Spiritual Agriculture, Wellness, & Sustainability: A case study of Biodynamic agriculture in South Tyrol, Italy

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Abstract

Over the past century, industrial agriculture has been a major contributor to the degradation of global reserves of arable topsoil, displacement of native ecosystems, reduction of biodiversity, toxification of soils and waterways, and greenhouse gas emissions (Mbow et al. 2019; Srednicka-Tober et al., 2016; Stoate et al., 2001; Thaler et al., 2022). The negative effects of this so-called “conventional” agriculture have much to do with the divergence of its methodologies from ecological principles (Nicholls et al., 2017). Awareness of this misalignment has long been noted and rebelled against, bringing to global prominence many forms of “sustainable” agriculture aimed at re-harmonizing food production with natural principles. One such method, Biodynamics, arose early in the sustainable agriculture movement and today features prominently in the global wine trade. Biodynamics, an offshoot of Rudolf Steiner’s Anthroposophy movement, is an agricultural methodology born out spiritual and philosophical ideas. Though oft-ridiculed for its ‘unscientific’ ritualistic methods, Biodynamics has been demonstrated to be an effective form of agroecology that boosts soil organic matter, soil microbial diversity, and above-ground farm biodiversity. In this paper, I argue that the specific measurable efficacy of Biodynamic methods is not the principal characteristic that underwrites its efficacy as a form of sustainable agriculture. Rather, the approach’s key attribute is its spiritual-philosophical foundation, which understands the human as one actor within a larger ecological and cosmic web of living relations. Such an ideological outset imbues Biodynamics’ practical application with care toward the well-being of the humans and non-humans involved. This balanced prioritization of human and non-human lives and their needs results in an agricultural model that

achieves higher degrees of sustainability, cultivates well-being and meaningful relationships between humans and non-humans, and encourages more ethically-driven business practices. Drawing on my personal experience of living and working on a Biodynamic-certified vineyard in South Tyrol, Italy, I will explore how farmers' spiritual dispositions manifest in their farming practices. I will also demonstrate the myriad ways in which a biodynamic farm "organism" can benefit the human and non-human lives involved. Finally, I will broach the ethical challenges that arise in operating a farm business with consideration toward human and non-human well-being.

Introduction

Conventional agriculture is characterized by intensive soil cultivation, use of industrially-produced synthetic inputs, and large-scale monocultural production of cash crops. Beginning with Justus von Leibig's revolutionary hypothesis that plant needs could be reduced to quantifiable proportions of elemental nutrients (now widely known as "N-P-K"), and later bolstered by the inventions of industrial nitrogen fertilizer and synthetic pesticides (both, notably, derived from wartime industries), the ground was laid for agriculture to grow into "agribusiness" (Berry, 2015, p. 153; Marchesi, 2020). The industrial potential for higher productivity on farms, combined with the early 1970's U.S. agricultural policy of "get big or get out,"[1] led to the aggregation of farmland and inflation of profit margins for agricultural corporations and the wider food industry. Though indeed the modern form of agriculture has been a financial boon for a small number of capitalist winners, it is now readily apparent that a vastly disproportionate number of

[1] Quotation by Earl Butz, U.S. Secretary of Agriculture 1971-1976 (https://time.com/5736789/small-american-farmers-debt-crisis-extinction/)

losses have been dealt to farmers, the larger human population, and global ecosystems. Many small farmers have been pushed out of the industry as farmland is consolidated into larger and larger holdings; barriers to entry grow ever taller as farm machinery, infrastructure, and technical knowledge have become increasingly necessary; and farm productivity decreases with the loss of soil fertility (Berry, 2015; Pollan, 2006). The health of the human population, now largely dependent on industrially-produced diets, is negatively impacted with elevated cardiovascular disease and cancer rates (Horrigan et al., 2002). Cultivated land and surrounding ecosystems are suffering from extreme topsoil degradation, displacement of native ecosystems, biodiversity reduction, toxification of soils and waterways, and greenhouse gas emissions (Mbow et al., 2019; Srednicka-Tober et al., 2016; Stoate et al., 2001; Thaler et al., 2022).

The destructive effects of industrial agriculture have been noted since its inception, spurring the proliferation of efforts at more sustainable cultivation methods. One of the early critics of industrial agriculture was Rudolf Steiner, founder of the spiritual-philosophical Anthroposophy movement. In his 1924 *Agriculture Course* in Koberwitz, Poland, Steiner identified the inherently problematic nature of the organization of agriculture by economic principles alone. Through the lens of his philosophical framework, Steiner analyzed the practice of agriculture and proposed that a new, spiritually-based farming method be developed that would align with natural principles and cultivate health and wellness for all beings involved (Steiner, 1924). Though he died shortly thereafter, attendees of the lectures took up the reins of research and development. In 1938 the term was coined and the methods published by

Ehrenreid Pfeiffer in his book “Bio-dynamic Farming and Gardening,” the first codified organic agricultural method to reach the Western world (Paull, 2011a, 2011b). Today, Biodynamics remains a prominent agricultural method with over 250,000 hectares now Biodynamic-certified, and a steady rate of growth recorded annually (Castellini et al., 2017; Paull & Hennig, 2020; Santoni et al., 2022).

Biodynamics is a spiritually-informed agricultural approach born directly out of the cosmological theory of Anthroposophy. Its methods are formed by the “practical conclusions” drawn from Steiner’s “[observations of] how all agricultural products arise; how Agriculture lives in the totality of the universe” (Steiner, 1924). One such conclusion, which lies at the heart of the Biodynamic perspective, is the appreciation of every being on earth within its larger cosmic context, constantly under the influence of, and in relation with, the forces of the entire cosmos (Steiner, 1924). As such, plants are understood to grow and behave differently at different times of year, thereby having differing nutrient and energetic requirements. Particular days, based upon an astrological calendar and the relative positions and energetic influences of stars and planets, are considered, for example, better for planting, pruning, watering or harvesting. The energetic properties of other plants, animals, and minerals within the farm are considered and utilized for the aid of the cultivated crops. Specific “preparations,” made from plant and animal materials, as well as specially-prepared water (through the process of “dynamization”) are used to boost soil microbial activity, plant growth, and plant immune system resilience. According to the calendar, these are applied on particular days to maximize efficacy (Diver, 1999; Joly, 2012; Steiner, 1924).

Before going further, it is important to clarify my use of the term *spirituality* in the context of this thesis, because it is a term with many potential meanings, connotations, and interpretations. I do not use it in any specific religious sense. Rather, my usage incorporates approaches, worldviews, and perspectives that stem from a recognition of the world's aliveness and embrace reality with reverence, a sense of grandeur, and an openness to mystery. Apt to characterize my usage of *spirituality* is Andreas Weber's term *enlivenment*, which connotes an "orientation towards the open-ended, embodied, meaning-generating, paradoxical and inclusive elements of life." Such a disposition, which frames the world as "creative and pulsing with life in every cell" stands in stark contrast with anthropocentric, reductive, and materialistic worldviews characteristic of industrial and capitalistic Western thinking, which tend toward seeing the world as constructed by "dead matter" (Weber, 2013). Though the term *spirituality* is often associated primarily with notions of transcendence and aspects distinct from the material world, I also include in my usage a grounded connection with the terrestrial reality of the here-and-now and a sense of oneness with the creative spirit of living Nature.

