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Decolonizing Nature? Dominant Worldviews and Worldviews of Agroecological Farmers in Germany to Address the Global Environmental Crisis

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Note on Terminology

"Decolonizing Nature? Dominant Worldviews and Worldviews of Agroecological Farmers in Germany to Address the Global Environmental Crisis" – the title of the thesis already illustrates its dilemma at core, which consists in the use of an inherently dualistic terminology that resonates with colonial anthropocentric concepts and thus reproduces the separation of humans and nature in question (Redecker & Herzig, 2020: 659; e.g. 'Nature'; 'Environmental Crisis'). Besides the effort of choosing words as sensitively and inclusively as possible, dealing with the lack of linguistic alternatives within Western cultures and their languages (Moore, 2015: 5-7), among them English and German, requires both a constant awareness and a questioning of the used vocabulary's potentially underlying dichotomous, anthropocentric and categorizing connotations.

“Imperialism leaves behind germs of rot which we must clinically
detect and remove from our land
but from our minds as well.”

–Frantz Fanon, *The Wretched of the Earth*

1. Introduction

The list of current crisis dynamics and global challenges is overwhelmingly long: the Corona crisis, the climate crisis, species extinction, flood disasters, wildfires, poverty and famine – to name only a few. According to Jason Moore, these crises are neither convergent nor multiple, but singular and manifold, agreeing with Fritjof Capra that the world's crises are unified through a “crisis of perception”. This crisis in turn stems from the fact that we, as a Western modern society, apply an actually outdated worldview to a reality that has outgrown the concepts contained therein (Moore, 2015: 3-4; Capra, 1984: 15-16). Central to this worldview (i.e. the modern/Western/Newtonian/Cartesian worldview) and thus directly implicated in the vast violence, injustice, and oppression of modernity in its core, is the binary of nature and society.

For this dualism enables the view of nature as external, quantifiable and rationalizable. The detachment of humans from nature is not only a crucial condition for capital accumulation but also intricately entwined with modernity's knowledge structures (i.e. the logic of contradiction and the semantic construction of binary opposition (Mignolo & Walsh, 2018: 154-155)), its prevailing power relations, its status of re/production, prosperity, as well as modern human behavior patterns towards their environment (Moore, 2015: 2-3). Hence, what the world faces today “is not a crisis of capitalism *and* nature but of modernity-*in*-nature. That modernity is a capitalist world-ecology.” (Moore, 2015: 4, emphasis in original). The concept of modernity as it is used in this thesis, refers to a rational and science-driven perception of the world that entails a dualist framing – which Moore refers to as the Cartesian binary (Moore, 2015: 21) – and is further characterized by the beliefs in progress, growth, and secularism (Mignolo & Walsh, 2018: 106 et seq.). Ergo, it is “neither an entity nor an ontological historical period, but a set of self-serving narratives [...] a construction made by actors, institutions, and languages that benefit those who built the imaginary and sustain it, through knowledge and war, military and financial means” (ibid.: 110).

The darker side of Western modernity with its auspicious narratives of salvation, progress and development is revealed by the concept of coloniality, which is not derivative but constitutive of modernity as “there is no modernity without coloniality” (ibid.: 4; 107). The concept of coloniality, was first introduced by Aníbal Quijano in the late 1980s, yet it has a history and praxis of more than 500 years for it was established “by a selected community of humans of a given religion (Christianity), in a continent called Europe and around the fifteenth century, in the process of defining themselves as humans” (ibid.: 6; 16; 153). As a matrix of power, coloniality today touches all aspects of life through its three pillars upon which the colonial differences built, i.e. racism, sexism and last but not least the invention of the concept of nature (ibid.: 10, 159). Its *modus operandi* involves the destruction and denial of worldviews, knowledges, beings, spirituality, lands, ways of thought and (cosmo-)existence, social cohesion and everything else, that threatens to impede its way (ibid.: 15-16).

Considering the further worsening global challenges of the 21st century, it seems appropriate to assume that Western states are no longer in control of the monster (i.e. the

colonial matrix of power) they created and that “the universalized model or paradigm of the West is crumbling before our very eyes” (ibid.: 10;15). Previous patterns of action are no longer effective in solving systemic crises. These patterns have mainly supported human technocratic phantasies of omnipotence by developing ever more innovations that have made it possible to exploit nature (including human nature) in yet more powerful ways and to enjoy its “free gifts” on the cheap. The failure of those strategies that perpetuated capitalism over the last 500 years now indicate a pending change of epoch (Moore, 2015: 1).

With coloniality-capitalism arriving at such pivotal point, resurgences, shifts, and movements towards a decolonial otherwise increase in number and significance (Mignolo & Walsh, 2018: 16). Decolonial thinking and doing intend to disengage from the epistemic assumptions valid within all areas of knowledge of the Western world since the 16th century. This goes beyond offering resistance against the West’s global model and rather aims at *re-existence*, which refers to the endeavor to redefine and reorient the praxis of living in conditions of dignity (ibid.: 3; 106, emphasis in original). How to move beyond the vicious binary of nature and society/culture/human – Western concepts that have been established as ontologies and hence make no sense beyond Western cosmology – is a crucial decolonial question (ibid.: 160; 161; 164).

However, decoloniality and a decolonial pluriversal perspective does not negate Western thought *per se* but understands it as integral (Litfin, 2003; Moore, 2015, Escobar, 2020); nor does it “imply the absence of coloniality, but rather the ongoing serpentine movement toward possibilities of other modes of being, thinking, knowing, sensing, and living; that is, an otherwise in plural” (Mignolo & Walsh, 2018: 3; 81). Such a perspective is particularly important for this thesis as it helps to reduce the risk of viewing decoloniality from the *outside* of the colonial matrix of power (CMP) only, which would not only diminish the spheres of action, but would “also blind eyesight of the decolonial cracks that exist within this matrix and system and that, in essence, complement and push toward the edges and borders” (ibid.: 82). These cracks and fissures within “Western Christian civilization as spaces, places, and possibilities of and for decolonization” (ibid.) are the focus of interest for the empirical part of this work for it scrutinizes agroecological farmers’ worldviews and in particular their conception of nature in Germany, which implies such Westernized cultural context.

A culture’s agriculture is highly expressive of its fundamental metaphysical beliefs and values (Callicott, 1988: 3), and represents a cornerstone of human-nature interaction as it signifies peoples’ diverse conceptions regarding themselves and their relationship towards their environment (ibid.). Thus, modern industrial agriculture constitutes the epitome of the Western model and Cartesian paradigm, while agroecology presents a counter-draft, supposedly resting upon an alternative worldview that is based on a radically different human-nature relationship (De Schutter, 2017; Anderson et al., 2021: 4). While proposing an assemblage of alternative farming principles (Nicholls et al., 2017), agroecology is further considered a new paradigm facilitating the emergence of an alternative food system which draws its transformative potential in terms of responding to both environmental and social challenges essentially from the renegotiation and alignment of this very fundamental relationship (Gliessman, 2016; Oehen et al., 2015).

