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► **To cite this version:**

Sylvie Pouteau. Plant-centered virtue ethics: a cross-talk between agroecology and ecosophy. *Philosophies*, 2023, 8 (5), pp.97. 10.3390/philosophies8050097 . hal-04273017

HAL Id: hal-04273017

<https://hal.inrae.fr/hal-04273017>

Submitted on 7 Nov 2023

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Article

Plant-Centered Virtue Ethics: A Cross-Talk between Agroecology and Ecosophy

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Abstract: The claim that environmental virtue ethics (EVE) is anthropocentric appears inherently aporetic since it implies that either anthropocentrism is virtuous or the whole environmental issue is anthropocentric, thus translating vices into virtues or vice versa. Another interpretation is that *both* the environment and humanity are thought with a vicious conception of centeredness. Conversely, if centeredness is rightly addressed and humanity and its environment are considered as one and the same issue, the focus on anthropocentrism should also be different. By drawing on Felix Guattari's ecosophy, this paper proposes that EVE needs to be based on a philosophical understanding of agriculture. Thus, agriculture is the organic and epistemic matrix of our relation to the environment and not merely a section of an abstract environment nor one economic area among others. The environmental crisis is primarily a crisis of humanity *within* its agricultural matrix. To be an environmentally virtuous human being, a requirement is to face again the burden of our absolute need for food and for fruitful cooperation between farmers and plants, not only animals. This paper discusses the importance of plant ethics and plant topology to understand the specificities of the agricultural matrix. The emphasis will be placed on plant-centered virtue ethics and reframing anthropocentrism by drawing on transdisciplinary conversation with plant practitioners in the context of a research action project.

Keywords: agroecology; ecosophy; environmental virtue ethics; golden mean; plant topology; plant ethics; sense of place



Citation: Pouteau, S. Plant-Centered Virtue Ethics: A Cross-Talk between Agroecology and Ecosophy. *Philosophies* **2023**, *8*, 97. <https://doi.org/10.3390/philosophies8050097>

Academic Editor: Soraj Hongladarom

Received: 7 September 2023

Revised: 9 October 2023

Accepted: 9 October 2023

Published: 17 October 2023



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1. Introduction

Both Arne Naess and Félix Guattari have proposed the term “ecosophy” to imply a broader than naturalist, scientific approach of ecology [1,2]. Guattari is well known for his long-running collaboration with Gilles Deleuze and for his political commitments to social and ecological issues. According to Guattari, ecosophy underlies three dimensions of ecology: an institutional scientific ecology, a social ecology and an individual, mental ecology [3]. The latter underpins “the flourishing and development of human potential” by changing oneself or one’s subjectivity [4] (p. 106). Subjectivity is not conceived as egotic but rather as a counterbalance of the atomized identities generated by capitalistic globalization. A major ecological target should be to de-escalate compulsive drives and mass consumption behaviors by creating more subjectivity. In the ecosophic vision, the subjective individual is part of the definition of ecology: “nothing will be possible without a profound ecological transformation of subjectivities” [5] (p. 85).

Ecosophy expands in *eudemonia* and environmental virtue ethics (EVE) and can be interpreted as an ecology of the self or a spiritual ecology. Its vision goes beyond the categories of environment and atomized individuals as it encompasses both inhabited and mental or existential territories. A major cause of concern is that: “The contemporary human being is fundamentally deterritorialized” [6] (p. 354). Existential territories, i.e., the relationship between subjectivity and exteriority (social, animal, plant, cosmic), tend to collapse. This means that most of us have lost a proper sense of our place on Earth and no

longer understand the meaning of our subjective centeredness. It is crucial to reconsider human beings in the light of their existential territories and to address their place in the ecology of the Earth. This lends to a reappraisal of the notion of human centeredness beyond mainstream anthropocentrism.

While a number of authors like Val Plumwood believe that centrism in itself is a problem [7], Guattari's ecosophic vision supports the notion that a lack of centeredness might be an even greater problem. The issue at stake would thus be how to turn anthropocentrism into an "anthropo-centeredness". The conversation between EVE and anthropocentrism is an opportunity to address this issue. Both expand on the notions of *anthropos* and centeredness, hence the place of humanity on Earth, though in different ways and with contrasting conceptions of nature. At first glance, EVE may seem a paradoxical assemblage because it endeavors to link the flourishing of the environment with that of human beings and may be equated to a kind of anthropocentrism [8]. One way to address this ambiguous intertwining is to introduce the notion of pattern or matrix in which humanity is embedded and develops virtues and vices. In Guattari's terms, the aim is to envision a "re-territorialization" of humanity.

At least three underlying common patterns are to be considered in the conversation between EVE and anthropocentrism.

1. The agrarian common pattern inherited since the Neolithic. The invention of agriculture has changed radically the place of the human being in nature, and the agrarian pattern has been the corner stone of all other cultural developments to date.
2. The common philosophical pattern inherited since antiquity. The momentum issue was the emergence of philosophy, but in spite of its urban and political focus the environmental mindset of the ancient world was probably closer to an agrarian mindset than it is today. Agrarian life and the domesticated were still part of nature.
3. The naturalist, scientific common pattern inherited since the Copernican revolution. Everything we know about the category of "environment", its complexity and dramatic changes over earthly times of evolution happens to be seen through the lens of natural sciences, this being referred to as the "naturalist episteme".

From the beginning, the field of environmental ethics (EE) has been shaped by naturalist, scientific premises and analyses. In particular, EE incorporates the recount of a newly discovered, pristine nature that is inherent to the naturalist, scientific enquiry and inventory of kinds and traits. Meanwhile, the two other common patterns, the agrarian and the virtue-oriented philosophical, have been neglected. For this reason, the ongoing criticism of anthropocentrism keeps using anthropocentric arguments and is doomed to be inherently aporetic. The hybrid agency of EVE takes a departure from this general trend and provides a magnifying lens to reveal the complex entanglement of different worldviews or common patterns. This can be best understood if one brings the issue of agriculture centerstage rather than keeping it in the background as if it was merely a degraded part of the environment. Against the notion that "the domesticated is the degraded" [9] (p. 9), one needs to acknowledge that "environmental philosophy does need to quit seeing agriculture and domestication as "polluted" or "unnatural" and so not their concern" [10] (p. 259).

In his bright "Agrarian vision" [11], Paul Thompson proposed that an agrarian way of understanding ourselves and our place in the world could lead to a more sustainable way of life. His vision prompted a number of comments applauding his timely contribution and raised new questions in return. It was argued that the nurturing of an agrarian imaginary is not unambiguous, especially in urban contexts. The narrative of virtue can be overemphasized so as to hide the adverse effects and vices linked to agrarian history and to the evolution of contemporary agriculture as a technological system [12,13]. However, virtue is not a natural output of a lifestyle. It works the other way round; a lifestyle provides a basis or a matrix in which one can habituate and develop virtues. This paper aims to address the virtues of the "*Anthropos*" in its agrarian matrix, whether these virtues are directly linked to an agrarian lifestyle or not. The root name *Anthropos* is used as a concept to emphasize the place of humanity and the individual human being on Earth. The running thread of the paper is that a re-imagination of the "environment" depends on a re-imagination of the "*Anthropos*". Its

argument will draw on interdisciplinary and transdisciplinary interactions. It will elaborate on case studies, one being the conclusions of the COP15 and the other one consisting of conversation with plant practitioners in an agronomic research action project. Phrasing by these plant practitioners will be used to discuss the pivotal role of plant-centered virtue ethics in moving towards “anthropo-centeredness”, a more sophisticated kind of anthropocentrism based on plant-centered topology.

