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Sustainable pasts, edible futures. Learning to craft a livable world through plant-techne

Abstract

It is provocative, but not uncommon, to compare the work of art to a plant. Art is inseparable from the aim to pass on knowledge to future generations, just as plants strive to reproduce. This paper forwards the art-plant hypothesis that views works of art and plants not only as structurally similar, but teleologically united. We look to two models of art to test this hypothesis: earthworks of the land art movement, and the ancient Greek concept of craft or techne. Plant grafting serves as an example artform that is instructive for crafting a more sustainable world. We approach plant grafting as a sustainable technology in an age of genetic monopolization, and as a powerful metaphor for our common roots and responsibility to create a better world.

Keywords: Art, Plants, Sustainability

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It is provocative, but not uncommon, to compare the work of art to a plant. For example, 18th century German intellectuals like Johann Wolfgang von Goethe, Friedrich Schlegel, and Novalis all looked to organic models for a theory of poetry. How far we can push the art-plant comparison depends on the aesthetic qualities that constitute something as art. If art embodies formal beauty, then the symmetry, unity, and variety found in plants makes an obvious comparison. In this paper, we forward the art-plant hypothesis by claiming art and plants are not merely analogous, but teleologically united when viewed as processes of production that aim towards sustaining future growth. By looking to land art and traditional crafts – focusing on plant grafting in particular – we find a compelling case for an expansion of the concept of art based on the following qualities: practicality, reproducibility, and ephemerality.

Products of art sustain a complex relation to time, existing in two temporalities at once. As material production, art exists in the realm of change – those things that come to be and pass away (Aristotle 1934: 1140a). However, art survives its material degradation by communicating truths through the ages – some attribute this survival to the "soul" of the work (Winckelmann 1972: 75). Wassily Kandinsky understood this longevity, theorizing about a spiritual art that contains "den Keim der Zukunft in sich" – the seed of the future within itself (Kandinsky 2009: 26). If art is like a seed, what is its future? The art-plant hypothesis offers us a suggestion. Plants exist in a state of development toward a future goal, which is their maturation to produce seeds that will lead to reproduction. Art is inseparable from the desire to pass on knowledge to future generations. This means that the goal of art, like plants, is reproduction. By reproduction, we do not mean making facsimiles. Art is reproduced by inspiring future creations; in this way it perseveres. This pedagogical desire can be observed throughout the entire history of art, from the construction of monumental tombs honoring the pharaohs, to the artist workshops of the Renaissance, to contemporary art's didactic turn toward reckoning with muffled histories of colonialism and war¹. Plants exhibit a similar future-oriented process. In Goethe's studies of plant morphology, he happened upon a striking insight: plants are not static forms (Gestalten), but instead processes of formation (Bildung). The discrete parts of a plant (stem, leaves, stamen, etc.) are articulations of a process of Bildung. On a larger scale, nature is not a sum of natural organisms, but a productive

¹ An example of the latter is Alessandra Ferrini's MAXXI Bvlgari prize-winning video essay *Ghaddafi in Rome: notes for a film* (2022).

process. Goethe reminds us not to miss the forest for a tree. A tree belongs to nature even in death, as its decomposition serves to intensify the productive forces of nature. Every individual tree takes its existence from its participation in this larger process. We envision similar situation for art: through its enlivening effects on the human, the precious object of art recedes as a means towards further cultivation.