Moreover, agroecological and food justice movements demand a “shift towards a radical ontological politics *beyond* capital” (Moore, 2015: 276, emphasis in original) impending to undermine universally acknowledged points of agreement regarding the ontology of value and nature within the modern world-system (ibid.). Globally speaking, such political movements are still rather restrained in the Global North (ibid.: 289). In fact, insights into cultural beliefs and practices of agroecological farmers in Western Europe are scarce.

This thesis thus explores the worldview of agroecological farmers in Germany to identify how they conceptualize their relationship with nature and whether new connections to people are implied as well. Thereby, it tries to detect key concepts of a worldview that might be able to transcend the human-nature dichotomy and serve as an inspiration for a more sustainable agriculture. More specifically, it seeks to answer two overriding questions:

- (1) How does the worldview of agroecological farmers in Germany make use of a decolonized perspective in order to reconstruct their relationship to nature?
- (2) Which place do farmers perceive for themselves in their environment regarding important societal challenges such as climate change?

In its first part, the thesis retraces the historical foundations of the Western worldview dating back to the 16th century and discusses the consequences of its application to agriculture including the arising limitations of such approach. Subsequently, various ontological principles and philosophical perspectives underlying alternative worldviews are presented and synthesized in an attempt to move beyond the Western model with its colonial concept of nature. Such outlines of an alternative metaphysic – drawing on *evolutionary idealism*, *radical relationism* and *Gaia theory* – can serve as guidelines for a different model of environmentalism and can thus be an ally for environmental justice struggles and further help to develop a decolonial view of nature (Muraca, 2016: 19). Agroecology is then scrutinized for its transformative potential regarding the development of a worldview that might transcend the human-nature dichotomy and foster the realignment of social-ecological relationships. Thereby, a recourse to some crucial concepts from environmental sociology sets a first epistemological basis for the empirical part of the study. The role of agricultural narratives and metaphors for investigating key concepts of the farmers' cosmovisions together with their ethical value and morally directive function are outlined before the rationale of the study in form of ontological and epistemological assumptions and principles as well as the concrete methods of the case study are delineated in the methodology section (Chapter 3).

The thesis then presents a qualitative reconstructive analysis of four narratives collected via in-depth interviews with agroecological farmers of one farmer union in Hesse, Germany. The here applied scientific approach, which is based on Jan Kruse's (2015) *integrative basis procedure (Integratives Basisverfahren)*, rests on the reconstructive research paradigm that equally transcends the Cartesian paradigm with its positivist and objectivist posture. Assuming that the social reality is constructed through linguistic and non-linguistic actions (Kruse, 2015: 472), the study's interest lies in the reconstruction of agroecological farmers' subjective patterns of interpretation and their worldviews, particularly with regard to their conceptions of nature and the concomitant self-world relations. In a concluding discussion, the results are interpreted against the background of the conceptual framework in an attempt to answer the research questions.

Attention has to be given to one's "own *inner eyes*, what [the decolonial feminist thinker Sylvia] Wynter called the classificatory lens and logic that put limits on how we can see, know, and act on and with respect to the local, national, global order" (Mignolo & Walsh, 2018: 17, emphasis in originals). The consequential dilemma of my writing as a white privileged woman without partially reproducing the dominant modern structure has to be recognized and accepted for its insolvability (ibid.: 20-21). My stance demands a constant reflection of my own socialization and relation with Western thought. My intention is to think *from and with* (not only *about*) subjects, which "advance other ways of being, thinking, knowing, feeling, and living [...] that interrupt, transgress, and fissure or crack modernity/coloniality's matrices of power, and make evident concrete instances and possibilities of the otherwise" (ibid.: 20). However,

decoloniality should not be considered “an individual attribute, or a lineal point of arrival or enlightenment [...] [but] seeks to make visible, open up, and advance radically distinct perspectives and positionalities that displace Western rationality as the only framework and possibility of existence, analysis, and thought” (ibid.: 17).

Investigating the ontological basis for the practice of agroecology in the Western European context can reveal fundamentals to foster the agroecological transition and further render insights regarding the role agroecological farmers want to play in the wider food, political and environmental system. Their standpoints and perspectives can also fuel hope during these times of crisis and inspire a new metaphor for the human species’ earthly existence which could help to set in motion a cognitive transformation at the level of a whole society by raising awareness for the troubled systems and by calling predominant models into question (Hirsch & Norton, 2012: 319).

2. Agriculture and the Environmental Crisis

Agriculture implies both, human use of nature and people's dependence on the earth (Sanford, 2011: 284). This use of the earth through agricultural practices, have always had some – at least temporary – transformative effects on nature. Evidence from environmental history, paleo-ecology and archaeology even indicates that diverse forms of land use such as hunting, foraging, land clearing and agriculture led to severe transformation of terrestrial ecosystems already more than 3,000 years ago (Ellis et al., 2013: 2978). However, according to most global change scientists, these early anthropogenic changes are described as localized and rather insignificant in comparison with current global changes of the earth system (ibid.).

The world agri-food system, based on modern industrial agriculture, intensified and enlarged these effects to a degree where it renders itself at the heart of the global environmental crisis (Callicott, 1990: 37; van der Ploeg, 2006, Springmann, Clark, Mason-D'Croz et al., 2018). While Litfin (2010) exposes this environmental crisis as “a creeping megacrisis, in which the exponential expansion of human populations is coupled with even greater increases in consumption” (p. 117), Levins (2006) detects a pattern of the single intertwined crises, humanity is currently facing, and calls it the “eco-social distress syndrome (EDS)” (p. 35). The term refers to

a pervasive and intensifying dysfunctional relationship between our species and the rest of nature, expressed in increasing demand on depleting resources, pollution, new and resurgent diseases, climate change, growing inequality, increased vulnerability to disasters of all kinds, loss of biodiversity, the erosion of productive systems, and recurrent conflict within our species. (ibid.)