The paper is structured in four sections. First, it will depict the naturalist, scientific common pattern which currently prevails for decision making on environmental issues. Second, it will undertake a re-imagination of the environment by showing how different meanings of the term *Anthropos* reverberate in the understanding of its centeredness. Third, it will propose to reassess the agrarian common pattern based on the notion of “agroecosophy” by combining the terms agroecology and ecosophy. Fourth, it will distinguish three types of agroecosophic virtues, those related to:

- Agrarian virtues aimed at right agroecological practice.
- Food-centered virtues aimed at developing awareness of food reburdenment.
- Plant-centered virtues aimed at developing awareness of plant otherness.

2. The Category of Environment According to the Naturalist, Scientific Common Pattern

For the naturalist, scientific episteme, the environment is something that surrounds us, in which we human beings are embedded ¹. Its definition encompasses nature insofar as it is distinct from us but also as we live in it and have reciprocal influences on each other at different levels, from local to global. Beyond this, the environment also includes the second nature created by human labor, including agriculture and urban development. In the Anthropocene, an additional definition is that the environment is an issue, the issue of our right place on Earth and action on it, this issue being the subject of both EE and environmental humanities. Underlying this wide range of definitions is the implicit notion that the environment is something that requires new awareness and informed knowledge, hence science-based recording and analyses. Addressing environmental issues, especially at a planetary level, implies that there is a common interpretative framework. Debates on the anthropogenic origin of global warming and climate change have provided a clear demonstration that the environment is a naturalist science-based concept. Although this provision may seem common sense, from the perspective of critically addressing anthropocentrism, one also needs to recognize that the notion of environment perpetuates an anthropocentric bias in decision-making. To explore this issue, the case of the 15th Conference of Parties (COP15) to the UN Convention on Biological Diversity (UN-CBD) held in Montreal in December 2022 will be examined.

2.1. The Case of the COP15, Setting Humanity in the Right Direction

On 19 December 2022, the COP15 adopted the “Kunming-Montreal Global Biodiversity Framework” (GBF), including four goals and 23 targets for achievement by 2030. A breakthrough was the decision to bring one third of the environment (Earth’s lands, oceans, coastal areas and inland waters) under protection by 2030 with the goal “to arrest the ongoing loss of terrestrial and marine biodiversity and set humanity in the direction of a sustainable relationship with nature”². By 2050, it is expected that: “The integrity, connectivity and resilience of all ecosystems are maintained, enhanced, or restored, substantially increasing the area of natural ecosystems” and “Human induced extinction of known threatened species is halted”³. No doubt, the achievement of this target would constitute a major turn in the environmental crisis.

When examining the documents released by the UN-CBD, one can observe the interweaving of two different visions or patterns. One is based on “Mother Earth centric actions”⁴ and is implicitly guided by an eco-centric approach. The aim is to foster a sustainable relationship with nature for the “benefit of all people and nature”⁵ in order that “all people (to) live well in harmony with Mother Earth”⁶. It also recognizes “traditional knowledge”⁷ and “customary

sustainable use by indigenous peoples and local communities⁸ acknowledging the “link between biological and cultural diversity” as demonstrated by the “decline in global diversity of both nature and culture⁹. This vision underlies an implicit criticism of the colonial and utilitarian attitude toward both nature and culture and a call to recognize “natural and cultural heritage and diversity as enablers and drivers of the economic, social and environmental dimensions of sustainable development¹⁰. However, the Mother-centric vision may also suggest an ambiguous naturalization of indigenous peoples and local communities, e.g., by addressing both natural and cultural diversity with the same terms. This is implicit in the recommendation to “Compile, protect, maintain and promote traditional knowledge, innovations and sustainable practices of indigenous peoples and local communities¹¹. Furthermore, the Mother-centric vision incorporates the notion that the issue at stake is “to minimize human-wildlife conflict for coexistence¹², potentially leading to a neo-Darwinian interpretation of coexistence. These naturalist, scientific premises are conducive to a deontological approach since one may conclude that coercive measures are needed to curb human predatory trends and protect 30% of Mother Earth.

The other vision or pattern is a typical Western utilitarian and functional approach in which the basic goal is to “Restore, maintain and enhance nature’s contributions to people¹³ where nature represents resources, functions and services. Especially when it comes to agricultural issues, this means to “ultimately increase crop production” and to “invest in biodiversity¹⁴ also “considering the potential to develop new products and medicines¹⁵ and “promote access to the latest technologies and molecular tools for modern soilless agriculture¹⁶. Recurrently is expressed the objective to “promote knowledge dialogues” and cross scientific and traditional knowledge. However, from the perspective of agriculture and related areas of activities, naturalist, scientific methods are expected to guide decision making and action. Thus, it is also claimed that “assessing and monitoring [...] is fundamental to inform adaptive management and to guarantee the functioning of all terrestrial ecosystems¹⁷. This means to “Encourage the development of harmonized definitions, standard baselines, indicators and national and subnational-level monitoring activities of soil biodiversity¹⁸ and to develop “standard protocols”, “large data sets”, “mapping capabilities” and “digital technologies” in order to work at “all levels”, in “all sectors” and “all regions”. Here, the naturalist, scientific premises lend support to the utilitarian vision, reinforcing the dualistic divide between means and ends, the environment and human beings.

2.2. *The Naturalist, Scientific Target: Instating Two Planetary Realms?*

One can be struck by the decision to protect 30% of Earth’s lands and waters as if this percentage represented a strong symbolic threshold. Although the overall purpose is easy to understand, the background assumptions that underlie the calculation of this ratio need to be deciphered. Because background assumptions are embedded in the prevailing scientific paradigm, they are usually ignored, and many people would claim that they have no background assumption. Thus, these assumptions can only be tentatively uttered.

As already mentioned, a first assumption is rooted in the modern dichotomy between mankind and nature. Accordingly, to protect nature means to leave it on its own. On the one hand, this implies that nature has its “own”, but the quality of this own needs to be specified. One interpretation is that nature has its own agency or even that it has a *telos* of its own that deserves to be respected [14]. On the other hand, this own should be left alone as far as possible. Thus, human interaction is mostly conceived as a degradation, and the environment is implicitly granted an essential standing whose integrity depends on the possibility of remaining wild, as expressed by the notions of wilderness and wildlife.

A second assumption is that minimal interaction with human beings should be achieved by spatial segregation in separate units of land, those that are under protection and those that are not. Accordingly, protecting biodiversity will mostly depend on territorial management and the possibility of sanctuarizing land and coastal areas. This

also means that access to wide areas of land will be restricted and that human societies will be confined to more limited areas. Within a territorial management framework, migration flows between different units will necessarily be an issue, especially with regard to pests that may commute from one to another, e.g., avian flu.