Since prehistoric times, plants have been central to art – as pigment for paints or as inspiration for subject matter. Instead of giving a gloss on this rich history, we reflect on a contemporary example: an intensive interdisciplinary program we conducted called "philosophy in the field of culture: ancient and new perspectives on gesture and production", taking place on the Homeric island of Kefalonia, Greece for two weeks in June and July 2022². Kefalonia is a place of great beauty and wonder, as ancient traditions are alive in everyday practices, sustained by an abundance of natural resources such as fruits, herbs, clay, seaweed, and wild animals. The fragrance of jasmine flowers, abundance of wild carrot (used since ancient times as a contraceptive), and distant sound of ringing bells from roaming goat herds are but three examples of the rich environmental tapestry that one experiences on the island. We sought to explore artistic practices that are aligned with nature, natural processes of production, and the unmediated progression of time³. To situate plants in an artistic context, we studied the works of Theophrastus. Theophrastus is an understudied philosopher despite being a close friend and student of Aristotle, and the successor to the Peripatetic school after Aristotle's death. The ophrastus is considered the father of botany due to his systematic treatment of plants.

Our primary artistic activity was plant grafting, a technique given special attention by Theophrastus as a method of propagation. Approaching grafting as an art requires understanding the knowledge involved in the process and cultivating a practice of art and philosophy working together.

² The authors are extremely grateful to Zaineb Siddiqui, an interdisciplinary researcher who collaborated with us in the program. Her dedication to understanding the Aristotelian corpus was a tremendous help in understanding the relationship between Theophrastus and his teacher, Aristotle.

³ When discussing Greece, with its renowned Mediterranean climate, we must be careful not to fall into "the myth of the static climate" (Post 2016). Such a myth was pronounced in Plato's *Timaeus* when Critias attributes the mild climate of Greece to a gift from the gods (Plato 2000: 24D). In fact, climate change and its effect on human, animal, and plant life was a topic of study for Greek philosophers in the 5th and 4th century – including Plato, Aristotle, and Theophrastus (Neumann 1985).

Grafting is a technique of making special cuts into two plants so they can be joined together and grow as a single unit. While there are many different techniques and kinds of cuts, Oliver Allen summarizes:

In essence, grafting involves the wounding of two growths and the arranging of them so that they heal together. One of the two growths is called the stock, understock, or rootstock. It is the host plant, rooted in the soil and providing nourishment for the other growth, the dependent top section, which is called the scion. (Allen 1978: 60)

Over time, the stock nourishes the scion from its own root system, and the scion can eventually bear fruit. The practical uses of grafting are numerous: creating hybrid "fruit salad" trees that produce different kinds of fruit in the same tree, speeding up the hybridization of cultivars, supporting or repairing weak plants with hardy and study ones, increasing genetic variation, and providing resilience to disease and pests. Grafting is also useful for the scientific study of the transmission of plant viruses. This is an immensely practical skill in an age of agricultural homogenization and monopolization of genetic material. Our resilience to famines increases with biodiversity, and grafting is a practical and easy way to support diversification⁴.

The metaphor of grafting confronts us with themes of difference, foreignness, interdependence, purity, and collective healing. Since early modern times, grafting has been a powerful metaphor for social and political relations. The graft was an image of ideal friendship expressed by Montaigne in *Of friendship*, and Shakespeare made frequent use of the metaphor (Achiellos 2018). The early modern discourses were characterized by ambivalence towards grafting as an opportunity for the perfection and improvement of nature with an attendant risk of debasement and domination through human intervention. The sociologist Georg Simmel used grafting as an example of cultivation, understood as a reciprocal interaction between nature and culture. In *On the essence of culture*, Simmel wrote:

⁴ Although grafting can be used to create hybrids, it is a somewhat different process from hybridization. Hybridization involves genetic mixture. Grafting, on the other hand, does not blend but *binds* two plants together. Each part of the graft – the rootstock and scion – preserves its genetic identity even though they grow as an organic unity. Subject to fierce scientific controversy, it was once thought to be a myth that that plants could exchange genetic material through grafting, however, recent research shows this is possible (Bock 2009).