As noted by the Millennium Ecosystem Assessment in 2005 already, agriculture contributes to biodiversity loss and the destabilization of ecosystem functions more than any other single human activity. At the same time, no other human activity is as basic and central as food production since it is essential to collective and individual sustenance (Callicott, 1988: 3; Litfin, 2011: 425). As human activities, including agriculture, are not only expressions of human nature but culturally deeply embedded, “a culture's agricultural *motif* and *esprit* are especially revealing of its fundamental metaphysical beliefs and moral and aesthetic values [...] A culture's deepest beliefs are manifest in these activities.” (Callicott, 1988: 3, emphasis in original). Modernity's or Western culture's beliefs are further expressed in its “emblematic faith in technology, the doctrine of progress, the centrality of instrumental reason, the sanctity of individual freedom, the denial of the sacred” (Litfin, 2003: 30); all of which have been identified as “sources of an environmentally destructive cultural tendency” (ibid.). These beliefs and alleged causes of our complex crisis are rooted in the same ‘philosophy’, which is known as the Western/secular/mechanistic worldview or the Cartesian paradigm, which guides both our perceptions and actions (Kirschenmann, 2005). Hence, the physicist Fritjof Capra declares the basic thesis of his book *The Turning Point. Science, Society and the Rising Culture* (1984) to be that the different crises of society pose different facets of the same crisis that for him is essentially a crisis of perception, which “derives from the fact that we are trying to apply concepts of an outdated world view – the mechanistic world view of Cartesian-Newtonian science – to a reality that can no longer be understood in terms of these concepts” (Capra, 1984: 15-16).

2.1. The Western Worldview and Shifting Paradigms

The origins of the Western worldview and its value system that create the basis of today's Western or modern culture can be traced back to the 16th and 17th centuries, a time when people's picture of the world and their entire way of thinking started to change dramatically. A whole new mentality and perception of the cosmos arose out of the Scientific Revolution in the 17th century and was further shaped and reinforced by the Industrial Revolution in the 18th century (Capra, 1984: 53; Kirschenmann, 2005, Mies & Shiva, 2014).

In pre-modern times prior to 1500, the dominant worldview in Europe can be described as organic since people "experienced nature in terms of organic relationships, characterized by the interdependence of spiritual and material phenomena and the subordination of individual needs to those of the community" (Capra, 1984: 53). The scientific framework of this view was basically built on Aristotle's natural philosophy and Christian theology and has not been questioned throughout the Middle Ages. Thus, being based on faith and reason, the nature of medieval science aimed to grasp the meaning and significance of things – standing in stark contrast with contemporary science, seeking for prediction and control (ibid.).

The Scientific Revolution with its cutting-edge achievements in physics and astronomy, brought along crucial changes by replacing this notion of an organic, living, spiritual universe with the metaphor of the world as a machine. The starting point of the revolution was laid by the astronomer Nicolas Copernicus (1473-1543), who substituted the geocentric model of Ptolemy and the Bible with the heliocentric view. These findings had severe implications for religious consciousness of the time as "man was robbed of his proud position as the central figure of God's creation" (ibid.: 54). What was formulated as a mere hypothesis by Copernicus and supported by Johannes Kepler (1571-1630), was turned into a valid scientific theory by Galileo Galilei (1564-1642). He is considered the father of modern science as he was the first to integrate an empirical approach of scientific experimentation with mathematics in order to describe nature. On his mission to describe nature with mathematical language, Galileo suggested to restrict the research to material objects and their quantifiable and measurable properties, which implied the exclusion of any other properties, such as color, sound, smell and taste from science for they were considered to be subjective mental projections only (ibid.: 55). This distinction of objective and subjective qualities builds the basis of what the philosopher Alfred North Whitehead (1861-1947) later calls the "*theories of the bifurcation of nature*" (Muraca, 2016: 22; emphasis in original). Thus, experience was precluded from nature in order to construct "nature" as the object of natural sciences, which poses a "highly abstractive representation of human-nature relations that does not correspond to the way in which most people would probably frame their experience, which is structurally value-laden (or, better, value-oriented)" (ibid.: 23).

Before Francis Bacon (1561-1626), science generally pursued the development of a profound understanding of nature to live in harmony with it. Bacon saw less value in the mere study of nature and the related 'ecological' attitude of scientists with their integrative purposes. Thus, the "Baconian spirit" turned this attitude into the opposite, namely from integration to self-assertion. The goal of science became the generation of knowledge that would enable the human species to dominate and control nature and to invent technologies that could modify the world according to people's largely anti-ecological desires (Capra, 1984: 55-56; Kirschenmann, 2005). Bacon's well-known aphorism "knowledge is power" and other more violent metaphors he employed in his writings about nature – such as making the nature a slave and torturing secrets from her – contributed to the further transformation of the ancient concept of the nurturing Mother Earth into the patriarchal metaphor of the world as a machine (Capra, 1984: 56; Mies & Shiva, 2014).

René Descartes' (1596-1650) belief in the certainty and absolute truth of scientific knowledge constitutes the fundament of Cartesian philosophy that has become characteristic of Western culture and is still reflected in today's scientism (Capra, 1984: 57). Descartes' analytic scientific method, which "consists in breaking up thoughts and problems into pieces and arranging these in logical order" (ibid.: 59) has been one of the greatest contributions to science and remains extremely valuable.

However, the limitations of this method of thought were at first overseen which has resulted in a fragmented way to see the world and in a reductionist scientific approach, referring to "the belief that all aspects of complex phenomena can be understood by reducing them to their constituent parts" (ibid.). Descartes' famous statement "*Cogito, ergo sum*" ultimately results in the Cartesian division of mind and matter as two independent and separate realms, "*res cogitans*, the 'thinking thing,' and that of matter, or *res extensa*, 'the extended thing.'" (ibid.: 60; emphasis in original). The natural sciences were exclusively occupied with *res extensa*, which reinforced the picture of the world as a machine with "no purpose, life and spirituality in matter. Nature worked according to mechanical laws, and everything in the material world could be explained in terms of the arrangement and movement of its parts" (ibid.). This mechanical view on nature turned into the dominant scientific paradigm for the next three centuries until the modern physics changed everything again in the 1920's.

Descartes expanded his mechanistic view to living organisms, whereby plants, animals and human bodies were nothing but automata, the latter connected with a rational soul (ibid.: 61). With the "mechanization of the human intellect" (Kirschenmann, 2005), Descartes not only provided the matching philosophical framework for Bacon's technological transformative visions, he also shared Bacon's endeavor to become masters over nature through scientific knowledge (Capra, 1984: 61, Kirschenmann, 2005). They further agreed on the assumption "that it was possible (indeed *necessary*) to *separate* subject from object, mind from body, conscious from unconscious, fact from value, and human from nature" (Kirschenmann, 2005; emphasis in original). The belief that certainty in knowledge can be achieved *only* via such separation became central to the Western worldview and science and is also referred to as the doctrine of separation that "taught us to see the world in *fragments* instead of *relationships*" (ibid.; emphasis in original). This shift had crucial and far-reaching consequences that shape our modern life – including modern agriculture – until today (ibid.).