A third assumption is that two different realms of the eco-biosphere can be kept separate and have their own course, at least to a significant degree. Accordingly, static conservation strategies rather than dynamic co-evolutionary strategies will be favored; thus, the importance of both positive and negative interactions might be overlooked. However, only soil can be conceived as properly local, whilst the other natural elements, water, air and warmth, act at a more global level, e.g., climate change and air and water pollution. Furthermore, protected areas are scattered all over the Earth and interwoven with areas that are not protected. In the same way as patches of land in which organic farming is practiced, the borders of these areas will remain exposed to dissemination of pollutants and genetically modified organisms (GMOs) coming from the unprotected units. Conversely, human–wildlife interaction can also be beneficial. For instance, gathering and foraging activities play an important role in regenerating and enhancing wildlife flourishing [15]. Some small-scale, eco-systemic farming systems also promote regenerative strategies which tolerate small levels of unwanted spontaneous biodiversity within cultivation plots [16].

Finally, a fourth assumption is that a utilitarian, functionalist approach is needed to “manage” the environment as implied by the mechanistic notions of planetary boundaries and Earth system. If nature should be left on its own; this is not (only) for its own sake. Protection applies to resources, functions and services. Although the quantitative measurement of biodiversity is useful for estimating general trends, it is also conducive to an abstract calculation in which the sense of proportion is obscured. Thus, the ratio of 30%, about one third of the planet may be an arbitrary threshold taken to symbolically indicate that the ecological footprint (currently estimated to be approximately three planets) will be mitigated. In the meantime, the remaining two thirds of the planet would have to provide the equivalent of three planets. Thus, within the new boundaries of this “smaller planet”, so to speak, the ecological footprint would become 4.5 “smaller planets”¹⁹ Of course, this interpretation would be true only if 100% of the planet was currently used homogeneously, which is not the case. Furthermore, biodiversity and vulnerability of ecosystems are not equally distributed around the world. However, implementing the protection of one third of the planet implies some restriction of use and might increase pressure on the remaining two thirds of the planet. In turn, this might exacerbate urban densification and agriculture artificialization, raise environmental justice issues and possibly generate more environmental problems.

Agriculture is one of the areas where biodiversity is most affected, partly indirectly because of deforestation, uprooting of hedges, etc., and partly directly due to chemical and pesticide application, seed surface sterilization, crop standardization and more generally uniformization at all levels. It is difficult to foresee how the loss of biodiversity could be halted unless a truly eco-systemic agriculture is promoted in wide areas of the planet. One may ask whether it is possible for “all people to live well in harmony with Mother Earth” whilst dividing Mother Earth into highly protected and poorly protected areas. This would not only perpetuate the naturalist, scientific dichotomy between mankind and nature but eventually implement this dichotomy in real life. At its extreme, this would result in two separate, though partially overlapping, planetary realms, one dedicated only to the environment and one handled by human beings. Although this vision might seem over-simplistic and speculative, it is worth asking what the outcome would be if a division between the two halves of Mother Earth could actually be complete. Could the environment still be an “environment” if human beings can no longer have a genuine experience of nature? Could human beings still be “human” if they are not surrounded by nature?

At this point, the environmental issue appears clearly twofold: what *is* the environment and what *is* a human being are two sides of the same coin and need to be addressed simultaneously. What needs to be protected is not only dedicated areas hosting charismatic

pieces of the environment and their native peoples; it is basically what makes the whole of mankind and nature hold in one piece. In Guattari's ecosophy, this issue is embedded in the notion of existential territories, territories that are severely undermined by capitalistic anthropocentrism and need to be sustained. In the next section, this issue will be addressed by considering how the lack of qualification of the root name *Anthropos* conveys a vision of humanity without a place, deprived of existential territories. To re-imagine "the environment", it is important to also re-imagine "the *Anthropos*".

3. The Place of the *Anthropos*: The Human Being in the Light of Its Topological Center(s)

The two planetary realms depicted above are fictional at this stage, but their picturing can help understand how the two visions, the eco-systemic and the utilitarian, are eventually enacted and paradoxically tend to reinforce each other. One perpetuates the romantic longing for pristine immersion into wild nature, whilst the other one keeps heading toward further self-alienation and estrangement from nature. Although they seem to go in radically opposite directions, they share a common disregard of the human sense of place and proportion. It is pivotal to understand that ratio and proportion are not one and the same thing. They correspond to different visions of the *Anthropos* and not only of its environment. As already indicated in the Introduction, the root name *Anthropos* is used to mean that human beings are considered with respect to their place on Earth, of what surrounds them, of their inhabited and existential territories. It is an attempt to uncouple this notion from a narrow understanding of anthropocentrism and contains a criticism of the negative vision of humanity that it conveys. The *Anthropos* is not a species or an essential kind since its definition is broader than the atomized individual and encompasses its existential territories, others and everything that makes up its place on Earth. The *Anthropos* includes both humanity and the individual human being; thus, it is also meant to designate the individual moral agent. It will be a gendered he or she, depending on whether its definition is male-dominated or not.

3.1. *The Anthrokos, to Have an In-Between Place on Earth*

The enquiry by the linguist Romain Garnier [17] on the etymology of the word *Anthropos* showed that the link with the root name Andros (strong man) does not apply in a straight line. He suggests instead that the word is derived from the prototype *Anthrokos* ("directed downward", whence "earthling, earthman, earthwoman"). The *Anthropos* thus depicts a layman, or laywoman, defined by her position in space ("directed downward, being upon Earth"). She is the earthly being who stands below the gods, who inhabits the Earth and is mortal. She is turned downward, and yet her face is turned upward towards the heavens and the stars. Thus, she stands above the animal whose face is turned only downward towards the ground. Garnier also mentions a remarkable etymon which means "turned backward, who walks backwards".

These etymological findings are of special interest because they correlate the notion of *Anthropos* with a position in space and thus with the notion of place. This low man or woman dominates the animal bound to the earth and yet she stands below higher entities or agencies; thus, she belongs to an in-between kind. Because of her in-between position, she is in a twist, her gaze being directed to an opposite direction from her legs. The *Anthropos* "who has a human face" is also defined by the direction of her gaze. She can be seen as the one who turns her gaze backwards in turning towards the earth. Through finding her place, her "center", her position is now defined topologically in space. But she can also turn backward figuratively; thus, she is the one who can take some distance, who can wonder and reflect upon things, who can behold the heavens higher up.