The wild pear tree produces hard, sour fruit. That is as far as it can develop under conditions of native growth. At this point, human will and intelligence have intervened and, by a variety of means, they have managed to make the tree produce the edible pear; that is to say, the tree has been "cultivated". (Wirth 2014: 232)

The "variety of means" refers to grafting other fruits onto the pear tree to influence the qualities of the fruit. In literary theory, Jacques Derrida used grafting as a metaphor to discuss the iterability of the sign in different contexts, insofar as the sign can be "grafted" onto signifying chains (Derrida 1988: 9). Contemporary times give the metaphor new power. We are nourished by a common ground and come from the same "stock". The foreign, wounded, and sick are not our enemies; to share in the wound of another creates an opportunity for collective healing. Grafting belies the myth of scarcity – the lie that there is not enough for everyone. Nature reveals an abundance and generosity by redirecting nutrients from the stock to the scion – to the detriment of neither. The idea of an open future that preserves difference is not an idealistic dream, but a way of life more aligned with natural processes.

In arguing that the plant graft is an artform, we turn to more traditional notions of craft; in particular, the ancient Greek concept of *techne*. Passing through the latin *artes* and translated in English as "art", *techne* denotes any kind of productive activity that is informed by knowledge. To the Greeks, painting and music are *techne*, as are agriculture and medicine. When Theophrastus wrote about the effects of art on plants, the word he used was *techne*. *Techne* is an attractive framework because it mends the hierarchical division of craft vs. art or mechanical/decorative vs. fine art, which, for centuries, artists have striven to overcome – most notably in the arts and crafts movement of victorian England and the feminist art movement of the 1960s. Retrieving a concept of art as skilled production will not only lead to a more inclusive view of what constitutes art, but will also force art to reckon with its inclusion in other forms of production and manufacture, both on the industrial scale and in the realm of spontaneous nature.

However, there is a risk of anachronism in equating *techne* with contemporary art. To do so would potentially impose a framework of art on traditions that had no such framework⁵. Many have responded to this risk by situating aesthetics as a historically specific discipline arising in the

⁵ Analogously in the field of rock art studies, researchers debate whether to classify prehistoric petroglyph markings as "art". Robert Bednarik points out the eurocentric concept of "fine art" at work in these debates (Bednarik 2008: 62).

18th-century. The inception of aesthetics is said to occur with Alexander Gottlieb Baumgarten's 1735 dissertation, where he repurposed the Greek word aisthētikós as part of a broader renegotiation of the "'parts' of philosophy within the system of academic philosophy" (McQuillan 2021: 145). The 18th century is characterized by a decisive break in which the concept of "fine art" is conceived by rifting it from notions of handwork and craft. While there is certainly merit to this view – that what we understand today by aesthetics and even art is an invention of the 18th century – we also observe that the dearth of any aesthetic framework or concept of art in past societies is overstated. Historicizing approaches go too far by claiming "the Greeks had no word" for fine art, implying a broader conceptual void (Shiner 2001: 19). Taking the ancient Greeks as an example, how do we explain the frequent discussions of art in their philosophical works? Even if the Greeks did not have an autonomous discipline committed to art, they were certainly thinking about it – a lot (consider Plato's Gorgias, with Callicles' invective against Socrates: "you are literally always talking about cobblers and fullers and cooks and physicians, just as if our argument had anything to do with them" (Plato 1987: 491a)). It was not even settled for the ancient Greeks what constitutes techne, which makes our task even more difficult. The "techne question" captivated 5th and 4th century Greek intellectual life, taking the form: "is X a techne?" (Roochnik 1996: 13). The Gorgias gives us a glimpse into this debate.