Isaac Newton (1642-1727) finalized the Scientific Revolution with his development of a complete mathematical formulation of Descartes' mechanistic view on nature "and thus accomplished a grand synthesis of the works of Copernicus and Kepler, Bacon, Galileo, and Descartes" (Capra, 1984: 63). Newtonian physics, which basically reduced all physical phenomena to the force of gravity, reinforced the metaphor of the world as a perfect machine, which was assumed to be completely causal and determinate as governed by immutable laws. Yet, the Newtonian view still "implied an external creator; a monarchical god who ruled the world from above by imposing his divine law on it [...] [even though] [t]he physical phenomena themselves were not thought to be divine in any sense" (ibid.: 66). However, the scientific achievements increasingly raised doubt in the divine until it "disappeared completely from the scientific world view, leaving behind the spiritual vacuum that has become characteristic of the mainstream of our culture" (ibid.). This secularization of nature originating from the Cartesian division between spirit and matter, rendered the objective description of nature the ideal of all science (ibid.).

John Locke (1632-1704) together with other thinkers of the 18th century transferred the principles of Newtonian mechanics to the sciences of human nature and society. Due to his atomistic view of society and the belief in a rational approach to human problems, Locke became the pioneer of the age of Enlightenment. By trying to apply the principles of human

nature to economic and political problems, he derived ideals such as individualism, property rights and free markets and hence is generally considered the father of liberalism (ibid.: 69). As a consequence, “the modern mechanical mind portrays society as *nothing but* an aggregate of individuals – or social atoms” (Callicott, 1990: 42; emphasis in original). The major ideals of the Enlightenment, such as reason, progress and liberty were collectively expressed through notions of popular sovereignty and self-determination (Litfin, 2003: 38). Furthermore, the ‘enlightenment’ thinking created the basis for the emergent discipline of sociology for the common assumption that human society poses an exceptional case in nature due to their development of culture (Guzmán & Woodgate, 2015: 9). Accordingly, “human culture changes more rapidly than nature’s biology and thus progress can continue unchecked because, ultimately, all social problems can be resolved through cultural adaptation. In other words, human culture exempts societies from ecological structures that shape the natural world” (ibid.). Catton and Dunlap (1978) termed this phenomenon the *Human Exemptionalist Paradigm* (HEP), that underlies most theories of development and also agrarian modernization theories in the second half of the 20th century (as referred to in Guzmán & Woodgate, 2015: 9).

In the course of the 19th century, the mechanistic model of the universe was further developed and elaborated by the work of scientists of almost every discipline – from physics, to biology, to psychology and the social sciences. Simultaneously, new discoveries such as Maxwell’s theory of electromagnetics and Darwin’s theory of evolution were made, which initiated a new way of thinking. For the first time since the beginning of the Scientific Revolution in the 17th century, limitations of the Newtonian model were disclosed (Capra, 1984: 69-75). Despite these innovative discoveries, Newtonian mechanics remained the basis for all physics until the beginning of the 20th century, even though it was dethroned as the “ultimate theory of natural phenomena” (ibid.: 70).

Albert Einstein’s theories of relativity and atomic phenomena – culminating in quantum theory – initiated another revolution of scientific thought and marked the beginning of modern physics as it “shattered all the principal concepts of the Cartesian world view and Newtonian mechanics [...] [such as] [t]he notion of absolute space and time, the elementary solid particles, the fundamental material substance, the strictly causal nature of phenomena, and the objective description of nature” (ibid.: 74). The worldview that logically emerged from modern physics can be described as a systems view and is associated with similar adjectives as the dominant pre-modern worldview, i.e. organic, holistic, and ecological since “[t]he universe is no longer seen as a machine, made up of a multitude of objects, but has to be pictured as one indivisible, dynamic whole whose parts are essentially interrelated and can be understood only as patterns of a cosmic process” (ibid.: 78). The fundamental conceptual elements of nature were considered as relative, mutually defining and structurally integrated and subject and object could therefore no longer be viewed as separated, but inextricably bound up with each other (Callicott, 1988: 6).

The mechanistic paradigm was thus repressed as an intellectual scientific paradigm in theoretical physics within the scope of Thomas Kuhn’s use of the term. A ‘paradigm’ for Kuhn (1962), on the one hand refers to

the entire constellation of beliefs, values, techniques, and so on shared by the members of a given community. On the other, it denotes one sort of element in that constellation, the concrete puzzle-solutions which, employed as models or examples, can replace explicit rules as a basis for the solution of the remaining puzzles of normal science. (p. 175)

Kuhn (1962) further claims that “[p]aradigms gain their status because they are more successful than their competitors in solving a few problems that the group of practitioners has come to recognize as acute” (p. 23). Due to the revolutionary findings of modern physics in the early 20th century, the Newtonian mechanistic paradigm lost such status and hence a paradigm shift occurred in the respective scientific realms. However, a paradigm shift as defined by Fritjof Capra (1984) as “a profound change in thoughts, perceptions, and values that form a particular vision of reality” (p. 30) has not yet taken place in many other realms that are constitutive of Western society – besides physics. Capra broadens the concept of the scientific paradigm towards a more general intellectual paradigm, which is constitutional of nature, culture and society (Callicott, 1990: 42; Capra, 1984: 30-31). He sums up the main values and properties of the dominant paradigm of Western culture as the

belief in the scientific method as the only valid approach to knowledge; the view of the universe as a mechanical system composed of elementary material building blocks; the view of life in society as a competitive struggle for existence; and the belief in unlimited material progress to be achieved through economic and technological growth. (Capra, 1984: 31)

These familiar features of Western modern culture imply that even though the mechanistic Cartesian worldview was no longer a viable paradigm, it maintained a strong influence on Western (scientific) thinking. It remains important to note that modern physics did not discount Newtonian physics in its essence and declared it to be completely and generally wrong but rather came to realize that all scientific theories can only be approximations to the true nature of reality and that none is able to represent a complete account of all natural phenomena (ibid.: 101). Hence, Newtonian physics was capable to depict “a middle range of reality” (Callicott, 1990: 41).

While Newtonian physics had indeed to be abandoned in atomic and subatomic physics as well as in astrophysics and cosmology, in other fields the problems arose less from the application of Newtonian physics to other phenomena but rather from “the application of the mechanistic world view on which Newtonian physics is based” (Capra, 1984: 102). Since this mechanistic worldview evolved to serve as a model and template for thinking about basically everything, mainstream agricultural thought has adopted the Cartesian worldview as well and thus agriculture has been modeled after the concepts and theories of Classical Mechanics, resulting in today’s “conventional” industrial agriculture (Callicott, 1990: 42). As different and more integrative forms of agriculture prevailed not all too long ago, industrial agriculture can be titled “conventional” only from an ethnocentric and historically myopic point of view (Callicott, 1988: 4). The consequences of the application of the mechanistic worldview to agriculture and the arising limitations of such approach will be discussed in the following.