Interestingly, the origin of agriculture in the Neolithic was contemporary of a symbolic revolution that was characterized by the emergence of the first godly figures and indicated a major psycho-spiritual shift [18,19]. Both events, agrarian life and symbolic figuring, may be taken to depict the birth of the *Anthropos* as an *Anthrokos*, although the notion itself possibly appeared later. Nearer to our days, the ancient *Anthropos* underwent another revolution

by “turning”, or “reversing” towards herself in the practice of philosophical thought. The *Anthropos* became stretched between an earthly life bound to mundane activities such as ploughing and growing crops and a quasi-heavenly life expanding into contemplation and thinking. The birth of philosophy also meant that the “vita contemplativa” was then granted a higher standing than the “vita activa” in the words of Hannah Arendt [20]. However, it would be anachronical to equate the emergence of the *vita contemplativa* with modern anthropocentrism. For instance, Aristotle’s philosophy of biology reveals his commitment to a more sophisticated anthropocentric perspective [21]. In the cosmology of antiquity, nature was thought to be part of the immortal realm, the “being forever” of the supralunar world. What was granted a lower standing was not nature as such but labor insofar as it implied to turn one’s gaze downward only. As for Archaic cosmology, it was probably even more inclusive and all-embracing and, thus, even more remote from the mechanistic cosmology that has expanded during the Modern era and from what is currently meant by the term anthropocentrism.

3.2. *The Andros (or Andropos), to Be a Strong Man Who Dominates the Earth*

The adoption of a mechanistic cosmology after the Copernican revolution meant a radical change in the topological understanding of space. The emergence of anthropocentrism cannot be separated from the conception of a void universe, a cosmos that has been emptied of its primeval wholeness. As expressed by Jacques Monod in 1970 [22] (pp. 224–225): “Man finally knows that he is alone in the indifferent vastness of the Universe from which he emerged by chance”. In ecosophic terms, this can be summarized by the notion of deterritorialization. As already mentioned in the Introduction: “The contemporary human being is fundamentally deterritorialized” [6] (p. 354).

It is only in a void, abstract universe that human beings can conceive themselves as “masters and possessors of nature”, to quote the famous phrasing by René Descartes in 1637 [23]. In adopting this new conception, the *Anthropos* denies part of her specification, which implies turning her gaze upwards to that which stands above or appears higher than herself—be it gods, a starry cosmos, or the wholeness of nature. In this respect, she is not an *Anthrokos* anymore, but he (and not she anymore) has become an *Andros* with the qualification of a strong man, be he a man or a woman. Anthropocentrism becomes an “androcentrism”. Most importantly, along with the original *Anthrokos*, the sense of place and of her position in space, her actual centeredness between Earth and heaven, disappears.

This topological change is inherent to the naturalist, scientific episteme and pervades all life sciences. Accordingly, the two visions, the eco-systemic and the utilitarian, suffer from the same topological flaw. Both visions abide by the naturalist episteme in considering that a real knowledge of nature can only be attained by preventing any human interference. This premise has major implications for our relationship with nature, and yet its importance in addressing ecological issues has barely been addressed. Firstly, it imposes an indifferent attitude and assumes that one can adopt a gaze from nowhere, independently from any sphere of reference and from any sense of place and belonging. Thus, the sense of proportions is replaced by bare quantitative measurements and ratios, and relative dimensions are taken to be absolute in an absolutely abstract universe. This is exemplified by the notion of “planetary boundaries”, which underlies an object-bound quantification of stocks and fluxes in a purely utilitarian approach to the environment. The spacecraft metaphor further expands on the vision of the planet as a device. Secondly, knowledge should be best approached by relying on sophisticated devices and the building of logical rules between quantitative data. Thus, “true” knowledge should be a knowledge from nowhere, no man, and eventually an absolute knowledge. Thirdly, ethical judgements should be guided by this absolutely universal knowledge so that a large number of our decisions could eventually be delegated to smart devices.

Finally, the kind of anthropocentrism or androcentrism perpetuated by the naturalist, scientific episteme should be called “nullo-centrism” since it erases the notion that there is an environment *to be known* and that the human being is *the knower* of this environment.

The *Anthropos* as an *Andros* or *Andropos* is doomed to wander in the void, having no place but an abstract Euclidian reference. The Euclidian topology is characterized by postulates that cannot be demonstrated [24]. Although it has been challenged by mathematicians since the middle of the 19th century, it remains embedded in every picturing, building, or manufacturing and is inculcated from early schooling on. Its invention coincides with the colonialist expansion of the West and cannot be assumed to be an indifferent mathematical concept. Since the invention of the monofocal perspective in the Quattrocento, it has become the way the world should be seen [25]. In the Euclidian conception of space, centeredness means to be the absolute center of oneself and to replace one's innate sense of proportion with abstract connections. With these premises, one may wonder whether it is possible for the modern *Anthropos* to develop environmental virtues *at all*. To mitigate the naturalist, scientific and androcentric bias that may interfere with a right understanding of EVE, a first requirement is to consider the dramatic consequences of adopting a vision from nowhere, hence no man and no woman. To overcome the topological indifference imposed by an absolute Euclidian system of reference, the next section will bring the common agrarian pattern back into the discussion.

4. Agroecosophy, Virtue Ethics and the Agricultural Common Pattern

Based on the previous section, it is proposed that the virtuous *Anthropos* knows her place on Earth, her in-betweenness. The sense of in-betweenness can be linked to the Aristotelian theory of the golden mean, i.e., the right center or the just middle. Rather than a geometric or arithmetic mean value, an average or a 50% ratio; it is a golden mean between two opposites, excess and deficiency, these fluctuating with the circumstances of each situation. The golden mean is related to the golden proportion; it is a middle in the sense that it implies a right balance. In the *Magna Moralia*, Aristotle insists: "And generally in each of the feelings, one can see that *what surrounds* the middle is easy, but the mean is difficult, and this is the point for which we are praised; for which reason the good is rare" [26] (1187a1, Book I.9). Every virtue depends on the capacity to find the golden mean when and where it applies as if one was the needle of a scale. The ability to approach the golden mean is a radically anthropocentric virtue. In *His Nicomachean Ethics*, Aristotle writes: "Thus a master of any art avoids excess and defect, but seeks the intermediate and chooses this—the intermediate not in the object but *relatively to us*" [27] (1106b8, Book II.6). Accordingly, it would not make sense to delegate this appraisal to any kind of digital sensor. Although no ethicist would defend such an evaluation of the golden mean, the current development of farm robots and smart agriculture suggests that this vision will gradually be implemented in real life.

Place is not a location. The sense of place can be experienced anywhere, even in a plane or a spacecraft. Place is not a location and yet it implies a sense of space and centeredness. There is probably no better way to inquire about place than to consider plant farming—here considered to encompass plant gathering and crop growing [28]. Plant bodies overtly bridge below and above, and everything around, everything that surrounds [29]. When interacting with them, one needs to accommodate this in-betweenness. Plants provide a yardstick to approach a virtuous agroecology, this incorporating an ecosophic account of the golden mean, i.e., an agricultural ecosophy or an "agroecosophy". Agrarian farmers and gatherers who continuously work and interact with plants on a daily basis also represent a yardstick to conceive our agroecological future wherever we live, even in densely urbanized areas. They are the keepers of the land, not only Euclidian territories geolocated on a map but also non-Euclidian, existential territories that afford in-betweenness and underlie our ability to experience the golden mean. This preliminary introduction to "agroecosophic virtues" will be developed further in the next sections based on transdisciplinary discussions conducted in the context of the PlantCoopLab, a research action project²⁰.