Gorgias claims that his craft (techne) is rhetoric. Socrates answers that rhetoric is not techne because it produces pleasure but not knowledge (Plato 1987: 462c). To explain, Socrates analogizes rhetoric and cooking. Both are instances of what Socrates calls "flattery" - rhetoric to the soul and cooking to the body (Plato 1987: 463b). Cooking pretends to know what food is best for the body, whereas medicine actually knows what is best and is therefore techne (Plato 1987: 464d). Socrates' characterization of cooking as a non-art, a mere "knack", is premised on the claim that cooking lacks knowledge about its aim, which is health. Cooking may involve knowledge of how to prepare food into a meal, but it lacks knowledge about what foods are best and why. In ancient hippocratic medicine, dietetics was the most prestigious branch, serving as a model of preventative care that was valued above pharmacology and surgery (Totelin 2015). In pharmacology and surgery, the patient passively receives the doctor's interventions, but with diet, the doctor would prescribe a regimen of food and exercise that the patient would actively incorporate in their life. In this sense, the patient becomes their own physician. Doctors can pass on this knowledge and therefore practice an art, whereas cooks only produce pleasurable dishes.

From Plato we know that *techne* requires knowledge. Building off this, Aristotle defined *techne* as rational production (Aristotle 1934: 1140a10). The placement of this definition in the book six of the *Nicomachean ethics*, which is typology of intellectual virtues, implies that art is conceived as a special branch of knowledge that could be called the science of production. Unlike metaphysical truths contemplated for their own sake, *techne* is "instrumental reason", informed by scientific principles and concerned only with applying these principles in the best way (Young 2009: 190). An architect, to use Aristotle's example, demands determinate and standardizable knowledge that can be taught and learned as a trained ability. Their art unfolds as an intergenerational process of education. Rather than taking the form of eternal truths, *techne* is a form of intergenerational knowledge that is passed on and therefore adapts to different situations. In this way, *techne* fulfills the aesthetic quality of being reproducible.

As a way of grasping the truth, *techne* is distinct in its reliance on memory. Material culture is in many ways a memory bank, as Bernard Stiegler argued that human memory is "technical from the start", since humans have always exteriorized themselves in tools (Stiegler 2010: 67). Even before Stiegler's *Technics and time*, Harold Osborne wrote:

Memory, by which [the human] differs from the animals, makes possible the accumulation and transfer of experience from generation to generation; and from inherited experience illuminated by understanding comes *techne*. (Osborne 1970: 40)

The possibility of intergenerational knowledge occurs within the individual as memory, and memory is therefore crucial in the transmission of artistic or technical knowledge. In the preface to *Phenomenology of spirit*, Hegel characterized absolute spirit as a kind of intergenerational memory, where the wealth of the laborious progression of knowledge is passed down in more consolidated lessons (Hegel 1977: 16). When we take this "inherited experience" and actively understand it, we get a special kind of knowledge that lends itself to practical use: *techne*. In this respect, *techne* satisfies the aesthetic quality of usefulness.

Techne is a science of production concerned with how things cometo-be and pass away, which situates art in the ephemeral realm of

change. The realm of change includes not only production (poiesis) but also action (praxis, Aristotle 1934: 1140a5). These are two different things, a point Aristotle repeatedly insists on, so much so that each constitutes a distinct branch of knowledge: art (techne) and practical wisdom (phronesis). Poiesis and praxis are different because they have different goals (teloi). Practice is a telos in itself; it is done for its own sake. Practical wisdom, therefore, is rational deliberation that involves desire, because the goal of action is nothing other than the desire to act in that way. On the contrary, the *telos* of production is something external: the product. Production is less desirous and more calculative because it aims to create an excellent product. Maintaining a hard distinction between production and action proves to be an immense challenge. For example, it is unclear where cooking would fall, despite Socrates' censure. Cooking is praxis when done for its own sake, such as when a cook prepares a recipe many times over to practice a technique. Cooking is poiesis when it is done for the sake of producing a dish to be eaten. If poiesis and praxis were united, then it would be possible to characterize many and perhaps all activities as artistic.