2.2. The Influence of Cartesian-Newtonian Thought on Agriculture

For Callicott (1988), “[i]ndustrial agriculture is precisely the translation of Classical Mechanics – the reigning Western paradigm from approximately the seventeenth century – into an agricultural vocabulary” (p. 4). Accordingly, the soil is treated as nothing more than a physical substrate, a mechanical medium, providing space and mechanical support for nutritious plants, which were considered nothing but complex assemblages of simple elements (ibid.: 5; Callicott, 1990: 41). The mechanical perception and the process of growing food basically encompasses the addition of nutrients, such as nitrogen, phosphorus and potassium to the soil plus water and carbon dioxide, which is provided by the atmosphere. The (potentially engineered) DNA of plant cells is considered a prototype for the production of carbohydrates, which in turn serve as energy providers or building materials for agroanimals and ultimately humans. Like on an assembly line, the processes are broken down to the smallest steps and the “[p]roducts are standardized; scale is magnified; and crops are specialized and monocultured. Machines and synthetic compounds are mixed with sun, soil, water, and organisms at every stage of production, from soil preparation and planting to food processing and serving” (Callicott, 1988: 5). Agricultural goals, such as increases in yield, the containment and the control of pests and pathogens, the maintenance of fertility etc. were believed to be achievable “Cartesian-style, by finding a separate solution for each and summing the results” (Callicott, 1990: 41). Thus,

[t]he factory-style intensive rearing and genetic engineering of farm animals epitomizes the reductive, mechanical paradigm. In it animals are treated as meat, milk and egg producing Cartesian automata and the production *problematique* is divided, following Descartes’ *Discourse on Method*, into its simplest elements, linearly ordered, and integrally summed. (ibid.: 48; emphasis in original)

Justus von Liebig’s historic publication *Chemistry in the Application to Agriculture and Physiology* from 1840 serves as an ideal and early example of the adoption of the mechanical worldview to agriculture. Von Liebig argued that the labor-intensive nutrient cycling practices can be replaced with the application of chemical fertilizers, by which he inspired farmers to abandon the mixed farming practices, which integrated livestock and organic manure into their farming systems and to rather turn towards a specialized production of a few high-value crops (Kirschenmann, 2005).

The resulting massive use of chemical fertilizers and pesticides during the 20th century transformed the fundamental structure of agriculture and farming. The age-old practice of ecological farming was suppressed in favor of ‘modernization’, which involves a whole series of transitions, namely from labor-intensive to capital-intensive; from heterogeneous to homogeneous; from small to large-scale; from subjection to nature to domination of nature; from what was considered superstition to the sole validity of Western science; and from the production of food to the production of commodities (Levins, 2006: 38). Any arising problems resulting from these transformations were attributed to the cost of progress and further believed to be solved by applying the same means that caused them, i.e. more investment, more chemical tinkering, more genetic engineering etc. (ibid.; Callicott, 1988: 6). The increasing demand of synthetic products opened immense markets for the oil companies and thus the petrochemical industry became a powerful multibillion-dollar business, trying to convince more farmers to use ever more chemicals (Capra, 1984: 253-254).

The immediate effect and initial success of the new farming methods in form of an impressive improvement in agricultural production led farmers to adopt narrow notions of

efficiency and blinded many of them to the downsides of these capital-intensive farming methods (ibid.). Overlooking the fact that productivity is not the same as social and ecological efficiency and the belief that progress can only follow the pathway from less developed to more developed became distinctive characteristics of the new era of chemical farming, which became also known as the “Green Revolution” (ibid.; Levins, 2006: 38). As part of this approach, the remarkable achievements of the petroleum-based agricultural technologies in the advanced capitalist economies engendered the promotion of agricultural modernization in the Global South. With the proclaimed goal to increase international food production, various international institutions and policy programs ultimately “contributed to the reproduction of First World development models of a modern agriculture sector generating surplus capital for industrial development” during the third quarter of the 20th century (Guzmán & Woodgate, 2015: 7).

The new style of farming privileged big corporate farmers and eventually led to what McMichael (2009) termed the ‘corporate food regime’, which “has concentrated land ownership through dispossession in the search of economies of scale, marginalizing smallholder agriculture and provoking large scale rural to urban migration” (as referred to in Guzmán & Woodgate, 2015: 8). Most farmers, who were able to stay on their land, had to acknowledge a fundamental shift of their role and image for it turned from “growers of edible foods, taking pride in feeding the world’s people [...] into producers of industrial raw materials to be processed into commodities designed for mass marketing” (Capra, 1984: 255). The techniques the farmers apply and the decision what to grow or breed in the first place is no longer based on ecological considerations, indications of the land or the demand of the (local) people but is dictated by the market and the giant farming industry, “in which key decisions are made by “agriscientists” and passed on to “agribusinessmen” or “farming technicians” – the former farmers – through a chain of agents and sales people” (ibid.).

Due to these developments, consumers became not only more and more alienated from the land as the origin of products but further became increasingly exposed to health hazards arising from the poisonous agricultural chemicals themselves as well as from the concomitant losses of nutritional value and impairment of the taste of food for the benefit of quantity in yield, resistance to transportation and a long shelf life (Levins, 2006: 40).

At the same time, industrial agriculture continues to have detrimental effects on the natural environment as it firmly undermines the soils inherent productive capacity through erosion, compaction, salinization, acidification, and the loss of trace elements (ibid.). It further leads to the agrochemical pollution of air, surface and ground waters and causes immense losses of bio- and genetic diversity, which threatens fundamental ecosystem functions (Callicott, 1988: 6). Over time, a series of changes have been unleashed, such as climate change, biodiversity loss and land degradation, that

has now severely damaged the *resilience* of ecosystems – the level of disturbance that an ecosystem can undergo without crossing a threshold to a different kind of structure or functioning. So not only have we degraded the productive capacity of the planet, we have also undermined the planet’s capacity for self-renewal and self-regulation. (Kirschenmann, 2005; emphasis in original)

Taking these transformations in the socioeconomic, the productive and ecological as well as sociocultural and political dimensions caused by the capitalist agricultural industrialization into account, it seems fair to say that it “represented a new form of colonialism in which modernization impoverished everything that did not follow the norms and rules that modernity dictated” (Guzmán & Woodgate, 2015: 10). Furthermore, the disastrous effects for the health

of the soil, the people, for the social relations and the entire global ecosystem indicate that when modern agriculture is submitted to critical scrutiny – the characteristic principle of the scientific method and modern worldview – it “passes neither test, neither reality check. Notoriously it is not working, at least not sustainably. And it is based upon a bankrupt metaphysics, a world view that has not withstood critical scrutiny and that is, in fact, dead in pure science, even though it lives on in applied science” (Callicott, 1990: 40).