4.1. *The PlantCoopLab Project, Plant Labor and Food Agentivity*

The PlantCoopLab project aims to challenge the lack of concern for plants in an agricultural context where plant–human qualitative relationships are usually ignored. Its working hypothesis is that raising concern for the standing of plants can be a catalyst of change towards more sustainable food production and consumption. Its approach is framed by the perspective of environmental humanities and is based on three methodological axes. First, interdisciplinary cooperation in the field of the humanities (anthropology, ethnography, philosophy, semiotics, sociology) with invited contributions from other disciplines (e.g., agronomy, ecology, ecophysiology, history, medicine, zootechnics). Second, transdisciplinary interactions with plant practitioners (e.g., agrarian farmers, seed craftsmen, herbalists, artists) during seminars and workshops. Third, an emphasis on real-life experience encountered in professional practice, in the context of both research and productive activities.

The project addresses the issue of plant–human cooperation “in the field of labor” [30]. This issue is especially relevant in the context of food production where the purpose is use and sale of plants, whereas it does not apply in a recreational context. Production is the very issue, so there is no point in opposing a relational agriculture to a production agriculture [31]. The emphasis is put on the notion of “plant labor”—whatever this means—in order to cast new light on both plant activities or “agentivity” and the different plant-centered occupations of practitioners. The use of an agentive, performative lens reverberates on the whole process of food production which can also be described in terms of agentivity, food being agentive in its own way [32]. Examples of questions that have been discussed so far are: Are plants something or “someone”? Do they “collaborate”? Are they fully domesticated or do they retain some degree of “wildness”? The objective is not to conduct an opinion survey but rather to set a participative process and seek interactions on a research action basis. The quotations in the following sections are taken from the records of a two-day workshop that was organized in a farm in Sologne in 2022 with about 30 participants. The place was chosen for its extensive expertise in several areas: agroecology and professional education in agrarian farming, seed collection and reproduction of old and native crop varieties and the more recent creation of an agrarian university.

Most practitioners who have participated in the project so far already had specialized in agroecologically oriented practices, including a wide diversity of approaches: organic farming, biodynamic farming, eco-systemic agriculture, regenerative agriculture, conservation agriculture and permaculture. Most of those who attended the workshop in Sologne had also been involved for many years in professional farming education, so they were quite prepared to discuss their specific orientation in round-table conversation. On the whole, they tended to be critical of the scientific framing of the questions because these seemed artificial and too intellectual to them. Some of the attendees even thought that the notion of labor does not apply because their work is tightly intertwined with their private life. Work was not seen as a job or a business: “working, the notion of work, for me it’s life”. To the extreme, one argued that his whole life should be viewed as labor or else his labor would amount to life: “I start working on Monday mornings when I wake up. And I stop on Sunday night when I fall asleep. You can’t be a peasant if you’re not a peasant all the time”. An important distinction was between “dead labor” and “living labor” which also pointed to an opposition between industrial agriculture and agrarian farming. The qualification of living labor helped to draw a parallel between plant labor and human work, even though this was by using metaphors. Thus spoke one of the practitioners: “My relationship with plants is a question that does not arise since I bathe in them, I live with them and my work, it is theirs and vice versa”. He later added: “You can’t dream, as energy doesn’t come from oil, it has to come from the man. . . 4000 h of work is something I can manage!”. He recognized that he had been lucky for when started he had no money and encountered health problems; thus, he had to turn to another way of growing crops. Another one pointed to the volunteer aspect of his work: “I do a service to society. I’m sorry, it’s not to say...but I don’t make a living. But I do it to evolve our food systems”.

Overall, the notion of labor triggered an emphasis on individual striving toward a way of life more attuned to ecological values. For a number of the attendees, this meant less money and more work in addition to a lower social standing. Some had left their previous occupations, e.g., a singer in a popular music band or an employee in a well-paid computer engineering company. One practitioner described his professional occupation as a landless peasant, another one had chosen to work and live on site where he had built a positive energy hut and another works in a 0.6 Planet estate that aims to reduce the human footprint from three planets to only 0.6 planets. For all practitioners, agroecology was implicitly linked to the pursuit of *eudaimonia* through caring for agrarian nature: “I work rather to flourish, to create, to exist, to forge my identity”. The striving for the good life was interpreted as having others in view, i.e., fellow (wo)men who need food, non-human living beings and more generally everything that surrounds: “[my work with plants] is a commitment, I think about the commitment I feel to the seeds I care for or am in charge of”. Flourishing was more or less explicitly linked to a responsibility: “For me it is the expression of our freedom to respect or not to respect the living”. This meant developing a sense of belonging through “complete connection” and gaining a more sensitive perception of plants and their surroundings; integrating respect, gratefulness, wonder and love in training and education and sharing an ecological awareness through participative projects and community building—e.g., with students, children, persons in social reintegration. Overall, the conversation on the issue of plant labor and cooperation allows virtue-oriented principles to surface and emphasizes the importance of VE in order to understand the diverse approaches of the notion of agroecology.

4.2. Agroecosophy, a Philosophical Turn

Agroecology is not one but many and it encompasses more or less subtle approaches and different farming visions. Giraldo and Rosset see it as a “territory in dispute” between two trends, one that “conforms” and one that “transforms” [33]. Conformation agroecology aims to make industrial agriculture less unsustainable by adding technical options to its toolbox. Transformation agroecology consists of changing the underlying agricultural pattern by promoting a sustainable human–nature relationship. The dichotomy exposed by Giraldo and Rosset shows that institutional science tends to perpetuate a dominant pattern, whilst actual change in this pattern can only emerge from social movements. This dichotomy can also be understood as a polarity between two driving forces that need to be balanced. Thus, the issue of scalability will eventually raise the need for some degree of institutionality—e.g., to obtain scientific recognition, public subsidies, product or process qualification and trade standards. Reciprocally, ongoing social and ecological problems will keep challenging the institutional mainstream and call for more radical changes and breakthrough innovations.

Beyond the dichotomy that opposes conformation and transformation, in other words scientific ecology and social ecology, VE introduces a third component that may have been overlooked so far. This leads to propose that agroecology is three-fold rather than two-fold, in line with Guattari’s concept of ecosophy (see Introduction). In integrating both concepts of ecosophy and agroecology, the notion of “agroecosophy” elaborates on a threefold understanding of agroecology. The forgotten, third component of agroecology emphasizes the position of the *Anthropos* within her agricultural matrix and her actual striving to mitigate the territorial dispute between conformation and transformation, institutionality and social movement, form and life, two opposites in a polarity. Agroecosophy is conceived as a virtue-oriented agroecology that aims to establish the golden mean between conformation and transformation. Because of its threefold understanding, it can expand in a proper philosophy of agroecology and not merely “about” agroecology. Accordingly, plant cultivation should also be given an ecosophic account.