Aristotle provides a further challenge by introducing another teleological difference between production by art and production by nature (physis). Art and nature are similar in that both are goal-oriented, possessing teloi. Nature is in fact inherently a goal, as Aristotle defines nature as the spontaneous movement towards its formation (Aristotle 1934: 193b5). The goal of art, on the other hand, is bestowed from the outside by the artist. Products of art, by definition, are unable to be brought into existence on their own and require the intervention of a maker as their efficient cause. Just as with *poiesis* and *praxis*, it is only by uniting artistic and natural production that the art-plant hypothesis becomes tenable. Notably, both praxis and physis are circular concepts that exist for themselves. Art is unique as a concept that denotes the human power to intervene, bringing things into existence. Despite having different origins, can the goals of art and nature be united? On a fundamental level, the goal of nature's spontaneous movement to reproduce is deeply linked to sustaining human life. Karl Marx understood nature as an extension of humans, calling nature our "inorganic body", with which we must remain in "constant intercourse" to live (Marx 1988: 76). However, this characterization belongs to Marx's more complicated theory of alienation (Entfremdung), and viewing nature solely as a means of subsistence, relating to it only in its processed form as "inorganic matter", is indeed a symptom of capitalism, in which the worker is alienated from their labor, their fellow humans, themselves, and the natural world. If nature is instead viewed as a living force of production, it is possible to unite the goals of nature and art in a mutually beneficial participatory process. Aristotle's idea of nature as a goal challenges the assumption that nature exists simply to be exploited by humans.

Aristotle attempted to harmonize the goals of nature and art. In the Physics, he recognized that humans are goals in themselves (Aristotle 1957: 194a30), prefiguring the Kantian idea of humans as an ultimate end, or a special kind of being that can create ends for itself (Kant 2000: 295). This is precisely why art is essential. We are not just scientists who contemplate the universe; we are technicians – that is, craftspersons and artists – who make things that gratify the goals created by human culture. Theophrastus' writings on plants are unique because they combined aristotelian philosophy with the practical concerns of agriculture and plant cultivation. Theophrastus did not simply study plants as natural organisms; he secured a plant-techne or art of plants by generating knowledge of their principles of growth and applying these principles in different circumstances. For Theophrastus, there are two conditions that make growing plants an art: when it involves knowledge, and when the aim is improvement (Theophrastus 1990: 15, 1916: 333). In a treatise called On the causes of plants, he utilized Aristotle's matrix of the "four causes" to explain plant growth. Efficient causation is a special case, since it refers not to the spontaneous movement of nature but to human art. Humans cultivate plants for their own uses, sometimes interrupting the natural goal (telos) if a certain flavor, odor, or potency is desired (for example, a plant may be harvested before it fully matures). On the other hand, art also "helps [the plant's] nature to achieve its goal", in the case when plants require artificial support structures (Theophrastus 1990: 3). Without knowledge, it is possible to cultivate plants by luck, accident, or force of habit, but in this case, there would be no art to it. The art of plants is all about how human interventions in the soil can help plants achieve the best conditions for growth. It is likely that Theophrastus emphasized the role of knowledge so that horticulturalists could respond to what each plant needs given changes in climate, or to accommodate imported plants. His discourse can be adapted to different circumstances, and ultimately aims to improve human life by improving plants. In Kefalonia, we took inspiration from Theophrastus and sought to apply this theory in an artistic practice of grafting plants.

To learn how to graft, we met in a Kefalonian village with Sophie Kagadis, an artist and academic who serves as the director of the "Ionion center for the arts and culture", our host on the island. Sophie was able to teach us traditional grafting techniques because of her family's background in agriculture. We first learned about grafting from Sophie's brother, Dionysus (we called him Denis), when we visited the island back in 2017. Sitting close to his olive groves, Denis showed us how to graft the way his father taught him, who was taught by his father, who was taught by his father, and so on. Denis began expertly working a twig, and before we knew it, he showed us two sticks that fit together perfectly. There were about nine of us present; most were trained artists adept in handiwork, yet we all struggled to execute the technique. Returning five years later, we had a different perspective. The global COVID-19 pandemic, extreme weather catastrophes related to climate change, and worsening migration crises all illuminated the graft as a powerful image for the kind of future we need to create; thus, we returned with the intention of mastering the technique. Sophie, despite her background in fine art and academia, learned this skill from her family, and knew it well enough to teach us.