Similar to Thomas Kuhn’s (1962) revolutions of scientific paradigms, “a crisis occurs when developments in the world undercut the credibility, and thus the legitimacy, of the traditional story” (Litfin, 2003: 29). This traditional story – its metaphors and narratives of conquering nature and manipulating parts of a machine – which emanated from the Scientific Revolution and underlies Western agricultural practices has long been disguised since “agriculture lies within the scientific domain, and science, for the most part, is deemed objective and beyond culture” (Sanford, 2011: 289). Even though the dominant narrative of industrial agriculture is thus presented as natural and inevitable within both the scientific and the ‘feed the world’ discourse, it is only one among multiple options. On this note, the prophecy of the ‘Malthusian collapse’, i.e. a population die-off caused by population growth exceeding agricultural production, seems invalidated by the fact that nearly 6000 calories per capita per day can be supplied through crops directly edible by humans (Berners-Lee, Kennely, Watson & Hewitt, 2018: 2).

Only by acknowledging that stories and their metaphorical and narrative realms are involved in the construction of agricultural and scientific knowledge is it possible to critique these paradigms (Sanford, 2011: 289.). Thus, the conclusion ought not be that the problem arises from science and technology as such and that humanity should revert to a pre-modern worldview and create a pre-technological world (Kirschenmann, 2005; Litfin 2003: 29). The core problem rather grows out of a worldview that was too narrowly conceived causing us “to conduct our research and develop our technologies from inside an intellectual silo that prevented us from seeing anything outside the walls of matter and motion. From this narrow perspective we were blinded to the way the world actually worked” (Kirschenmann, 2005). Accordingly, the machine metaphor and the fragmentation doctrine embedded in the Western worldview compels us “to overlook vital pieces of information about our world – information about relationships, interdependencies and emergent properties – all vital, as it turns out, to economic, social and ecological sustainability (ibid.). The crucial questions of life and their answers do not emerge from accepting the dichotomies by which the world is divided into biological versus social, genetic versus environmental, physical versus psychological, deterministic versus random and so on, nor by ascribing relative weights to them by analysis of variance, but through the rejection of these dichotomies and the focus on their integration (Levins, 2006: 43).

Today, society as a whole finds itself at a similar crisis of legitimation as physicists in the beginning of the 20th century and since this crisis threatens a culture’s entire worldview and the fundamental beliefs about the nature of the cosmos and humanity’s place in it, it unfolds on a time-scale of generations (Capra, 1984: 15; Litfin, 2003: 30). The sharply deteriorating planetary situation, evident through the various crises or – according to Capra (1984) – through different facets of the same crisis, disclose the limitations of the Cartesian worldview and demonstrate that there is an enormous need to move towards a new story and beyond the Cartesian paradigm – especially with respect to agriculture (Kirschenmann, 2005; Litfin, 2003: 33). The emergent agroecology movement reflects and embodies this need and thus “is less a perennial alternative to conventional agriculture than a bellwether of a fundamental paradigm shift in modern Western culture now global in reach” (Callicott, 1988: 4).

2.3. Towards an Organic Paradigm

In the view of the foregoing, the interdependence of biological, psychological, social, cultural and environmental phenomena in a globally interconnected world requires a new vision of reality, in form of a fundamental change of thoughts, perceptions and values – a paradigm shift (Capra, 1984: 16, 78). But how can we move beyond the predominant Western story, the Cartesian Paradigm and a colonized view on nature in order to reorient our mental models and consequential actions toward a participatory embeddedness in the greater whole and steer towards sustainability? How can agroecological farmers in Germany, who are embedded in a Western culture, develop a deviant worldview for them, their practices and their existence in territory and in society?

Even though there is no well-established conceptual or institutional framework for an exhaustive formulation of a new paradigm, there exist outlines of such framework, which are created by certain networks, communities and many individuals, who are trying to promote new ways of thinking and seeking new principles for their organization (ibid.: 265), such as the agroecological movement. Some selected concepts and useful guidelines underlying this new organic paradigm and the corresponding agroecological approach will be presented and partly synthesized in the following section. Since the matter of agriculture and food production in the context of climate change and the Anthropocene depends crucially on (ethical and cognitive) questions regarding the relationship of humans with their environment – “the term *environment* being used in the broadest sense of the word, including everything from social structure to the stars” (Callicott, 1988: 3; emphasis in original) – the following section will center around a few selected concepts attempting to reformulate this peculiar rapport from different perspectives.

2.3.1. The *Integral Worldview* and the *Decolonized View on Nature*

An integral perspective has been developed by Karen Litfin (2003), who draws upon the idealist philosophical tradition to move towards a new story by tracing the outlines of an alternative metaphysic to the Western worldview. The *integral worldview* does neither promote a deconstructive post-modernism nor reverts to a pre-modern worldview, instead it transcends the secular story yet remains still inclusive, i.e. integral of it, while building on “the premise that consciousness is ontologically prior to action” (p. 29). Hence, the integral approach assumes that the interconnected problems of secularism – the ‘global problematique’ – is rooted in a dysfunctional mode of consciousness. Modernity and its understanding of sovereignty, which is based on “the quest for material progress through the mastery of nature, and thus the valorization of human reason and autonomy” (ibid.: 32) is rendered problematic, however is not characterized as a mistake but understood as a developmental stage. Embracing apparently disparate truths and synthesizing them into a bigger and more cogent whole poses a crucial key feature of an integral vision (ibid.).

Further, the *integral worldview* entails a constructivist approach that considers sovereignty to be a historical construct and secularism to be a story as it recognizes the interpretive and intersubjective dimensions of reality as opposed to secular materialism, which “has chronically neglected the internal subjective aspects of reality” (ibid.). Litfin’s integral vision acknowledges both constructivism and materialism as fundamental stages in the evolution of consciousness and thus she characterizes her approach as *evolutionary idealism* (ibid.; emphasis in original). Ontologically and metaphysically, the universe is viewed as the progressive unfoldment of consciousness, which leaves no room for the dichotomies of matter and spirit, subjectivity and objectivity or humanity and nature but rather understands “mind and

matter [...] [as] two dimensions of a single reality that expresses itself in the self-organizing processes of the universe” (ibid.: 33). From the perspective of social and political practice, the ecologically unsound procedures, such as industrial agriculture can be traced back to a deficient human consciousness. Thus, by framing the ecological crisis as a crisis of consciousness, an integral perspective also entails a hopeful component in pragmatic terms, as it not only recognizes humanity’s embeddedness in nature but also accepts the concomitant unique responsibility and human’s special position for committing our individual and collective (un)conscious to finding a new mode of consciousness and ultimately to “close the gap between our knowing and our being” (ibid.: 34). In this way, the *integral worldview* can even help to converge political theory’s focus on collective values with environmental ethic’s emphasis on individual responsibility (ibid.). Since all phenomenal existence is regarded as the unfoldment of Spirit – the key premise of the *integral worldview* – “it makes as much sense to investigate the evolutionary status of social collectives as anything else” (ibid.: 51).