To many, Biodynamics' regime of esoterically-informed agricultural practices sounds like "hocus pocus" (Pigott, 2021). The cosmic influences upon which the methods are founded are unconfirmed, and largely unconfirmable, by scientific study. As such, Biodynamics has been subject to ridicule and mockery from the scientific community under the claim that many of its underlying theories and methods are unscientific, unbacked, and unfounded (Chalker-Scott, n.d.; Ingram, 2007). But from the outset, Steiner and the other founders of Biodynamics anticipated mainstream ridicule,

and were adamant that the methods be developed through experimentation and demonstrable efficacy (Paull, 2011b; Steiner, 1924). Their high priority was to counter the proliferation of ecologically-destructive, economically-focused industrial agriculture, the achievement of which could only be realized by connecting with a wider, non-Anthroposophic community of farmers (Ingram, 2007). Many of the attendants of the original Koberwitz lectures were farmers as such, unlinked to the spiritual society but interested in an alternative agricultural approach after watching the vitality of their soils and crops decrease due to chemical-intensive agricultural methods (Paull, 2011a). So though it is fundamentally based in spiritual philosophy, Biodynamics was developed as a practical methodology of organic agriculture whose ability to promote ecologically-sound and productive farming could not be refuted. Modern scientific understanding and analysis has since provided the evidence that renders the efficacy of Biodynamics incontrovertible: its practices promote plant health, enhanced microbial activity in compost and soil, and farm biodiversity, on-par with and in some cases exceeding the effects of conventional organics (Carpenter-Boggs et al., 2000; Penfold et al., 2015; Santoni et al., 2022). From the scientific perspective, the effectiveness of Biodynamics is due to its adherence to agroecological principles such as low to no-tillage, employment of microbially-rich compost and foliar applicants, and cultivation of on-farm biodiversity, rather than any proclaimed influence of astral or cosmic forces (Ingram, 2007; Santoni et al., 2022).

But the link between spiritual/traditional knowledge and ecologically-sound agriculture is no coincidence, and is not to be discounted as insignificant. Many of the foundational ideas of Western sustainable agricultural approaches, including

Biodynamics, are but recent echoes of long-integrated, spiritually-imbued understandings of nature found in other cultures. Now viewed through the lens of scientific study, such traditional knowledge is confirmed to correlate with biological and ecological principles (Allendorf & Byers, 1998; Carroll, 2012; LeVasseur et al., 2016; Sveiby, 2009). One such idea, which lies at the core of Biodynamic thinking, is that all in the universe is connected, inextricably interrelated, and constitutes a larger whole. No single organism or system is considered as an isolated individual, but rather as part of a fractal "entanglement of life-propagating relations" in which "every element is implicated in the existence of the other" (Lyons, 2014). This timeless understanding of reality, found in many cultures and spiritual traditions across the world, is strongly aligned with the findings of modern Western micro- and macro-biome research. Genomic sequencing technology has illuminated the fact that our human bodies house a vast microbial ecosystem, the makeup of which is crucial to the basic biological functionality of our bodies (Gordon, 2012). These findings challenge the common Western consideration of organisms as individuals and instead cast us humans, and therefore all living organisms, as epiphonema made up of an interactive web of constituent ecologies (Gilbert et al., 2012). Broadening the scope to the ecosystem scale, a wide body of research now supports the idea that biodiversity and interspecies cooperation are crucial to overall ecosystem health (Brockerhoff et al., 2017; Gorzelak et al., 2015; Millennium Ecosystem Assessment, 2005).

In highlighting this link between spiritually-grounded human-nature relationships and scientifically-derived theories, I do not suggest an outright equivalence of knowledge and scientific verifiability. There is a long history of colonization that

discounts indigenous, non-Western cosmologies and worldviews outright, or if considered are only done so in their degree of scientific confirmability or usefulness. Keleman et al. highlight several historical examples in which indigenous agricultural knowledge was extracted by colonizers for development agendas. Disregarding their original cultural contexts and underlying cosmologies, and without heeding the voices of the indigenous peoples themselves, indigenous techniques and knowledge were co-opted and used as political and economic tools which furthered colonial regimes and oppressive power dynamics (2016). Needless to say, there is much value to the scientific method and its power for illuminating the mechanics of reality. But the dominant preference for materially-verifiable understandings of the world, at the expense of all other ways of knowing, creates a hegemonic pattern of rational thinking that increasingly distances the human identity from intuitive, sensitive, and empathic ways of being in the world (Kimmerer, 2013). The Western scientific viewpoint frames the human as an objective observer who understands specimens by extracting them from their ecological and cultural contexts, cutting off their living ties of interbeing and treating them as individuals (Lyons, 2014). In stark contrast, indigenous knowledge arises from participative interrelation of human and other-than-human lifeways (Bawaka Country including Suchet-Pearson et al., 2013). It is rooted in place, communally-constructed, and born out of direct lived experience (Bawaka Country et al., 2015; Kohn, 2005). The two epistemological approaches create two very different visions of the world: the former “disenchanted” and exclusively material, the latter alive, interconnected, and metaphysical (Horkheimer and Adorno, 1973, as cited in Johnson & Murton, 2007; Johnson & Murton, 2007). Downstream, the human-nature relationships

manifest in equally stark contrast: the Western view has overseen global colonization and rapid degradation of global ecosystems, whereas indigenous knowledge has sustained countless peoples and their lifeways over generations and millennia (LeVasseur et al., 2016; Sveiby, 2009). Clearly, under the scientific scope, the overlap between their cultural practices and ecological principles is confirmable and is correlated to their long-term sustainability. But that relationship with land, learned and established over generations, is woven by the unmeasurable qualities of intuition, emotion, spirituality, and care.

The notion of care, a crucial feature of spiritual agriculture approaches, arises out of a consciousness of, and respect for, the living nature of the world. Krzywoszynska defines care as “paying attention so as to learn about, act on, and monitor the satisfaction of the needs of the one being cared for” (2019). In an agricultural setting, care is the consideration of the priorities, motivations, and well-being of the other-than-humans of the farm. Care is critical in shaping sustainable agricultural models because it influences farm operations to be structured through and around the needs and timelines of the other-than-humans involved (Puig De La Bellacasa, 2015). A conventional farm is designed predominantly through an anthropocentric view in which the productive crop is prioritized. In order to maximize production of said crop, the other lives of the farm go largely unconsidered and effects upon their well-being are externalized. A conventional corn farmer may plough soil without considering the destruction of the soil food web, apply fertilizers and herbicides without considering runoff into local waterways, and apply pesticides without considering the effects on insect populations and associated trophic levels. In contrast, a farm in which care is

employed accounts for the lifeways of other organisms in addition to, and in tandem with, the production of their crops; farmers may employ techniques such as low or no-tillage, compost application, reduction or elimination of chemical inputs, cultivation of farm biodiversity, use of cover crops, etc. The well-being of the farm is understood to be dependent on the well-being of the non-humans at play in the farm system. Practices therefore follow which internalize, to a greater extent, wider ecological wellness and take on the responsibility of cultivating a diverse flourishing of non-human lives.