The standing of plants has become an important issue since the notion of dignity of living beings was introduced in the Swiss federal Constitution [29,34]. This prompted the emergence of a field devoted to plant ethics, as reported in the recently published volume by

Angela Kallhoff's group in Vienna [35]. In particular, Kallhoff proposes to use the Aristotelian notion of flourishing to assess the good life of plants [36,37]. Other authors envision plant ethics in light of animism [38]. Ethical attention to plants supports a relational account of the virtues of gardening and of "growing one's own" in a garden [39,40]. Yet, some authors seem skeptical about the application of VE beyond wild and ornamental plants, considering that it will necessarily be limited in the case of agriculture, e.g., [41]. It can be argued that, in the context of food production, the good life of plants does not mean that they should be left out but rather that they need to be eaten by humans, animals or micro-organisms. Being eaten does not imply being degraded, provided that plant flourishing is an important issue for the food system. Because productive occupations cannot be uncoupled from an instrumental purpose, the role of EVE appears even more crucial in this case than for other interactions with plants. Examples such as organic farming in Europe and peasant movements in South America show that it is essential to distinguish between global driving forces at work in society as a whole and agent-centered motivations of individuals. Virtue is not a social output but an individual input. The history of organic agriculture is not built on institutional grounds nor on social movements but on the conversion and commitment of individuals [42]. There is no science of virtue but only a natural history of virtue. Virtue needs to be first uncovered and then recreated again through a continuous flow of individual transformation. Virtue can never conform, otherwise it would become merely an automatic response, a habit or implicit compliance to external norms. Likewise, a philosophy of organic transformation cannot be institutionalized, otherwise it would become a philosophy of organic conformation, hence an aporia. A philosophy of organic transformation needs to be experienced ever and again. Only then can it stream in social movements and eventually settle in institutional norms. But these norms can only be useful insofar as a right balance is found between conformation and transformation. To some extent, external rules may help find a provisional balance. However, in line with Aristotle's virtue ethics, the balance will be right only if the golden mean is recurrently assessed by moral agents. In practice, EVE will always be needed to adjust decisions to concrete situations.

One may argue that the number of farmers is decreasing in developed countries, especially small farmers. This was clearly pointed out by a practitioner: "I have watched the destruction of agriculture for decades. In fact, today the aim is to achieve an agriculture without farmers. That is why we are now only 2% while we were still 37% in the 1970s! [...] Before insects and animals and plants and biodiversity had disappeared, farmers themselves had to disappear". Here, the issue is not to propose a romantic vision of agrarian life and to claim that it is inherently conducive to virtue. Most of those who have left the land during the last two centuries were expecting to find better conditions of living in the cities and will probably not go back to farming occupations. Thus, the importance of agroecosophic virtues in agriculture may appear to be only marginal in addressing major ecologic challenges. This is undisputable. However, norms and rules are usually not the fact of the majority. Most of the time, they occur as a generalization of marginal cases which have been praised for their virtue. If we want to secure the future of agriculture and food production, this marginal, empirical contribution needs to be encouraged so as to continuously recreate and embody a human sense of place and centeredness on Earth. Furthermore, it is crucial to also enable urban dwellers to embark on this agroecosophic turn. In the case of organic agriculture, not only have individual farmers had to undergo a conversion. Individual consumers living in urban estates have also had to convert to this agroecological orientation and bring their support. The PlantCoopLab conversation with practitioners led to distinguish three types of agroecosophic virtues:

- Agrarian virtues acquired by those who actually work and interact with plants and need to attune their way of life to plant in-betweenness.
- Food-centered virtues developed by those who actually recall what their life owes to plant growth and farming.
- Plant-centered virtues exerted by those who actually undergo a non-Euclidian conversion in their perception of nature and of their own human condition.

This distinction will be further examined in the next sections.

5. Agroecosophic Virtue Ethics and the Golden Mean

5.1. Farming-Centered Virtue Ethics

In addition to the virtues that practitioners in the PlantCoopLab enquiry have linked to an agrarian good life (see above), the virtue of honesty, truthfulness or being true to oneself and to others appeared to describe quite explicitly the pursuit of the golden mean. As mentioned by one practitioner: “we are faced with a cheating agriculture. How does it cheat? It cheats with all the tricks of petrochemicals and heavy industry, which poison us and destroy the environment. [...] To get back to an agriculture that does not cheat, we have to get back to a sufficient number of farmers who maintain the environment”. Trickery means that any attempt to reach the golden mean is doomed to fail and that a faked balance will be used instead: “[The farmer]’s gonna put a little bit of “perlinpimpin” powder here and there. That approach has led us to huge dead ends. I make an environment that I produce and then I explain that nature works in that way. And here, it’s all fake!” In contrast to this vicious trend, the virtue of being true to oneself implies to have the capacity to discriminate the right *metis*, i.e., the kind of skill that acknowledges in-betweenness, from mere trickery that ignores and obscures the sense of place. Trickery seeks a “transformation of life into a machine” whereas a truthful *metis* requires an ongoing process of attunement: “We are always in tensions, which are never resolved, so it is not comfortable [...] it’s a bit like walking on water, so how to inhabit the “milieu”, in both senses of the word?”. Attunement implies that one needs to work with polarities. This was compared to the dynamic relationship in a couple of dancers. One cannot fake dancing and instead use ready-made fixes. The latter may hide a problem for a while but will eventually lead to larger problems.

It is only through enacted partnership in real life that truthfulness will be revealed as a virtue. The virtue of truthfulness does not require a specific degree of knowledge or professional experience. From the most unexperienced people to the most expert practitioners, truthfulness can be trained so as to encompass the sense of place, even in the case of urban dwellers and people who live away from agrarian surroundings. Each individual situation has its own specific requirement depending on the skills and experience of a person: “we must not say that it is right for everyone at every moment, no, in that moment, where is the rightness of action?” In the case of practitioners, there is “plenty of time to contemplate animals and plants. To wait. To listen”. There is time to gain an embodied knowledge: “our daily empiricism gives us the feeling that these things produce certain effects. Even if this cannot be scientifically demonstrated or even will be contested, the fact remains that on a daily basis it leads us into action”. Yet, in order to know what “the right actions” are, one also needs to make use of one’s individual compass. This led the landless peasant to ask “What is our potential to have an opinion, to judge the thing we’re talking about, which for me is more of the sacred order?” Here, the issue is not only to gain more knowledge or more information. It is also to develop a sense of rightfulness, this being tightly linked to the virtue of truthfulness.

5.2. Food-Centered Agroecosophic Virtues

Most city dwellers have left their former peasant conditions over the last two centuries and have undergone a gradual conversion to land and food agnosticism. Today, most farmers do not know who they feed: “I realized that when I plant potatoes or cabbages, or when I produce seeds, I don’t even know who’s going to eat that one day, I don’t know. So somehow it’s an altruistic act”. Reciprocally, urban people often do not know how food is produced: “it is not fair that we have a few mercenaries with big machines, robots, genetics, digital technology etc. who produce food for crowds who don’t even know what they eat and who no longer make any contribution, not only in the production of their food, but also in the upkeep and care of the environment in which they live”. It is a fact that most of us would rather ignore how “stones be made bread”²¹ and that their most pressing need is

food. We want to live not only by bread, and most of us nurture the dream of a pristine nature emancipated from labor while having the possibility to simply click and collect our food. This common pattern of food disburdenment is built on ignorance of one's own absolute vulnerability and of what agriculture is about. Of course, some urban dwellers are willing to raise their awareness of agricultural issues, to gain information about what they eat and change their food habits. But this striving alone cannot amount to virtue because most of the time the aim is to conform to a representation of what it is to be a good person rather than to actually have a practice of reburdenment and share the pursuit of a sense of place and of the golden mean.