Sophie teaching us how to make a graft

There were differences between the way Denis and Sophie taught. Denis showed us a complicated procedure that we had trouble mastering, partly because no one knew the purpose or use of the technique. Sophie, by contrast, reviewed the theory of grafting before we even picked up knives. She showed us different methods by drawing schematics of each cut. One of the most important lessons we learned was the correct season for grafting. The Greeks had a word for this: *kairós*. *Kairós* is one of the words for "time", and it specifically signifies the critical or correct moment (it also means weather). *Kairós* is an essential concept for art, since

it denotes the temporality of correct execution based on the correct application of principles. We learned that the *kairós* for grafting depends on the plant, but in general and especially for plants that bear fruit, it is in late january/early february, when plants are softer, drier, and about to receive nutrients that can be diverted to the cuts to heal and create new growths. We were working in early july; not only was it more difficult to make the cuts, but the grafts would never grow together. Nonetheless, Sophie was happy to pull shoots off her plants and let us attach them to the trunks of other trees, knowing they would never take. She was determined to teach us this skill, and we were determined to learn.



Graft onto a plum tree using a standard t-cut.

As we walked around her garden, we made grafts using different techniques of cutting and wrapping. We argue that these grafts are installations that belong to the tradition of land art or "earthworks". Earthworks are an extremely old artform practiced by native cultures across the world. Artists in the 1960s picked up this tradition, leading to the land art movement. Land art is often characterized by the desire to make art that escapes the dynamics of commodification and commercialization by creating works unable to be transacted or exhibited in a gallery or museum. These artists rejected the reification of the art process into an "art object", making monumental and ephemeral works from elementary materials like stone, sticks, and mud. Robert Smithson further elucidated the impetus of land art in his seminal essay A sedimentation of the mind: earth projects. He connected the commodity-form to the exploitation of the artist, who is robbed of their sense of time. Land artists sought to restore art to the flow of time in which the artistic process takes place. What results is an escape from thing-oriented art; Smithson writes: "When a thing is seen through the consciousness of temporality, it is changed into something that is nothing" (Smithson 1968: 50). By revealing the obliteration of separate things, time is displayed. This can be observed in Alan Sonfist's early earthwork called *Time landscape*, in which the artist planted precolonial plants in different stages of growth on a corner plot of New York city. The encroachment of post-colonial plants exhibits a hallmark of Earthworks, where the integrity of the work is given over to the forces of nature. Instead of functioning as a static museum of pre-colonial vegetation, Time landscape offers itself to the unmediated process of time, becoming part of its environment, serving to question what constitutes both nature and art, and how these distinctions are inevitably confounded over time. We find a similar dynamic in plant grafting. The graft is not a static installation; it is intended to grow and develop in tune with the processes of natural growth and decay.

Furthermore, the claim that grafts are works of art is supported by the rise of environmental aesthetics. Arnold Berleant's landmark contributions to this field include the concept of a "landscape of engagement" (Berleant 2005: 60). Engagement is a phenomenological alternative to observation; engagement denotes a living and active participation of human art with nature. The anthropocene has pushed philosophers to think on a more planetary scale, turning to practices like terraforming as a potential tactic of environmental mitigation. Gregorio Tenti recently investigated landscaping as a creative practice of inhabiting the earth. He defines Earth as, "a completely semiotized and therefore 'plastic' space

which is continuously reshaped by traces, semantic processes and human practices" (Tenti 2021: 57). The characterization of Earth as a semiotized space is a real embodiment of Derrida's metaphor of the sign as a graft. Grafting intervenes in the earth by introducing a new "semantic process" into the dynamic and interconnected landscape. This form of "overwriting" the land opens new possibilities, just as Derrida used the graft to illustrate how context is never totally determinative of a sign's meaning. By making a graft, we creatively engage the earth and produce new possibilities of the landscape, such as trees that now produce fruit.