But the relationship between care and a farm's degree of sustainability is not straightforward and complete. As I will discuss further below, care in a farm setting can be expressed in many different ways, toward many different subjects, and toward many different ends. Though sustainable agricultural approaches are designed to better align business success and care for farm ecology, friction still arises where the motivations clash. Farmers are often placed in ethical dilemmas where acts of care become compromises between the best-interests of the different subjects at play (Krzywoszynska, 2019). Care is not a one-size-fits-all prescription, which when employed unilaterally brings a farm to a state of sustainability. Its power is in challenging dominant anthropocentric paradigms and injecting into farm practices a consideration of values beyond solely the business imperative (Lyons, 2014; Pigott, 2021; Puig De La Bellacasa, 2019). It is therefore a framework through which a farmer can consider the relationship between their land and business, which when adopted can lead farms to higher degrees of sustainability.

Hence we arrive at one of the crucial features of spiritual agricultural approaches: a core ethic which places a high value on life beyond just the human. Most farms today

are tied into the modern economy, and as such have an imperative to make a profit. The profit motive, which is greatly encouraged by market demand and tempts the prioritization of immediate gain, has the potential to strongly influence the organization and practices of a farm business. We see through the history of agriculture how prioritization of income has shaped conventional farm businesses and their resultant externalization of ecological costs. Even proclaimed sustainable approaches, as in the case of Organic-certified agriculture can begin with good intentions, but unrooted in a deep spiritual framework are gradually co-opted by capitalistic influences. Though it was a step in the right direction away from conventional agriculture, Organic agriculture has been molded to the global industrial business model and now, in large-scale applications, looks eerily similar to the conventional industrial model it was born to replace (DeLind, 2000; Pollan, 2001a; Raynolds, 2004). Of course, any farm operating as a business must necessarily consider the monetary element; I do not suggest that economic motivations are inherently negative or even necessarily at odds with agroecological wellness. But a spiritually-informed farmer, already grounded in an ethical framework and with extra-monetary motivations of good will, is more likely to operate from a deeper sense of purpose and with care for human and non-human well-being in an ecologically and community-aligned manner.

II. Relevance for Gastronomic Sciences & Food Studies

This topic is relevant for gastronomic sciences and food studies because it seeks to better understand the underlying patterns of thought which give rise to sustainable and regenerative forms of agriculture. As we reckon with myriad ecological and human

health crises around the globe, and recognize that modern industrial agriculture has played a significant role in advancing both, it is now more critical than ever to look for new paradigms of food cultivation that will realign human motivations with those of the natural world. This research looks to spiritual modes of thought to encourage us out of purely anthropocentric models of food production and to highly consider the ecological context in which we cultivate our food, and the non-human lives that we affect when we produce our food. Through this study is highlighted an approach to agriculture in which wellness for the soil, insects, plants, and animals is directly linked to the wellness of the human farmers, surrounding community, and larger food system. This approach to agriculture, more than just a prescriptive set of methods, begins from a spiritual-philosophical shift in the farmer that informs a dynamic approach to their land, the organisms who inhabit it, and the business that survives through it. This study also addresses the ethical dilemmas that arise when business motivations clash with the wellness of non-human organisms. Such a discussion is critical as we navigate the financial realities of survival in the modern Western economy-driven world, and attempt to positively influence the food system from within. Though imperfect, a spiritually-driven, symbiotic model of agriculture offers a paradigm shift, as a starting point, for our agricultural system to move in a more sustainable, health-promoting, meaning-promoting, and life-promoting direction.

III. Description of Research Objectives

The aim of this paper is to explore the effectiveness of Biodynamic agriculture and to highlight the importance of spirituality in informing human-non-human agricultural

relationships. I seek to understand which qualities attract farmers to Biodynamics as it rises to prominence as an agricultural methodology around the world. I also investigate the conception and role of the human within the web of relations, and how humans are cared for within the farm system. Finally, I explore the ways in which the economic imperatives of business come into conflict with the well-being of non-humans in the system, as well as the ethical dilemmas which this conflict presents to farmers.

Methods

What follows is an exploration of the relationship between spiritually-informed agriculture and sustainability through a case study performed at Ansitz Dornach in South Tyrol, Italy. Over the course of three months, from July-October 2023, I lived and worked on the Biodynamic-certified farm with the three-generation Uccelli-Terleth family, who own, operate, and live upon the property full-time. The farm features the iconic eighteenth-century family home, the one year-old winery and “Wine Terrace,” six hectares of vineyards, one hectare of orchards and mixed berry patches, one hectare of chestnut trees, two vegetable gardens, three goats, three donkeys, two cows, and twenty chickens. The property rises three hundred meters up the steep valley slope and is surrounded by mixed forest with creeks running down each side. The entire farm is certified-Organic and Demeter-certified Biodynamic.

The content and insights of this study are drawn from three sources: a review of relevant literature, my lived experiences and personal observations from the summer as I participated in all aspects of the diverse array of farmwork found on the farm, and interviews with four Biodynamic farmers: Patrick Uccelli, Karoline Uccelli, Josef Terleth,

and Myrtha Zierock. The three former live and work at Ansitz Dornach, and the latter is the daughter of renowned Biodynamic winemaker Elisabetta Foradori, and herself is the accomplished manager of the Foradori Biodynamic market garden in Mezzolombardo, Italy.

Ansitz Dornach, featuring the 19th-century family estate, vineyards, and Wine Terrace. Salorno, South Tyrol, Italy

Results

Farm as Organism

At the core of Biodynamic philosophy is the conceptualization of the farm “as a living, unique organism in which every organ needs the other” (*Farm Organism*, n.d.). Though each organ holds its own unique shape and function in the body, it only thrives

in connection with all of the others. If critical failure strikes any one unit, the whole system can fall into disarray and must be propped up by intensive life support technologies. But if all organs are vital, and well-maintained, they harmonize to compose a functioning and active body. Such is the metaphor through which Biodynamics understands the healthy farm: to resemble a healthy body, a farm should be made up of a variety of species at all trophic levels whose lifeways are mutually-beneficial. The wellness of each species makes up the wellness of the whole system, and vice-versa.

I discussed in the introduction how the functionality of the individual body follows the same principles of interconnectivity and interdependence that underpins ecological functionality. The conception at Dornach of the farm-as-body is borne out in its design with natural systems as models. Ecological principles are adapted to the farm context to create a network in which the lifeways of constituent species are interwoven and mutually-reinforcing. Let's take a brief walk through the vineyard to get a better sense of the layers of this farm ecosystem, from the bottom.