One example is the adoption of a vegan diet which is often focused only on animal suffering while the radical difference between husbandry and industrial agriculture is obscured [43,44]. Although ethical concerns about suffering and ending an animal's life are well founded, erasing the whole history of animal domestication and companionship does not seem to be a better option. Thus, in a strictly vegan society, farm animals might appear unnecessary and eventually become extinct: "if we think of food without animals, it doesn't make sense. There are no plants without animals. I can't imagine doing without animals for food, because that would mean doing without them for life". Furthermore, this would further undermine the carbon to nitrogen balance that has already been drastically disturbed by the uncoupling between plant and animal productions, hence accelerating soil degradation and the artificialization of agriculture, and this would also ignore the environmental footprint of the replacement of animal products by plant products (e.g., chemical inputs, building and energy costs and food processing). Although most vegans do not think about animals as material but as sentient living beings, they implicitly accept the notion that plant food and animal food are equivalent according to their substance and can be interchanged. In the PlantCoopLab conversation, it was argued that we cannot be animal moralists on the one hand and plant predators on the other hand: "what's also quite central for me is the relationship to life and the relationship to death [. . .] in the end, what's at stake is taking life, be it animal or vegetable. It's part of life". But taking life cannot be uncoupled from the issue of labor: "is working with domestic plants at the service of life or at the service of multinationals?".

Two food-oriented virtues surfaced in the discussions, humility and gratefulness. First, we need to approach food in the perspective of living and dying. We need to take life, "to slit a lettuce", in order to keep alive: "it's something that disappears, it's something that we've seen evolve, we would like it to remain because it's a great moment of affect, emotion and connection". We have looked after it, cared for it and eventually we will go and pull it out. We have to do so because our human condition is mortal, and hunger is our primal experience of this condition [45]. To recall this fact ever and again amounts to the virtue of humility versus the hubris of the strong man who behaves as if he could turn any piece of stone into bread: "our Western attitude is to deny our vulnerability and be in hyper control. So not to be hyper-vulnerable instead, but to admit that this is our condition". Humility in this case also calls forth the virtue of hope since we need to trust that life will actually keep going and rebuild what has been torn away to make our food.

Second, we need to raise our awareness that life keeps going because farmers and plants cooperate to make that food. We should be grateful because thanks to this cooperation we have something to eat: "When I harvest the lettuce, I put myself in the place of the lettuce I've been growing for so long, [. . .] If then I land on a plate and someone eats me gratefully, I've fulfilled my goal". The virtue of gratefulness is needed to mitigate the predatory drives of the *Andros*. It is needed to recall ever and again that plant-based food is not more environmentally virtuous than animal-based food if it is considered to be mere stuff that comes from the ground. For both plant and animal food, one should be grateful for the life given [46]. Any urban dweller who wants to undergo a genuine agroecosophic turn could start with the virtues of humility and gratefulness. This could help make sense of something more conspicuous like veganism and other possible commitments and actions.

5.3. Plant-Centered Agroecosophic Virtues

Most city dwellers probably have a very faint notion of what it means to grow food. They possibly also have little knowledge of what it is to be a plant, although they see plants around in their daily life. Even in a very concrete area, one can encounter trees, bushes or weeds. Yet, there is a long way to go from a weed in the city to a crop in the field and the understanding of what plant-centered virtues might imply. The otherness of plants is paradoxically fascinating and difficult to address in ethical terms [47,48]. In the PlantCoopLab conversation, this otherness was often described by the notions of “cosmos” and “life”, which underlie the undisrupted continuity of plants with the wholeness of the world depicted as a spatial globality and an evolutionary process. The plant was seen as a “revelation” in this global integration: “Does the plant have a will, or is it merely subject to laws? I’d like to say that the plant is a revelation of cosmic laws that manifest themselves”. Cosmic laws appear in seasonal rhythms by which life and death alternate through growth, blooming, dormancy, etc.: “life, it lies between expansion and contraction”. This expressive specificity was linked to its verticality: the plant is anchored in the earth, in a place and in a geographic location, and it is “sucked up” and suspended in the larger space where it unfolds. This integration in the wholeness of the world was described as a “total connection”, a symbiosis in a “being-together”, or an “ecosystem”. This feeling could be intensified in exceptional moments: “At one point, late in June, I saw a tiny green dot appear on the neck of the verbena plant. There I was, on my knees, lying down, my eye on that bud, the blue sky already warm and the earth still fresh, and I no longer existed. I was part of the earth, part of the sky, part of the plant”.

The otherness of plants contrasted with our atomized androcentric condition: “In the end, the only being no longer connected is us. Everything else is connected”. We human beings in our modern technological societies are “disconnected”, we have lost something. We keep striving to extract “something else” through our work because our experience is that of scarcity and need. We need relation, interaction and exchange to reach beyond the limits of our human individuation and isolation and to gain an experience of unity with the living, earthly, cosmic basis in which we are founded and which indigenous cultures still nurture. Finally: “Are plants something or someone? Actually, neither. It’s a commitment, I’m thinking to the commitment I feel towards the seeds I care for or look after. It’s not someone either, because a plant is very diffuse. Visually it has an outline, but when you understand the plant, when you see it develop, you understand how it relates to its environment, its contours become very, very diffuse”.

Altogether, the otherness of plants invites us to think again the place of the human being on earth. We gain “a growing curiosity about soil, what is below, water, flows, temperature, I don’t know... I imagine this opens up to the essence, to knowledge, but above all to this relationship with oneself, to what place one gives oneself in this living world”. While the animal arises as a partner and companion of life, the wholeness of the plant invites us to perceive everything that surrounds in a cosmological topology: “We’ve talked a lot about space. What are the limits... this interaction [with plants] it can be limited to an individual, but then immediately we moved on to the collective, and to the cosmos. It’s as if the plant draws us back to everything, to life”. The plant cosmological topology challenges the common Euclidian pattern linked to our androcentric condition. Perception needs to be refined: “If you come right out and do it, it doesn’t work because you don’t have the right glasses. In the West today, we need to deconstruct the way we see plants”. Some practitioners go as far as to design their plots according to geometric proportions found in nature or used in sacred architecture: “In my garden—I’m also inspired by notions such as sacred geography—I’ve made connections with the golden proportion between the cultivation beds and the size of the gardens. I’ve put up standing stones... I say to myself, I make cultivation beds but not just to be functional. I also add elements”.