A number of international institutions and transnational social movements – among them the agroecological movement – suggest the emergent recognition of interdependence and the gradual displacement of the prevailing Western story, “[y]et the full acceptance of interdependence has yet to permeate our consciousness and inform our lives” (ibid.: 40). Hence, “[t]he historical mission of our times is to reinvent the human, at a species level, with critical reflection, within the community of life systems, in a time-developmental context, by means of story” (ibid.). The *integral worldview* offers such story “by reintroducing Spirit [in the form of consciousness] into an alienated secular ontology, by including secularism’s story within its own developmental conception of humanity, by integrating the supposed dichotomies of matter and spirit, by postulating an essential oneness between subject and object, and by reconciling rationality with heart and soul” (ibid.: 41). The dialectic logic applied in *evolutionary idealism* as a “movement from fragmentation to integration and from alienation to integration of an omnipresent Spirit” entails an imminent self-generative capacity and thus draws upon Hegel’s idealism, which becomes an important inspiration for systems theory as well as Gaia theory (ibid.: 42), the latter of which will be discussed in the following chapter. When secular ideals, such as possessive individualism and narrow notions of progress and growth, can be reframed within the larger story of *evolutionary idealism*, they do not have to be radically rejected but can rather be accepted as part of the evolution “as a movement from pre-rational to rational to transrational modalities of consciousness [...] [and as] a developmental stage in humanity’s self-finding” (ibid.: 46). The integral perspective exposes secularism’s unbound pursuit of economic growth and technological progress, its capitalist consumption and desire towards mastery of the environment and the domination of nature as an immature expression of a yearning towards oneness in the form of inner mastery and self-transcendence. The unprecedented ecological devastation indicates quite obviously that it is time to transcend the dominating Western story and to grow a consciousness that can evolve towards integrality (ibid.). Litfin supposes that a “worldview that understands nature as sacred, or as imbued with Spirit, would most likely be more ecologically friendly than one that reduces nature to a useful tool for human consumption” (ibid.: 50).

Accordingly, cultural stories, such as the one of the Western worldview, entail an ethical orientation as they convey what kind of behavior is deemed morally acceptable. Again, the predominant global problems, such as global injustice as well as the finite nature of resources, point to the inappropriateness of anthropocentric utilitarianism, which has been the prevalent model in the Western world. It suggests that “instrumental rationality should be applied to obtain the greatest good for the greatest number, where ‘good’ is defined in material terms as comfort, efficiency, and longevity” (ibid.: 47). However, an anthropocentric stance is not

completely rejected under the *integral worldview*, as it regards humans as ‘first among equals’ for they represent “the emergence of a reflective self-consciousness in the evolution of spirit” (ibid.). In this way, humanity’s special ethical responsibilities are as much underlined as its special rights, integrating secular rationality into a wider vision which incorporates cosmological time scales and letting it participate “in finding a new home for itself in a re-enchanted universe” (ibid.: 48). However, Litfin stresses that it must be responsibility and not privilege that has to be derived from a further evolved consciousness and even suggests calling it “*responsability*” in order free the term from its burdensome notion of duty, which is commonly associated with it (ibid.: 51, emphasis in original).

Inspired by Alfred North Whitehead’s thought, Barbara Muraca (2016) develops a framework for environmental ethics and a corresponding alternative, relational axiology based on what she calls *radical relationism*, which cannot only “become an important ally for environmental justice struggles and help to support a ‘decolonial view of nature’” (Muraca, 2016: 19; emphasis in original), but also assimilates with Litfin’s (2003) *evolutionary idealism* in a complementary way. *Radical relationism* refers to the Whiteheadian perspective that “relations are ontologically prior to and constitutive of entities rather than being conceived as external link(ing) between them” (Muraca, 2016: 19). Thus, relations create experience in the sense of a first grasping of something, a sort of original sense-awareness, which “is not the observation of an isolated entity, a *bare individuality* unclothed of its properties and relations by the abstraction of thought, but a complex occurrence embedded in a web of constitutive relations that include the emotional disposition of the act of grasping itself” (ibid.: 20; emphasis in original). Similar to Litfin’s (2003) (unfolding) consciousness in *evolutionary idealism*, experience as a fundamental ontological form of relation is not limited to (self-)conscious beings but can be used to explain the connectedness of the world (Muraca, 2016: 21). Hence, this

actual connectedness of the world that neither materialism of modern science – preoccupied with the adventures of matter in space – nor atomistic logic – reducing relations to external links or abstract universals – can explain, can be conceived and justified only on the basis of actual occurrences (or occasions) constituted by internal relations that are combined in a concrete togetherness. (ibid.)

Therewith, *radical relationism* offers another helpful concept for the endeavor to “move beyond the Western, modern tradition of thought and the canon of environmental ethics rooted in it, thus welcoming alternative axiologies more sensitive to non-Western languages of valuation and different tradition of environmentalism” (ibid.). Accordingly, the anthropocentric utilitarianism and its understanding of instrumentality stems from a misrepresentation of the self-world relation, which is again rooted in the bifurcation of nature “that does not consider the subject, or self, as embedded in a flow of constitutive relations” (ibid.: 27). By contrast, Whitehead would not regard a subject as some “pre-existing substrate, but [as] a constant process of becoming. It is a privileged ‘route’ of occasions of experience, of subject-occasions that bear a strong relevance in the narrative-historical path of a person’s biography” (ibid.: 28), which not only addresses Litfin’s evolutionary stance but also poses a crucial assumption for this study’s empirical part that seeks to investigate these subject-occasions. Thereby, the relation to means and instruments does entail implications for individuals and further affects the form of existence of societies for “the way in which a society frames its material, social, and cultural relations to ‘nature’ is constitutive of its very self-understanding and structure” (ibid.: 29).

The objectifying and instrumentalizing view on nature as a consequence of the bifurcation of nature, which is based on modern science has been outlined extensively above.