We start from the bottom, in size and in relative terrestrial position--not significance! The whole farm system, as any ecological system, is founded upon the soil. Though there is much lip service in the wine industry about *terroir* as expressed through a particular vineyard's underlying bedrock, the vast majority of biological and chemical activity occurs in the thin layer of organic matter that sits just below the soil surface. Decomposed organic matter provides the structure that houses an immensely complex "soil food web", consisting of many trophic levels of micro- and macroorganisms that, in relation with plant roots, compose the nutrient cycling system

that sustains plant life (Ingham & Slaughter, 2004). Though from one end, this system underlies and feeds the grapevines, trees, and other plants of Dornach, from the other end, the plants feed the subterranean system. Through photosynthesis, the plants pull gaseous carbon dioxide from the atmosphere and transform it into solid carbohydrates, which they send down through their roots to attract and feed microorganisms in exchange for mineral nutrients. The diversity of plants relate with different cohorts of microorganisms, maintaining a diversity of populations in the soil. Above ground the plants also relate with a variety of species. An array of grasses and flowering plants attract and provide habitat for a diverse society of insects. One of these insects is the honey bee, whose colonies are maintained by Karoline next to one of the vineyards. These insects serve as a food source for many species of birds, which flit between the vines and nest in the fruit trees or the forests lining the vineyard edge. Meanwhile, Dornach's chickens and ruminants graze the vineyards (after the grapes are harvested, of course), contained by fencing but otherwise roaming freely through the rows. As they feast upon and digest the diverse plant cover in the vineyards, they frequently drop excrement and stomp it into the earth as they walk by. The action of the grazers simultaneously keeps the weeds down, fertilizes the vines and other plants for the coming year, and inoculates the landscape with fresh colonies of microbes. Surrounding all of this farm activity are woodlands, which host a variety of deciduous and evergreen trees, native undergrowth plants, and animals of all kinds. Not only does the liminal zone between farm and forest increase Dornach's on-farm biodiversity, but the presence of trees around and interspersed through the vineyards provides many ecosystem

services which benefit the grapes, such as buffering against climatic extremes (Favor, 2021).

Biodiversity on display at Dornach. From nearest to farthest are visible mixed vegetable and flower gardens, vineyards with in-row plant diversity, and the treeline of the forest beyond.

This truncated tour of the complex web of multi-species symbioses at Dornach highlights how a holistic agricultural philosophy manifests in webs of interwoven mutual benefit for all actors involved. As is the aim in Biodynamic agriculture, this system approximates a closed loop, in which the nutritional needs of each organism are provided from within the system. Dornach purchases very few nutritional inputs for any

of the farm's plants or animals. Some supplemental feed is required for the chickens, the ruminant animals require hay in the winter, and the vegetable gardens need an occasional top-dressing of composted cow manure. But that which can't be supplied from inside Dornach's fence line comes from just up the road, purchased from neighboring farms and friends who grow feed or have spare manure heaps sitting around.

The farm-as-organism design thus establishes a care network, in which the strands of connective tissue that bind the system together are relations of mutual care (Krzywoszynska, 2019). This is not to anthropomorphize the plants and animals of the farm and insist that they hold a subjective sense of care as they go about their days. Rather, by going about their lives, each being naturally feeds into the necessities of the others. It is the eye of the farmers at Dornach who design the system, understanding the needs and motivations of the non-human actors involved and organizing species interactions to ensure that each is cared for by the system. In comparison, a monocultural farmer must provide directly for all of the needs of their plants or animals from outside the system with purchased industrial inputs. Dornach manifests a system that is self-contained and self-supporting, where care for the organism arises through the organism's placement and participation within the network, thereby caring for and supporting all other organisms involved. The redundancy and circularity of the descriptions of the system indicate its complex cyclical structure--interactions between species are recursive, entangled, and multi-directional. Unlike the dominant industrial agricultural model, Dornach's design is not one in which the lifeways of other-than-humans are bent into a simplified, linear, predominantly human-oriented

system. Rather, the system is molded around the messy, knotted shape of the interaction of non-human lifeways that compose it.

The Role of the Human

Though the system is designed with heavy consideration for the non-human species of the farm, it is important to highlight that the system is *fundamentally* human. In our interview, after asking him about the relationship between his agricultural approach and ecological principles, Patrick made clear to me:

> "We don't do 'nature'. We do agriculture. We work, always, from a starting point of view. Nature works in an absolute sense. It hasn't a starting point of view."

As he went on to explain, he sees nature as working as a totality, with no specific motivation or priorities beyond the survival and proliferation of life *itself*. Nature is the general force that animates life and manifests as diverse ecosystems. But as human farmers, we work with a limited and largely self-motivated perspective. Patrick admits that this is a false-dichotomy and that the line between nature and culture is not defined (the nature-culture debate is beyond the scope of this paper). But the metaphor highlights that farms are human constructs and impositions on the "natural" landscape. Indeed, Dornach's agriculture system is structured around the lives and behavioral patterns of the plants and animals there. And indeed, it is a relatively long and diverse list of species, especially in comparison to the surrounding monocultural farms raising only apples or grapes. But if we examine that list closer, we see a very recognizable and

globally-common profile of names: grapes, apples, corn, tomatoes, chickens, goats, cows, bees, etc. All are fully-domesticated species, which have a long history of relation with humans and now make up a large part of the human diet around the world. These species have been shaped by human hunger--bred over generations for the desirable characteristics of size, sweetness, spiciness, tenderness, and docile disposition. Many are non-native, imported from far off lands to usurp more local, traditional foodstuffs and dominate the agricultural landscape. Two staples of South-Tyrolean cuisine, for example, are corn polenta and potatoes, both of which only arrived in Europe post-American colonization. But in painting a complete picture of the situation of domestication, Pollan argues that we ourselves have been equally domesticated by these same species, convinced by their attractiveness and domesticability to port their seeds and work for their care the world over (2001b). So as we look out over a farm, even one as diverse and holistic as Dornach, we must recognize that it is a creation of the tight symbiosis between humans and our common domesticated species. It is inescapably an anthropocentric system designed to fulfill our needs and desires.

So though the human only plays one role within the larger farm organism, it is the crucial role of designer and composer. In coordinating all of the other organisms' lifeways, humans have a high degree of responsibility and workload to keep the system running in harmony. Though the ecosystem is self-contained, it is not self-sustaining beyond the human hand. Karoline, for example, must milk the goats every day, and must ensure that they are in a place with plenty of grazable plants and a source of fresh water. The cows grazing through the vines must be contained by portable electric fencing, moved every week or two for a fresh plot, and also be within reach of a water

source. The chicken house must be maintained, their feed refilled, and their eggs collected. The grandmothers are regularly tending the gardens. Josef can often be seen out pruning trees, fixing tractors, and moving hay. The vineyard team is out daily tending to the vines in one way or another. And Patrick, as the business owner, is constantly organizing, delegating, meeting with clients, and overseeing operations. Humans within the farm organism serve as the heart, keeping all of the other lifeways pumping and their interrelations flowing smoothly. Without the human, the farm would quickly be overrun and reclaimed by the forest. But by the human mind and hand, the agricultural organism is sustained.

All of this work is reciprocal and comes back around to sustain the health and well-being of everyone involved in the farm. This is foundational to Biodynamic thinking: that the human is not separate from the farm, and the way that the farm is treated is equally the way that its people are treated. In caring for the land and the non-human entities involved, humans are cared for in return. This philosophy is strongly adhered to at Dornach, and is expressed in the work culture and way of life there.

