That said,

1 For a reflection on agro-ecosystems as socio-ecological constructs and products of power relationships, see González de Molina, M. (2012), Algunas notas sobre agroecología y política. Agroecología, 6, 9-21. https://digitum.um.es/digitum/handle/10201/29877

2 Escobar, A. (2016). Thinking-feeling with the Earth: Territorial Struggles and the Ontological Dimension of the Epistemologies of the South. AIBR Revista de Antropología Iberoamericana, 11(1), 12-32. https://doi. org/10.11156/aibr.110102e

our production formula is completely different from the conventional one. In fact, community-supported agriculture proposes very specific modes of production and distribution and is based on a very close relationship with the citizens-consumers. Therefore, the most common farming practices and even the traditional ones belonging to the Valencian *Horta* do not fit with our values and objectives. At the beginning, we imitated some of the practices implemented by the local farmers, but very soon we realized that they generated a continuous dependence on agricultural inputs, on the farm machinery. In industrial agriculture farmers do not cultivate life. They are constantly depending on external resources in order to grow the crops. That is why we had to try new production methods in line with our agroecological principles. There was no one around to draw inspiration from. Thus, the majority of the practices we apply in Vorasenda are born from our own experimentations. This opened up enormous learning possibilities for us, but we also made a lot of mistakes because locally we had no reference points.

Could you describe some of these experimentations, as you call them? What practices have you carried out in order to restore and keep the soil alive?

In our geographical context, a farmer or group of farmers wanting to experiment with a regenerative approach – inspired by agroecology, permaculture, biodynamic agriculture, agroforestry etc. – usually inherits a heavily degraded soil as a result of decades of intensive conventional farming. The recipe for revitalizing the soil comes from studying models such as the forest in order to understand how nature spontaneously produces millions of interdependent relationships, generating relatively stable systems with an overflowing and vibrant aliveness and regenerative capacity[3]. It is moving to see the many intricate layers of life that can coexist in a square meter of forest, all of which are sustained by a rich and complex soil. On the contrary, what we normally have to work with are fields whose soil has no structure and shows a lack of minerals and microbial life. In such an environment plants can hardly thrive because, for example, the minerals they need for their metabolism are not available to them.

Going back to your question, the first action that I believe needs to be done in order to revitalize a soil is consolidating a body of citizens-consumers committed to agroecology because that is the *human humus* that will truly revitalize the land. Starting an agroecological project requires time, work and economic resources. It is a fallacy to think that farmers can carry out the soil regeneration autonomously: they need a community around them. Moreover, when we talk about degraded soils, it is important to understand that

3 Holmgren, D. (2002). Permaculture: Principles & Pa-thways Beyond Sustainability. Permanent Publications.

this degradation is the result of a cultural hegemony, a social process that has led to this destructive outcome and that needs to be reversed.

I find the notion of *human humus* very compelling. It connects with the idea of a *common aliveness* proposed by María Puig de la Bellacas[4] as a nurturing element for a more caring human-soil relationship.

Yes, I believe this common responsibility to nurture the soil and sustain agroecological practices needs to be present throughout the regenerative process. It is a process that also regenerates us and our social bonds. In my opinion, the agronomic techniques and practices are a natural result of this commitment. We start with the application of rock flours for the remineralization of the land. Then comes the incorporation of biofertilizers to replenish the soil microbiota, in order for the soil's aerial expression – meaning the plants and the microecosystems they sustain – to be balanced, biodiverse and healthy. Obviously, the health of the soil is reflected by its aerial expression. For example, we can throw a cabbage seed into a desertified field and the plant will grow if we add some agricultural inputs. However, it will most probably be a vulnerable plant since it is the expression of a life depleted soil. Therefore, it will not be able to sustain itself with its own metabolism and immune system. Another option is that, being in a desertified system, the cabbage will be heavily attacked by snails because there are no birds, hedgehogs or other predators to control the snail population. There are different scales of degradation, not only in the ground but also in the ecosystem at large. Agroecology tries to reverse some of these unbalances. Going back to the soil, like plants, humans too depend upon microbial life, and there is a connection between our inner microbiome and the one in the soil, as many recent studies show. Soils are a *complex microbial phenomenon*, just as humanity is, as Lynn Margulis and Dorion Sagan put it[5].

True. This realization contributes to erode our anthropocentric understanding of life by showing the different interdependencies and forms of *interspecies care*[6] our existence rests on. Can you share some of the learning experiences you have had in the past years through your experimental agroecological practices?