Besides inviting us to think again about the place of the human being on earth, the otherness of plants also raises the issue as to what kind of knowledge, or rather which way of knowing is needed. Plant-centered virtues do not depend only on information,

although this can be useful in any case [49]. To gain an adequate insight into plant otherness, one needs to raise attention to one's own perceptive activity, which can be physical (e.g., sense of touch), vital (vibration, energy) or more contemplative, aesthetic or even artistic and to one's intuition and introspective vision as a means of relating to the cosmological dimension of plants. This does not preclude the need for objectification and knowledge. But reductionist science is not sufficient because it approaches plants only as machines [29,50]. To reach beyond this science "from below", one also needs to introduce a science "from above". The latter "is that which is in the macrocosm, in the qualitative compared to the quantitative. Observing the synthesis of the global, what surrounds. . . surrounds the life forces around the earth". At least for some attendees, these "subtle agroecologies" [51] seemed to imply more than an embodied knowledge and revealed an intentional pursuit of a wise connection to the whole cosmos. Practical wisdom appears unsurprisingly a core agroecosophic virtue. In the attempt to address the wholeness of plants, this virtue can be further specified as the ability to grasp something all-embracing, a way of presencing the cosmological wholeness of plants. This ability is not a direct result of farming or gardening although the position of the gardener or farmer is obviously quite advantageous. One can start with awakening and nurturing an awareness of the wholeness of plants. This awakening can be trained even in the city; thus, agroecosophic wisdom is not limited to rural contexts.

With an agroecosophic perspective, what it is to be a plant can be grasped even in the middle of nowhere. Especially when what surrounds does not stimulate our perceptive activity, the presencing of plantness will represent a most needed virtue. Wherever there is a tree, one can raise attention to the cosmological wholeness of plants and reach beyond Euclidian bounds. Furthermore, wherever there is a seed, one can develop a subtle perception of plant potentiality. We all know that seed potentiality can expand in the cosmos although we cannot see it with our eyes until it actually happens: "we'll not be able to keep seeds in a conservatory, or in this hyper-technical environment [. . .] because we'll have to sow it again. If we do not do so within a certain timeframe, potentiality will eventually fade away". Human creation needs always to be attuned to spontaneous, wild expression of potentiality [52]. This leads to the question "to get rid of the guilt we almost all feel when we talk about plant domestication, do we really degrade plants by doing this to them, or do we raise them?" To this question another one was added: "or do we not rise ourselves along with them?" What is raised is not an ingredient coming from the ground but something imperceptible at first, a plant potentiality which has the capacity to flourish and expand into space. Thus, the sense of space is changed because the plant does not fit a Euclidian pattern like a concrete building but elaborates its own non-Euclidian pattern, its own golden proportions. To perceive this subtle way of weaving forms into space can change radically our appraisal of what surrounds, i.e., the "environment". From home plants to the co-creation process of breeding, agroecosophic virtues may reverberate through the whole of the agricultural matrix by changing our perception of space, our aesthetic matrix and turning the *Andros* into an *Anthrokos*.

6. Conclusions—The Non-Euclidian Pattern, Recasting the Epistemic Grounds of EVE

Under a naturalist, scientific premise, science and ethics should be kept separate. In line with this assumption, one may ban ethical anthropocentrism while adopting an epistemological anthropocentrism [8]. However, insofar as the naturalist episteme incorporates an anthropocentric bias, the distinction between ethical and epistemological anthropocentrism appears artificial. Under an agroecosophic premise, science and ethics should not be kept separate because agriculture is not a percentage of land areas but an all-embracing matrix. This leads to shifting the emphasis put on anthropocentrism seen as a curse to anthropo-centeredness, an "ecosophic anthropocentrism" that reveals the wholeness of the agricultural matrix. An ecosophic anthropocentrism also means that the notion of *Anthropos* and her virtues need to be thought on new grounds. A strong ecosophic requirement is to undertake a deep ecological transformation of one's subjectivity. The golden mean is

not to be found in statistics or in social norms; it arises as a singularity and needs to be experienced at once by a moral agent. As long as VE is bound to a naturalist, scientific premise, its environmental contribution will remain intrinsically limited. Recasting the epistemic grounds of VE with a new “aesthetic paradigm” [3,53] may have wide-reaching consequences and encourage further agroecosophic research and initiatives. To develop agroecosophic VE, one needs to approach the otherness of plants especially in a highly domesticated context. The attention to the wholeness of plants will only be raised by shifting from a Euclidian animal-based pattern to a non-Euclidian plant-based pattern. “Thinking in aesthetic terms therefore requires us to totally reformulate our relationship to the world, as Naess and Guattari unambiguously propose” [53] (p. 321).

Funding: The PlantCoopLab research project was funded by the Fondation Daniel et Nina Carasso (2021-2024) via the Fondation de France, grant number 00110655.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Informed consent was obtained from all subjects involved in the PlantCoopLab conversation.

Data Availability Statement: Not applicable.

Acknowledgments: I thank the members of the PlantCoopLab project (<https://plantcooplab.hypotheses.org/>) for their collaboration in organizing the transdisciplinary conversation with practitioners and scientists. I am also grateful to Christine Roberts for personal comments on the manuscript.

Conflicts of Interest: The author declares no conflict of interest.

Notes

- 1 The definition of the term environment was drawn from the the Oxford English Dictionary and a summary provided by the WordReference dictionary: “(i) the aggregate of surrounding things, conditions or influences; milieu; (ii) the air, water, minerals, organisms and all other external factors surrounding and affecting a given organism at any time; (iii) the social and cultural forces that shape the life of a person or a population”, available online at: <https://www.wordreference.com/definition/environment>. (accessed on 26 September 2023).
- 2 PR: Press Release by UN-CBD on 19 December 2022, <https://www.cbd.int/article/cop15-cbd-press-release-final-19dec2022> (accessed on 9 October 2023), p. 3.
- 3 PR, Goal A.
- 4 PR, target 19.
- 5 PR, target 11.
- 6 PR, target 16.
- 7 PR, Goal C, targets 11 and 21.
- 8 PR, target 5.
- 9 NC: Draft on Nature and culture, <https://www.cbd.int/conferences/2021-2022/cop-15/documents> (accessed on 9 October 2023), decision 1.
- 10 NC, Annex Goal.
- 11 BA: Draft on Biodiversity and agriculture, <https://www.cbd.int/conferences/2021-2022/cop-15/documents> (accessed on 9 October 2023), 3.8.
- 12 PR, target 4.
- 13 PR, target 11.
- 14 PR, target 19.
- 15 BA, 4.7.
- 16 BA, 3.10.
- 17 BA, Element 4.
- 18 BA, 4.12.
- 19 With the ultimate ratio of 50% of the planet under protection, the ecological footprint would amount to six “smaller planets”.
- 20 The PlantCoopLab research project is an interdisciplinary collaboration between eight academic scholars who are located in three research institutional departments in different areas of France. The research action started in 2020 and has been awarded a grant

for four years. It does not involve cultivation and care of actual plants but organizes transdisciplinary workshops with plant practitioners and has collaborations with civil society organizations that promote agroecology.

- 21 This verse is taken to illustrate the paradox of wanting to ignore how food is made. It refers to the episode commonly known as the three temptations of Christ by Satan. In the case of this temptation, the trial is rather cunning since the answer cannot bypass the fact that human beings need food. Although “man shall not live by bread alone”, he will obviously live *also* by bread. The complete wording of this verse is to be found in the Gospel of Matthew 4:3: “And when the tempter came to him, he said, If thou be the Son of God, command that these stones be made bread” and in the Gospel of Luke 4:3: “And the devil said unto him, If thou be the Son of God, command this stone that it be made bread” (Saint James version of the Bible).

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