An amazing ritual at Dornach is the daily team lunch. Each work day, at exactly noon, work shuts down. No matter what is going on at the farm or away from it, it is of the utmost importance to stop what you are doing and head to the house for lunch. From the far corners of the farm congregate between ten and fifteen people, spanning the three generations of the family and the team of employees, around the big outdoor table. Everyone lends a hand in setting the plates, putting finishing touches on dishes, and fetching bottles of wine. Once prepared, the team sits down and enjoys 90 minutes (sometimes more, but never less) of convivial rest time. Every day, lunch is fantastic. It

is always a feast, the vast majority of ingredients coming directly from the farm. There is always a cut of meat--beef, pork, or lamb--raised at Dornach and butchered by Josef. There are always fresh salads and roasted vegetables, harvested just that morning from the vegetable gardens. There are yogurts and cheeses made from fresh goat milk. And always on the table are several bottles of *vin de la casa*, made by Josef with Dornach grapes in his own basement wine cellar. It is always a raucous affair, the air filled with the laughter and cries of children, blessings of "*buon appetito"*, boisterous arguments over how to correctly slice cheese, and a never-ending barrage of commands of "*mangi, mangi!"* ("eat, eat!"*).* No matter the weather, the bulk of work that day, or the endless list of issues that inevitably crop up on a farm, lunch hour is always a time for care and nourishment of both body and mind.

The care that is shown to the people at Dornach through rest and good food is equally expressed in the farm work environment. Patrick puts great effort into the organization of the harvest program. He carefully curates the team, which expands to about ten people during harvest, such that harvest is a relatively relaxed, jovial process. He admitted to me that he could do it with much fewer people, or focus the team on efficiency, both of which mean lower wage costs for him. But in his philosophy, harvest should be a time of celebration and exaltation as a year of planning, concern, and hard work for the vines comes to fruition. So he intentionally shapes the team to create a positive social dynamic, and grows it to such a size that the workload on each person is not overbearing. He also has a unique way of scheduling the harvest to align with this goal, stretching the period out to a span of five weeks. Patrick says that the harvest could be performed much more quickly. But he prefers to draw it out, one reason being

that it permits a slower and more relaxed pace of work that eases the stress of an already intense and laborious process. As such, each day of harvest is extremely enjoyable. As the team works through the rows, one can hear the poetic, animated flow of Italian conversation and music playing from the portable speaker amidst the snipping of scissors and the splattering of grape bunches into buckets. Ritualistically, every day at mid-morning a cry of "*Holmbittog!"* rings out. Everyone drops their scissors and buckets and gathers for a "second-breakfast" of cured meats, cheeses, cakes, and wine. Despite the particular conditions or workload of a given day, this time of relaxation and nourishment is non-negotiable. Of course, the entire process is not so edenic--there are some long days, some in which intense attention to quality is required, and some in which urgency is necessary. But overarchingly at Dornach, harvest is designed as a time to rejoice and commune around the gifts of the vines and the security of a successful vintage.

Enjoying *Holbmittog* on the first day of harvest.

Such an expression of care towards the human element of the farm is often overlooked in agricultural settings, or any work environment for that matter. When productivity is the aim of a business, efficiency can take priority over human well-being. But at Dornach, and more generally in Biodynamics, it is a central feature and considered to the highest degree. This falls in line with the wider holistic philosophy of wellness that takes wellness as communal and interrelated. There is no human wellness without non-human wellness, and vice-versa. The agricultural style proposed at Dornach exemplifies that agriculture can and should be a life-promoting act in all of its dimensions.

In considering the humans that live and labor within the farm system, it is then necessary to also consider the humans adjacent to and outside the individual farm. In his original speeches at Koberwitz, Steiner proclaimed that:

> "There is practically no field of human endeavor that does not relate to agriculture in some way. Seen from whatever perspective you choose, agriculture touches on every single aspect of human life…Knowing these things brings agriculture into intimate relationship with society in an objective way. And this is what is so important, that agriculture be related to the whole of social life" (1924).

Patrick and Karoline make a great effort, and have invested both time and money, to run their business as a connective force that builds community and expresses care well beyond its fence line. This effort has manifested as the newly-constructed winery and Wine Terrace, a stark three-story building that stands prominently in the property's skyline. The Wine Terrace now features as the social hub of Dornach, open three days per week to customers to enjoy a wine tasting or aperitivo while looking out over the Pinot Noir vineyard to the striking Adige river valley beyond. Karoline and Patrick have also begun to hold social and educational events, as well as offering the space as a rentable venue for parties and business retreats. Though a drive away from any nearby towns, the terrace attracts customers regularly and can be heard ringing with laughter and the clink of glasses every weekend night.

Inside of the Wine Terrace is the wine shop and kitchen. Here, Karoline not only sells the suite of Dornach wines, but also features many other beverage and food

products from local, artisanal, and sustainable producers. Karoline herself makes many value-added items from Dornach products: apple juice, chestnut cream, fruit jams, honey, vegetable chutneys, relishes, and spice mixes. But alongside are the goods of her friends, neighbors, and businesses that she favors: wine, cider, beer, fruit juices, natural syrups, and dried fruits, among others. In the kitchen where she prepares a menu of charcuterie-style dishes, Karoline features cured meats, cheeses, sustainably-raised trout, tempeh, and breads purveyed from local artisan businesses. All of this stems from Karoline's desire to support the ethical and sustainably-oriented businesses of the local community, and to promote South Tyrol's regional food identity. She sees her shop and kitchen as a hub to connect local food producers and provide them a marketing and sales outlet. Rather than as competition, Karoline sees the effort as an extension of biodiversity and symbiosis that raises the identity of the entire community and supports their local sustainable food system as a whole.

Besides a social and commercial space, Karoline & Patrick also put immense effort into making Dornach an educational space. On a weekly basis, they provide multiple two-hour property tours and wine tasting experiences to visitors. They personally guide the guests throughout the property, explaining to them their Biodynamic agricultural philosophy, the farm-as-organism concept, their cultivation of biodiversity, and their pioneering approach to viticulture with disease-resistant *PIWI* varieties. Guests gain an intimate knowledge of the property and an insight into the perspective of caring farmers, seeing firsthand where and how the food and wine they will later enjoy is cultivated in a conscious and life-promoting manner. Such an offering, especially with such regularity, is very rare among winemakers and farm business

owners. Karoline and Patrick are extremely busy people, as the demands of a living farm system are constant. Yet they carve out huge chunks of their weekly schedules to provide this service, because to them connection with the wider community is part-and-parcel of the farm-as-organism concept. Karoline & Patrick take it on as their responsibility to use Dornach as a way to leave a positive wake in the cultural sphere beyond the farm. These tours serve as one of their microphones to promote sustainable agriculture methods, conscious food production and eating, and caring relations with non-humans. They hope that when visitors (often international tourists) leave Dornach, they will carry this message with them out into the world and sow the seeds of this knowledge far out into the global food system.