Graft using a bud as a scion in a cross-shape cut.



Crown grafting on an apple rootstock.

The grafts we made will not survive to produce fruit. This failure presents a possible objection to the artistic status of our grafts, since it seems to contradict the aesthetic quality of being practically useful. How can the grafts be said to have a *telos* if they are effectively dead upon being created? Works of art have a unique ability to incorporate failure into a productive process, revealing that failure and function are not necessarily opposed (Martins 2015). The temporality of the artist's process will always transcend any individual work, insofar as the artist continues to "fail better", following Samuel Beckett's famous mantra. Failure and function are not opposed when we understand the artistic process as pedagogical. This pedagogical dimension connects to the aesthetic quality of reproducibility. Reproduction is not simply mechanical iteration of the same, but an orientation toward the future in which new possibilities are opened. Simply put, insofar as the artist learns, there is no merit to the claim that

their work lacks practical value, because the lessons can be applied in future works. Our intention in making the grafts was to learn a skill. Sophie passed down a great gift: knowledge, and the kind of knowledge that can be applied in different contexts. This kind of application of knowledge can rightfully be called art. Therefore, the plant grafts satisfy the aesthetic qualities of being useful, reproducible, and temporally constituted (ephemeral). Despite being "dead on arrival", the grafts evoke a future that can be continually worked towards. To expect completion from a work of art is to effectively devalue the artist's sense of time, which, in the words of Smithson, would make one "the enemy of art and the artist" (Smithson 1968: 50).

The artistic kairós may never be perfectly executed. Art objects are inevitably swept away by the flow of time. Perhaps it is the combination of these two temporalities that makes a work of art successful. By looking to plants as art, we not only gain a more dialectical or process-based orientation toward art; we also maximize its social function by directing artistic energy to craft a more sustainable world. By placing plant grafts in the land art tradition, we have moved to a more process-based and less thing-oriented view of art. The concept of art can and should be expanded even further to encompass more practices that craft a more livable world. Even if we remain focused on the art-plant hypothesis, we could turn to early conceptual artists like Joseph Beuys or the "Fluxus" group who approached food production artistically – what is sometimes called "eat art" – in their efforts to transgress the boundary between art and life. The "Fluxus" artist Allison Knowles is a good representative. Her piece Make a salad (1962) is a performance that consists of making a salad and serving it to the audience; she recreated the piece on a much larger scale in 2016. This piece disrupts our conventional ideas about art and participation by offering the audience a work of art not only to be perceived and contemplated, but literally eaten and incorporated into the body. This work is ephemeral, practically useful, and linked to reproduction – the aesthetic qualities in this piece are radical because salads are generally healthy; therefore, by engaging with this work the audience is sustained and nourished by plants, allowing them to face new encounters.

In this paper, we looked at two different models of art, earthworks and *techne*. By incorporating natural materials and processes into the work of art, earthworks show how the restoration of temporality to the artist inevitably effaces the boundary between nature and art. Although

techne is teleologically distinct from nature, a successful art of plants harmonizes nature and art through a co-constituted goal. We argued that grafting is an example of both techne and earthworks, utilizing knowledge of plants to create humanized products of nature. These products, which gratify human needs, preserve the plant's natural telos to reproduce. Therefore, the art-plant hypothesis that claims art and plants are teleologically united is secured. The work of Joseph Beuys provides another glimpse into a unified art-nature-practice. The art-plant hypothesis is in fact presupposed by Beuys's infamous "expansion of the concept of art". Beuys's desire to expand art into life was motivated by a radical egalitarianism that viewed everyone as a creative artist and all activities as artistic. Beuys understood the art object as a leftover waste product; what mattered was how the artistic process connects to a larger social, political, economic, and ecological life process as a tool of transformation — what Beuys called "social sculpture".