Definitely. For me it was crucial to understand that forests are a great library for us to discover all the processes and relationships that sustain biodiversity. If

4 Puig de la Bellacasa, M. (2019). Re-animating soils: Transforming human–soil affections through science, culture and community. Sociological Review, 67(2), 391-407. https://doi.org/10.1177/0038026119830601

5 Margulis, L., & Sagan, D. (1997). Microcosmos. Four Bil-lion Years of Microbial Evolution. University of California Press.

6 Puig de la Bellacasa, M. (2017). Matters of Care. Speculative Ethics in More Than Human Worlds. University of Minnesota Press.

you take the forest as a model, you learn to read what is going on in your plots and what processes need to be strengthened to create a more balanced agrosystem. However, this is often not the case in conventional agriculture, where a constant cycle of depletion and desertification is repeated. In industrial farming we are taught to remove elements instead of replenishing the food web. It is therefore essential to understand the mechanisms that sustain biodiversity and then try to reproduce some of them in the fields. After understanding how a soil builds itself, for example, I made peace with the so-called pioneer "weeds" and I have even begun to revere them. It is something very meaningful to me. Through this new lens, I have finally understood their function, their specific role and how, once they have fulfilled their purpose, they naturally disappear leaving room to other plants starting a new succession stage. These weeds we are so used to view as harmful to our crops are actually the first phase between a desertified field and a more complex and stable system. This insight was truly liberating. As many other farmers, in fact, I was caught in a constant struggle against pioneer "weeds", a senseless losing battle.

You mentioned the ability to read what is happening in your plot of land as one of the fundamental skills to be able to conceive and apply methods to restore and strengthen life in the soil. How do you listen to the non-human "other" in your fields, meaning the plants, microbes, fungi and millions of other beings that inhabit the soil? What signs indicate that the practices you have implemented are contributing to enliven the soil and which ones inform you that something needs to be improved or modified?

Quite simply health manifests itself. You see that the bodies of the plants are healthy and not dependent on external inputs. Even though I have been working with these kind of methods for a relatively short time, I can tell you that health clearly expresses itself through the different life cycles happening in the fields. The problem is that we are often numb, detached and unable to interpret these signs. Unfortunately, I also believe that in many cases we have almost never come across a truly healthy ecosystem in our lifetime. Even when we go to a primary forest we don't necessarily know how to read it from an ecological point of view. However, humanity could not have survived without having established a dialogue with its own habitat – its creatures and processes. In our culture, we need to rebuild that type of communication and exchange. Listening in that sense is essential. It is necessary to open the many perceptive channels we have systematically closed or ignored, in order to fully see the state of the ecosystem and transform the processes that are deteriorating the material bases that sustain life.

It is interesting to see that your experience relates with what Margulis and Sagan define as *aesthetic perceptions of health*, which rely on empathic attention, mindful observation of life processes and consideration of organisms and systems' autopoiesis, meaning their capacity to sustain themselves and reproduce. In relation to this predisposition to listen and pay attention, how can we cultivate empathy towards beings and processes that are often invisible and very different from humans in scale and characteristics? Can art practice play a significant role in this effort to reestablish a meaningful dialogue?

I am not sure I have the answer to this question. I think we need to create proximity with the soil and experience it directly. Working with sensorial perceptions through art can surely be a significant strategy. Perhaps we also need to reframe our field of action and attention. I feel we are often focusing on fixing a broken system. In my opinion, there is an anthropocentric drive for control and manipulation in this idea. I believe this drive can originate from a lack of trust in what it means to be alive and in what life generously provides. My experience has taught me that it is important to trust a living system and learn how to take care of it by paying attention to the feedback it provides us. This comes as a result of a continuous dialogue and exchange. It became evident to me in the work we did in one of the fields we recently acquired, which was turned into a food forest. By simply inoculating the soil with micro-organisms and covering it properly, we saw a piece of land totally drained by industrial agriculture transform and boom with life in just two years. If you dig a little hole in this field, you can now see an impressive amount of hyphae, insects, earthworms, etc. that were not there before. And you ask yourself: who brought them here? No one did. We simply created some of the conditions for life to flourish. Sometimes we think of soil as a bare, inanimate substrate but there are seeds, dormant spores and other beings in it that have the potential to build a forest if we let them. With minimal human effort and time, the agro-ecosystem starts to recover and self-regulate. Thus, it is very important to step away from our anthropocentric urge for control and intervention which derives from the industrial farming mentality portraying the soil as a lacking space where it is always imperative to bring in inputs from outside. I believe it is important to let ourselves be surprised by its richness, generosity and self-restorative potential, and to integrate that knowledge and experience in order to fine-tune our practice and intuition.