Philosophy first

Biodynamics provokes a great deal of skepticism, criticism, and outright dismissal for its spiritual foundations, its esoteric proclamations of the influence of cosmic forces, and its use of mysteriously-concocted “preparations.” For many, the apparent wackiness of Biodynamics is enough to warrant its immediate rejection. But the fact that it features as one of the more prominent alternative agricultural models, and is very recognizable in the wine sector, indicates that there is something resonant in the philosophy that keeps farmers using it. So are they all crazy, or is there something deeper that attracts more and more farmers every year?

To all four farmers that I interviewed, I posed the question: “why did you choose Biodynamic agriculture?” The answers that I received, though varied in form, were similar in content. None of the four connect deeply with Biodynamic theory. None are

devoted students of Steiner's work, none make or employ the preparations religiously, and none are overly concerned with the phases of the moon or positions of the planets. I was quite surprised to hear this, previously thinking that Steiner's theories, astrology, and preparation applications were critical to Biodynamic practices. Regarding the preparations, Patrick said that:

> "working with the preps is important but it's not one of my first rules. You need circular systems. I think [the systems] are more important than the preps themselves. Working with preps is great because you are working with subtle forces. But if you are still working on developing wholeness in the farm, the preps are not enough. It is better if you are unable to give preps in a healthy organism instead of giving a lot of preps in a non-functioning organism."

In a less definite, but equally profound, assessment, Josef explained to me that:

> "If you have animals on your land, it is the same. These preparations are made from some kind of compost and do whatever to the plants. But I could never be bothered to make the compost, put it in a backpack, spray it on the plants…no, no, no. If I leave the animals out there, they wander there, they wander here, they go around…[Josef chuckles]...it's the same!" (translated from Italian).

This sentiment was echoed by all four farmers, the consensus being that the preparations are certainly useful and effective, but are secondary to the source of real

health: the wholeness of the Biodynamic farm organism. Though this is only the sentiment of four farmers, the diverse, self-supporting farm system seems to be the key attribute of Biodynamic philosophy. It gives the system fundamental vitality, the strength of which forges the bulk of the system's strength and productivity. To cultivate and coordinate the farm organisms into a cohesive and self-sustaining whole is the critical feature in establishing a healthy Biodynamic farm. From there, the preparations serve as supplements which can bolster the organisms' health.

Cows grazing on the diverse plant cover between vine rows, just after harvest.

But it is important to note that the preparations were not discounted, and were in fact praised for the role that they play. Myrtha shared with me that, though she doesn't *know* for sure about the effects of the preparations, she observes that her vegetables grow with a particular "uniformity," in which their growth rates seem almost synchronized. This is in contrast to any typical situation of plant cultivation, where due to soil conditions, plant genetics, deficiencies, watering disparities, etc., plants will grow at diverse rates and with varying degrees of vigor. When I asked her about her thoughts on the *500* preparation (the most recognizable of Biodynamic preparations, the making of which features stuffing cow manure into a cow horn and burying it over winter), Myrtha explained that:

> "[a particular] microbiome…forms because of the material available in the cow horns, [so the 500 preparation] is basically a vehicle for select microbial organisms compared to others. But of course it's weird to bury a cow horn, and you're like, 'why can't we just do it in something else?' But I always say, if that seems to be the vessel that gives the best result, or the result that works, I don't make a fuss about it."

Myrtha, whose personal relationship with Biodynamics is more practical than spiritual, attributed the effectiveness of the cow horn to the results of a recent scientific study which illuminated the particular microbiome she spoke of. But simultaneously, she equally rated the long-acclaimed anecdotal effectiveness of the tradition, her personal observations, and potential mystery beyond her capacity to know. This highlights

another strength of Biodynamics: its encouragement of practitioners to engage in relationships with their land that are beyond logic or scientific verifiability. It asks farmers to act in intuitive and sensorially-attuned ways with the non-human agents of their land, to be open to forces beyond their capacity to understand, and to take seriously orally-transmitted wisdom from within the community network. Each of these is a longstanding feature of many traditional and religious ways of being that challenge a distanced, anthropocentric worldview and tie us into immediate, felt relationship with the beings around us (Pigott, 2021).

Biodynamics: Certification First?

There is also a much more down-to-Earth attraction of Biodynamics to farmers today: its marketability. Biodynamics is now an agricultural certification granted by the Demeter Alliance, which features in 55 countries and whose reach grows yearly (Paull & Hennig, 2020). Biodynamic-certified products are marked on their labeling by a logo, often alongside that of the Organic certification. It is a way for companies to advertise their sustainable agricultural practices and for consumers to consciously select products raised in alignment with their ethics. As the organization and certification program has grown, it has become more and more attractive to producers as a way to distinguish their products on a store shelf. Especially in light of the degradation of Organic's sustainability standards due to food industry pressures, the Demeter label now stands out as an indication of a food product's "beyond-organic" origins, raising their value and marketability.

When I asked her about her relationship with Biodynamics, Karoline was bluntly honest.

> "For me, it doesn't depend on the certification,…a certification is kind of an invented category, and everyone within this category works differently. I believe in Biodiversity, that is my farming philosophy. We are only certified Biodynamic because the guy we sold our grapes to wanted Biodynamic."

Karoline's perspective highlights the practical reality of certification schemes like Biodynamics. For both Karoline and Patrick, Biodynamics is an agricultural model that happens to nicely overlay their pre-existing philosophies, belief systems, and approaches to land management. On their own terms, they already operated their farm in a holistic, conscious, and caring manner. Their attraction to the certification was in large part its ability to convey their farming philosophy to consumers and increase the value of their products, rather than a specific belief in and adherence to Biodynamic philosophy itself. Karoline even shared with me that they would have preferred to be certified by other, more local organizations that align even more strongly with their thinking and practices. But Demeter certification, now with a global reach, is recognizable by a wider market and is therefore better for international sales. Karoline emphasized that their case is unique and that each farm calculates this decision from their own perspective. Many farms, of course, get certified because they believe strongly in Steiner's philosophy and their farming practices truly embody Biodynamics. Others are attracted to Biodynamics principally for the market benefits of certification.

Regardless of the situation of a given farm, I do not suggest that a focus on business is necessarily greedy or ill-motivated. Businesses by their nature must concern themselves with marketing and sales to survive. And the financial realities of farm businesses (which generally operate on low margins as it is) put a lot of pressure on farmers, especially when those farmers have employees and families to support. Biodynamic certification can aid farmers as an avenue to boost their sales and further incentivize sustainable growing practices. Within the larger food economy, the net effect draws money away from industrial agribusiness and in the direction of more sustainable producers.

However, as when finances and bureaucracy get involved, so does the need for rigid codification of complex, interwoven systems. Karoline worked for a long time with Bioland, a local European certification organization, and explained to me the inner workings of drawing up standards for something so dynamic as diverse agricultural systems. It requires the placing of rigid metrics over interwoven, context-dependent systems, many of whose qualities and meaningful values are beyond quantification. Inevitably, for the standards to work at scale requires the broadening of stipulations, therefore reducing certifiers' abilities to examine a farms' practices in detail and with consideration of context. As such, the power of a label like Demeter gets diluted, as farms that are motivated primarily by money and do not arise from a more grounded, life-promoting ethos are more apt to do the bare minimum, skirt regulations, and pollute the certified market with illegitimate or below-standard products (Raynolds, 2004).