Beuys took particular interest in the ecology and economy of food production. Beuys's activities included cooking, agriculture, experiments in urban farming, and helping to found *Die Grünen* or German green party. Beuys famously claimed that even peeling potatoes is an art, on the condition that it is done consciously. Beuys's artistic mission has been subject to criticism for its naivety and utopian bent. Sometimes this is apparent; consider the following quote by Beuys:

What we use today in our kitchens is contaminated, everybody knows that... The question is, why is that? It has to do with capitalism. How, then, did capitalism emerge? And is there a notion of creativity possible at all, if the products we make, especially those products coming from nature, from agriculture, are already degenerated and ruined like this? Everything seems to be out of order: a new direction is needed. This is where it all starts... it starts with the salad we eat. (Lemke 2017: 255)

The problem with this statement is that Beuys aborts his political reasoning to present his artistic practice as a solution. "The salad we eat" is not the beginning of a new direction for society. Nor is it the case that Beuys just did not go back far enough, to the sowing or cultivation of lettuces, or even to the state of the soil in which food grows. All these factors are structured by the root problem of the capitalist system. Curiously, Beuys does not answer his question about the emergence of capitalism before asking another. Had he given more time to contemplate his first question, he might have recognized an answer laboriously articulated in marxism, along with a solution outlined through the organization of the working

class towards a consciousness of itself as a class. By turning instead to salad, Beuys perhaps mistakes an individual lifestyle with social transformation. Is this an attempt to give an image of revolution without class struggle? If we focus less on his artistic documents and demonstrations, which he regarded as leftover waste products, and look more towards what he said, then we find the idea of "social sculpture" to be amenable to class struggle, and a latent program for the production of society that is aligned with human needs and sustainability. If anything, Beuys can be criticized for his narrow view of what constitutes food production. Since environmental degradation is part of the system that contaminates every aspect of life, then activities like picking up trash are just as artistic as farming – so long as they remain coordinated by an understanding of the system we are up against and the revolutionary need to sustain ourselves. Beuys, perhaps more than anyone, understood this. He viewed teaching as his "greatest work of art". Beuys's art is instructive not as a model of life to replicate, but as a small part in the need to contribute to a larger social project.

In Kefalonia, one of the most striking cultural practices was the sharing of fruit from trees and gardens. Wanting to make lemonade, we were instructed to take lemons from our neighbor's lemon tree. Afterwards, Sophie inquired if we asked the neighbors' permission to take from their tree. When we said no, she responded: "Good. This is the correct way". She went on to share a Greek saying: "If your neighbor has it, you have it". The context for this culture of sharing is the effects of WWII and the earthquake of 1953 that ravaged the island; many people died for want of food and shelter. A younger resident speculated that these scarring events helped create a strong culture of cultivating, preserving, and sharing (sometimes even pushing) food and drink onto others. This is a very different culture from the private gardens and fruit trees in the United States, where people tend to think of gardens as their own private stock, since they are situated on private property. Unfortunately, this does not reflect an understanding of natural production and probably leads to great amounts of food waste. In Greece, even where there is a culture of taking from your neighbor, there is still more than enough fruit dropped from the trees – this goes to the wild animals.

The aesthetic qualities of practicality, reproducibility, and ephemerality have been shown to be present in many different artistic practices and even in nature. These qualities contribute to a more holistic and impactful understanding of the creative process. In present day Kefalonia, we grasp the connection of past and future. Ancient practices still survive in the

contemporary world; these practices are resilient and show us the path to collective survival in a world that is rapidly changing due to global climate change. These practices can be scaled up because they are grounded in fundamental truths. The passing down of these truths through the generations creates a body of artistic knowledge that can be utilized innovatively despite being grounded in tradition. Plants are not ahistorical substances but change with human's creative interventions throughout history. Only when we look to the past and the practices that have allowed us to survive, can we responsibly look to the future.

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