In that respect, the words of anthropologist Kristina Lyons are especially significant. Through her work on farmers' cosmovisions and practices in Latin America, she concludes that "transformative potentiality is

not a human privilege, but always a relational matter dispersed in the connections and labor among people as well as other beings and things"[7]. As for the transformation of our relationship with soil, I think artistic research can play a relevant role in linking human and more-than-human worlds, thanks to the potential of art practice to integrate different types of knowledge, explore the embodied and sensory dimensions of knowledge, while destabilizing conventional views and perceptions. As an artist and researcher, I have proposed, together with fellow artist Estela López de Frutos, the creation of *Agroversitat*[8], a platform to engage in intergenerational artistic and pedagogic processes related to land use and agroecology in the Horta landscape. Arising from a long-term collaboration with Vorasenda and other agents active in the Valencia area, this initiative started in 2022 with the aim of grounding artistic practice in the local context and bringing it closer to ecological systems and processes that sustain our life. Also, the project proposes a collaborative, place-based and experiential learning approach focusing on the notion of care for human and ecosystemic relations, starting from the premise that our sensitivity can be transformed by the encounter with the non-human "other"[9]. What motivates your involvement in art based research and cultural activities such as *Agroversitat*?

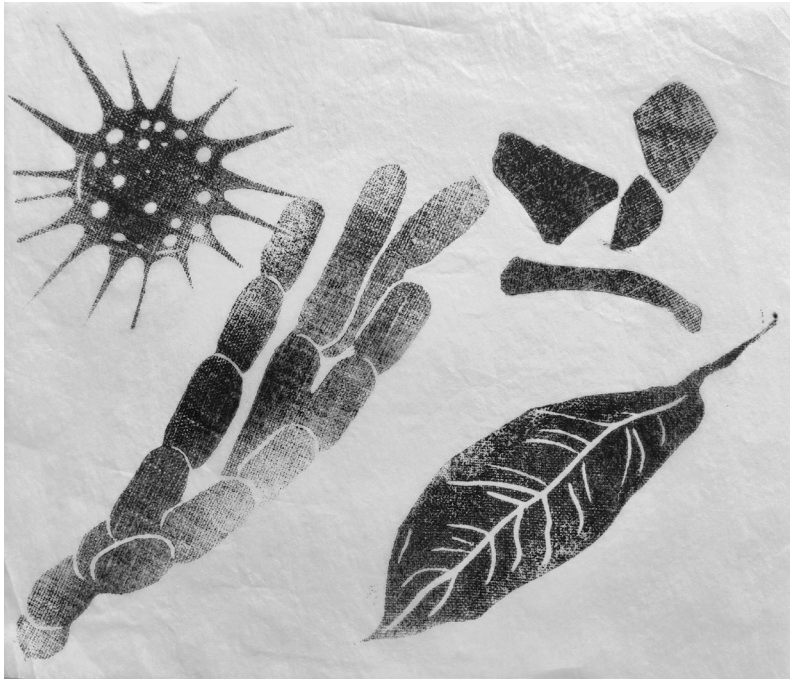
Since the very beginning, our project has had, besides the production of organic food, a line of action related to culture and social agency. We also offer educational services to schools and other collectives. We support Agroversitat as a space where we can practice decentering our perspective. In fact, most cultural and educational initiatives come from and revolve around the city, while your project immerses cultural production and collective learning processes in an environment that is more connected to natural cycles. Placing an open "university" in our fields allows us to engage with more horizontal forms of sharing knowledge and to nourish our predisposition to keep learning and experimenting.

Thank you Xavier for this inspiring conversation. Our hope is that this collaborative platform can become over time a gathering place for people and knowledge in connection with human and more-than-human communities and needs, as well as a space for shared imagination on our common future(s).

7 Lyons, K. M. (2020). Vital Decomposition. Soil Practitioners and Life Politics. Duke University Press.

8 For details, see: https://www.consorcimuseus.gva.es/actividades/agroversitat-laboratorio-de-arte-agroecologia-y-pedagogias-criticas/?lang=es

9 Tsing, A. (2015). The Mushroom at the End of the World. On the Possibility of Life in Capitalist Ruins. Princeton University Press.



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