Agriculture: A Compromise of Care

When I arrived at Dornach, I admit that I had a romantic view of the farm-as-organism. My vision of regenerative forms of agriculture, based upon my personal experiences as a farmer and all of the content and research I've absorbed over the years, was that there was a point at which enough diversity and a high-enough degree of ecological mimicry on a farm would bring it to an edenic point of harmony. If the farm resembled an ecosystem enough, I deeply felt that the natural order would take care of itself without needing much intervention from the farmer. But over my months at Dornach, my rosy vision was largely dismantled.

Disease pressure hit Dornach hard during South Tyrol's unseasonably wet July. An abundance of precipitation is great for keeping plants' thirst satiated in the hot summer months, but it simultaneously creates ideal conditions for the proliferation of fungal outbreaks on grapevines that will eventually rot grapes and can easily devastate a crop if left unchecked. As a counter-measure within Biodynamic certification standards, Patrick had at his disposal copper and sulfur spray treatments, which act as organically-derived elemental fungicides. Compared with the systemic fungicides used in conventional agriculture, sulfur and copper are much less toxic to micro- and macro-organisms, but also require much more frequent applications. Rains arriving multiple times per week during that month saw Patrick out on the sprayer multiple times per week, dusting the vineyards in a cloud of fine fungicidal mist. Though *relatively* non-toxic compared to alternatives, copper has been shown to accumulate in soils and be harmful to soil microorganism populations (El-Ghamry et al., 2000). In a farm that prioritizes so heavily the health of its soil, this struck me as paradoxical and left me

feeling ethically conflicted as the imperative of business clashed with non-human livelihoods and resulted in harm.

For Patrick, agriculture is a game of compromises. To maintain his crops, and therefore maintain his business, Patrick must sometimes act in ways that run contrary to ecological care. For the whole system to operate as it is designed, Patrick must spray his vines. He understands, and does not take lightly that his actions are likely harming the non-humans of his farm. It is not a reckless, greedy, or blind act of destruction. Rather it is a ranking of priorities; for him, the realities of human life place his family, his business, and his employees on the top step. But, in understanding that the meeting of those priorities is intimately tied to the wellness of his land, he does what he can to walk the line of greatest mutual benefit and minimal harm. and adapts his agricultural practices accordingly.

Care for non-human wellness in agricultural practices necessitates adaptability on the part of the farmer. Myrtha, in dealing with the same fungal pressures at Foradori's vineyards, explained to me their efforts to minimize their use of fungicides. By deeply studying the life patterns of the target fungi and applying the sprays at exactly the right moment (which is accurate down to a single hour), they are able to greatly decrease the concentration and frequency of their sprays. Both farmers also highly prioritize the organic matter content and microbial biomass of their soils, which Patrick explained equips soils to be better able to sequester and process the copper. Another promising avenue toward in the battle against disease, of which Dornach is a strong advocate, is the employment of resistant *PIWI* grape varieties. These varieties are relatively novel products of cross-breeding between the dominant global grape species,

Vitis vinifera, and another species of the *Vitis* genus which typically hails from North America or Asia. The hybrid variety that emerges from this crossing is naturally more resistant to common grape diseases, thereby requiring much less fungicidal applications, if any at all.

These examples, among many others, demonstrate these farmers' willingness to adapt their agricultural and business practices in consideration of environmental impact and the wellness of the non-humans of their farm. They do not come without sacrifices: for example, PIWI wines, due to their unfamiliarity to customers, are more difficult to sell than more common varieties such as Pinot Noir. But the vines' long-term viability and compatibility with Dornach's farm system outweighs the increased marketing difficulty, and simultaneously opens up an opportunity for education that draws more attention to PIWIs among wine consumers. Here we see that an openness to adaptability and thinking along mutualistic lines transforms ways of thinking about business. Though farm care and business care sometimes find themselves at odds, a farm that embodies mutualistic care networks brings them much further into alignment than more conventional agricultural businesses.

I asked Karoline about her thoughts on the relationship business and farm care. Waving her hand in a circle to indicate the wine terrace and farm beyond, she replied,

> "Without the business, we can't do any of this."

The income of the business is what permits Karoline and Patrick to do what they consider the meaningful work--the sustenance of their family, the cultivation of a

diversity of life on their land, networking of local food businesses, the community education and outreach, etc. Sometimes it is required to harm the soil microbes or inflict some negative effect on the farm ecology. But the small local impact is outweighed by the survival of the business, which is the medium through which they relate in caring and life-promoting ways with the world around them.

Discussion

Biodynamics: An Agricultural Framework for Spirituality

Biodynamics is often the subject of ridicule from the wider agricultural and scientific communities; the focus of scrutiny is honed on its use of apparently strange and scientifically un-verified preparations. But through the lens of this study it is suggested that the effectiveness of Biodynamics is not necessarily contained within the specifics of its canons, such as Steiner's teachings or the preparations (though the preparations are considered by the farmers to be effective). For the four farmers featured in this study, the power of Biodynamics is in providing them a methodology through which to express their personal spiritual conceptions and relationships with the larger natural world. The more general underlying principles, such as the interconnectedness of all living beings and the cosmos, holistic wellness, and intuitive relationships with non-humans, are the attractive and important concepts which resonate with them on a spiritual level. Biodynamic methodology embodies these notions in the farm-as-organism approach, which practically expresses and cultivates symbiotic human-non-human relations through integrated farm biodiversity. Indeed, the model's alignment with ecological principles shapes the farm system into a

mutually-reinforcing nutrient cycle with high degrees of sustainability relative to conventional farming approaches. But the spiritual appreciation of the aliveness of other beings and a focus on wellness for all creatures also opens up avenues for farmers to connect with their land in ways that bring a deeper sense of meaning and value to their lives. This caring spirit that informs all farm activities also carries beyond the farm to care for the surrounding human community the wider food system.

This study showcases examples of Biodynamics that take it beyond simply a prescriptive set of methods based upon the esoteric philosophy of Anthroposophy. Its critical, resonant feature is as a medium for spiritual expression through agricultural practices. Especially in the modern, capitalist Western world, in which agricultural technique is scientifically, and therefore secularly derived, Biodynamics plays an important role to reconnect farmers and their practices with the living nature of the world and the larger cosmos in a meaningful and life-promoting way.

With this in mind, Karoline's insights into the Demeter-certification process highlight the limitations of top-down regulatory schemes to promote truly radical agricultural ideologies. Indeed, Demeter certification plays an important role in the agriculture sector, maintaining much stricter standards than Organic and encouraging farms to incorporate more sustainable and ecologically-based practices. This is an important economic force which can greatly benefit individual Biodynamic farms, and, more broadly, draw market share away from conventional agriculture and towards more environmentally-friendly farming. But any certification program that is based upon the counting of metrics and regulation of methods can only relate to the practicalities of agriculture. It cannot create a deeper shift in philosophy or worldview; it cannot promote

a spiritual sense of the innate value of non-human lives; and it cannot cultivate in a farmer a larger sense of duty to community or ecology. Metric-based certification turns Biodynamics into a checklist to be satisfied, rather than the holistic view of life and interdependent wellness that forges transformational human-environmental relations. The driving force of Biodynamics which shapes farms to be life-promoting in all dimensions is a spiritual shift that can only arise from within the farmer.

Importance of Human Care

A unique strength of Biodynamic philosophy is its high valuation and focus on human wellness within the farm system. Though the demands of business often drive farms to be primarily product- and productivity-oriented, a prioritization of human wellness makes space within the business structure for non-productive time that cultivates nutrition, social connection, and relaxation. As was the case in the organization of harvest at Dornach, it can go so far as to shape the business itself around these values that make work more enriching and meaningful for farm employees. The focus on the human element within the business structure sets Dornach apart and demonstrates ways that businesses can actively care for the quality of life of their employees beyond monetary pay. The creation of community within the farm team is mirrored by Karoline's & Patrick's commitment to connecting a wider community to the farm's activities, establishing a wide-reaching network of relationships that is imbued with notions of care, wellness, holistic thinking.

Business vs. Ecology?

Though at Dornach the spiritual-ecological values of mutual benefit and other-than-human care are maintained to a high degree, there inevitably arise points of friction between anthropocentric motivations and ecological motivations. Anthropocentric motivations often arise due to the business imperative to generate income. A farm business must therefore prioritize the quality and viability of its sellable crop, as well as its processing and its distribution into markets--even when they entail negative impacts on farm ecology and the wider environment. This raises the difficult ethical question regarding rights to land use and our ethical obligations to the landscapes and non-humans that we disturb in our cultivation.

In considering this issue, Shotwell illuminates that we are, “all living after events that have changed, and frequently harmed, ecosystems and biospheres” (Shotwell, 2016). The land upon which we live, work, and derive our sustenance is long since impure and altered from its native pre-human state. We have no choice but to use land--our existence requires food procurement and energy usage, tying all of us into inextricable relations with the world that leave a wake in the lives of others (Heldke, 2018). We are only left, then, with a choice of *how* to engage with our land--in a life-diminishing or life-promoting way. Herein lies the larger principle behind Patrick’s understanding of agriculture-as-compromise: that there is no such thing as “pure” farming. Agriculture is a human activity performed for the satisfaction of our human needs, and in doing so we disturb the landscape and replace it with one of our own design. But, in going about using our land, we have the ability to choose to go about it in a way that allows for the simultaneous flourishing of as many other lives as possible.

Our impact on the land is inevitable. Therefore, as Patrick explained to me, “we must understand sustainability not as a destination, but a goal to always move toward.” Sustainability, in its popular conception, for a productive farm operating at scale in the modern economy is nigh impossible: despite one’s cultivation of biodiversity or reduction of inputs, they still rely to some extent on fossil fuels, plastic materials, and water usage. All a business can do, as Patrick expressed, is consider its values, remain conscious of its impact on the environment, and make incremental steps toward sustainability using the resources it has available.

But this remains just one perspective in much larger discussions around ethical land use and non-anthropocentric rights of nature, regardless of economic pressures. Though these are beyond the scope of this paper, the story of Dornach illuminates the complex ethical dilemmas that Western farm businesses face when balancing competing human and non-human values. What this paper does highlight is an example of how a grounding in spirituality can lead farmers to hold the value of human and non-human wellness alongside economic imperatives, and spur them to great efforts to align them in mutual becoming.

Conclusion

Biodynamics is a spiritually-informed agricultural methodology, which embodies notions of interconnectedness and mutual well-being in its practices in the farm-as-organism concept. In cultivating a farm that resembles an ecosystem, Biodynamics simulates a self-sustaining symbiotic system in which the lifeways of each organism feed into and support those of the others. Such a form of agriculture, which

marries spirituality, philosophy, and food production is rare in the modern Western world, and offers many farmers a way to incorporate their spiritual life into their agricultural practice and embody a sense of oneness in their relations with other people, their land, and the larger natural world. This meaningful connection and sense of place within the web of life goes on to inform practices based upon a high valuation of well-being, both human and non-human, creating a more sustainable and health-promoting farm system.

Biodynamics has a controversial reputation in the scientific and popular spheres due to its spiritual nature and practices. However, the criticisms lobbied against it are aimed primarily at its use of un-scientifically validated “preparations” or the background theory of Rudolf Steiner regarding cosmic and energetic effects on plant growth. But the four farmers I interviewed in this study regarded the importance of commonly-maligned targets as secondary. To them, the primary quality of Biodynamics is its correlation with, and expression of, an underlying notion of oneness and holistic well-being. It serves as a medium which translates their philosophical beliefs into practices that manifest on-farm as an reciprocal, abundant, nurturing farm ecosystem. Thus, beyond the name of the method or the specific teachings of the founders, the key attribute of Biodynamics is its ability to imbue agricultural practice with spiritual meaning and life affirmation.

At Ansitz Dornach, with care for the well-being of the humans and non-humans of the farm as a high priority, farm and business practices follow which aim to cultivate a flourishing of life for all farm organisms. But economic and ecological motivations often find themselves in conflict, forcing the farmers to a point of compromise that either harms non-human organisms or limits business productivity. Rather than a short-term,

zero-sum way of thinking, the farm operates with a long-term view that embodies the belief that well-being is mutual and reciprocal. The compromise between business and ecology is a calculation made by the farmer of mutual benefit that factors the human element, long-term sustainability, and larger-scale cultural impact.

Such a shift in consciousness, for any business, is radical because it directly counters the capitalist mindset that prioritizes personal gain as the highest virtue. Conventional agriculture, which has greatly contributed to ecological destruction and the climate change that we now experience, is constructed on economic priorities as such. A symbiotic, life-affirming mindset, which correlates both to ecological and spiritual principles of oneness, interconnectedness, and mutual wellness, cultivates food not at the expense of life but by the proliferation of many lives. It challenges the fundamental value system of capitalism and returns value to life for its own sake. The transition from economic to biophilic value systems is challenging and puts farmers in the middle of difficult ethical dilemmas. But it is an unavoidable requirement as we attempt to reorient our culture away from anthropocentrism and back towards our place within the web of life on Earth. A spiritual shift that understands the human as part of the web of life, and understands our wellness as the wellness of the whole, is the critical first step in repairing this relationship and leading us into healthier life-promoting interbeing with our land.

Limitations & Future Research Potential

This study was limited in scope, only representing one agricultural approach, the perspectives of four farmers spanning two farms, and one small region of Italy. There is

much room for future research potential around this topic. Study could be broadened to a wider range of Biodynamic practitioners working at different scales and expanded to other regions, countries, and continents. Other forms of agriculture, both spiritually-derived and secular, could be examined to better understand the correlation between philosophical underpinnings and agricultural applications. The application of indigenous cosmologies and agricultural frameworks is an important perspective to include to offer alternative ways of knowing and conceptualizing human-Nature relations, especially in consideration of the ethical dilemma between business and ecology.

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