Yet, a seemingly oppositional movement has emerged in the wake of the Romantic movement as a response to increasing exploitation of natural resources, which framed nature “as the other of reason, as the naïve, unreflected, wild, primitive, non-civilized, innocent other that can be observed, contemplated, and enjoyed at a distance from the point of view of those who are not engaged in a working relation to and with it” (ibid.: 32). Instead of standing in real opposition to the instrumentalizing and exploitive attitude of modern natural science, the aesthetic relation of contemplation poses the other side of the same coin for it derives equally from the bifurcation and frames nature as the separate other and as distinct and independent from humans (ibid.). These two framings of nature build the fundament of the “two hegemonic currents of Western environmentalism that have emerged and proliferated all over the world along a rather imperialistic path [...] that the political ecologist Martinez-Alier suggests, we can call them the Cult of Wilderness and the Gospel of Ecoefficiency” (ibid.). Whereas the latter is clearly based on a “instrumental consideration of ‘nature’ in terms of capital, resources, and sinks that have to be efficiently managed in order to guarantee the continuous reproduction of the established model of Western development in the long run” (ibid.: 33), the ‘Cult of Wilderness’ and its approach to nature “as something to be protected and preserved for its own sake independently of human transformation reproduces implicitly an instrumental consideration” (ibid.). Ramachandra Guha (2000) reveals that this form of environmentalism, also termed as ‘fortress conservation’ (Brockington, 2002; Siurua, 2006), entails a consumeristic attitude as the preserved “nature” is consumed by mostly modern societies and Western nature lovers for contemplation, inspiration and research. Locals, peasants and indigenous people “who do not share this conception of ‘nature’ as the other, but are used to inhabiting, transforming, interacting with and sharing a territory with other inhabitants, both human and non-human” are regularly excluded and violently forced off their lands in the name of this nature conservation paradigm (Muraca, 2016: 33.). Thus, the “bourgeois aesthetic of nature embodies not only a racist, but also a classist form of discrimination and oppression: Romantic ‘nature’ is encountered in a recreational mood freed from material and cultural necessities and dependencies” (ibid.).

Radical relationism offers a useful concept for an alternative path to both Western currents of environmentalism, which Guha and Martinez-Alier (1997) termed *environmentalism of the poor* or *environmentalism of livelihoods*, which is at work all over the world, but prevalently in the Global South (as referred to in Muraca, 2016: 34). It designates the struggles of small farmers, women and indigenous people for preserving their collective livelihoods and to their vision for a self-determined and sustainable life in their community, as it is also represented by the agroecological movement and their fight for food sovereignty. The Western idea of ‘nature’ as something external to society is not capable of expressing the complex relational frames in which they are embedded in and which support their lives. Hence, their language and narratives express

a radically different understanding of the relation to the ‘territory,’ with all its inhabitants included in what can best be called a cosmo-anthropo-vision, in which interconnection among different levels of the real (biophysical, human, supernatural) leads to specific society-nature relations and nature-culture regimes. (ibid.: 35)

Political ecologist Arturo Escobar refers to this view as a *decolonial view on nature* that “calls for seeing the interrelatedness of ecological, economic, and cultural processes that come to produce what humans call nature” (Escobar, 2008: 154 as quoted in Muraca, 2016: 35). Western ontology has compelled a colonial concept of “nature” upon the world, that functions

as a framework for the interpretation of all kinds of human-nature-relationships, presupposing an equivalence with non-modern people's ontologies and their understanding of "nature", thereby reproducing a dualistic cosmology (ibid.). However, "[n]on-Western people develop different ontologies to reflexively frame the fundamental system of relation that is the world in which they dwell" (ibid.).

Acknowledging these fundamental ontological differences and recognizing the modern ontology of nature as only one among others are important first steps along the path towards the development of a different model of environmentalism, which could guide alternative environmental practices within the Western tradition (ibid.), such as the agroecological movement in Germany. According to Muraca, the presented *radical relationism* that is based on Whitehead's philosophy, which in turn is formulated from within the Western tradition of thought, could at least assist in building "a bridge for a modest conversation in which we stop exporting some allegedly superior body of thought and step back as learners and listeners" (ibid.: 36). Litfin (2003) addresses this stance as the precautionary principle that departs "from secularism's Promethean impulse [...] [and] adopts an attitude of humility [...] [that] represents a more holistic orientation to science and technology, one that decenters humanity to some extent and acknowledges our inability to grasp the complexity of nature" (p. 55). Thus, the political act of changing the axiological scheme and giving room for diverse languages of valuation could help to establish

an alternative understanding of our relation to 'nature,' and thus a different way of addressing the ecological crisis: rather than following the (romantic) myth of wilderness and the tradition of nature conservation for its own sake (and for our need for nature as a mirror), a different kind of environmentalism would assemble around the idea of cooperation, *Gestaltung*, interaction, co-creation, transformation, and ultimately inhabitation of a common, shared world. (Muraca, 2016: 36, emphasis in original)

With respect to global environmental politics, Litfin's integral perspective challenges the single-point perspective of secularism, which finds its political expression in the singular and exclusive sovereign state by promoting a kind of globalism that does not entail "the colonization of the parts by the whole" (Litfin, 2003: 53) but rather by the emergence of 'the global' that strives towards an inclusive planetary holism. The principles of holism and ecological interdependence within the realm of global ecology suggest the gradual manifestation of the integral approach in planetary politics, becoming evident in recent movements and developments that indicate "the plausibility of an alternative story to that of secularism" (ibid.: 54-55), including the agroecological movement. While the recognition of these principles is clearly not enough to account for an *integral worldview*, it represents a significant step in that direction, "because it undercuts the anthropocentric presumptions of secularism" (ibid.: 53). Moreover, the efforts addressing global environmental problems or even the movement towards ecological mindfulness gave rise to the emergence of a global civil society, which hints at a change of (political) identities beyond mere citizenship, such as 'planetary citizen' or 'Earth steward' (ibid.: 54). In this regard, the boundaries between private and public become increasingly blurred as "one's private life, reflecting one's consciousness, takes on global importance" (ibid.). The hopeful story of *evolutionary idealism* would ask each member of this global civil society to engender a deep soul-searching and turn their ambitious words into responsible action by "integrating mind, heart, body, and soul around the project of conscious evolution, both as individuals and collectively" (ibid.: 56).

With regard to the empirical part of this study, it remains important to note, that neither the Western secular worldview nor the presented counter draft(s), i.e. *evolutionary idealism* in

combination with *radical relationism* are empirically verifiable at their core. Thus, the question of which worldview or paradigm to embrace can if anything only “be answered on grounds of pragmatic and moral consequences, intellectual coherence, personal experience, and aesthetic appeal” (ibid.: 49). Likewise, the different worldviews are presented as stories “about what *is* and what *could* be, rooted in an [relational] ontology of consciousness rather than inert matter” (ibid.: 55; emphasis in original) and are therefore not debated as theoretical models for “stories have a greater facility in this area than theories because they are more oriented towards questions of meaning than fact” (ibid.).

2.3.2. “Thinking like a Planet” – *Gaia Theory* and the World Food System

After having explored the wider philosophical background of a possible alternative worldview and a corresponding (global) environmentalism in the context of climate change and the environmental crisis, the following chapter will turn the focus on the transformation of world food system and the adoption of a planetary perspective through *Gaia theory* and a (living) systems view of life.

As early as 1949, the wildlife ecologist Aldo Leopold recognized that “the key to understanding the ecological context in which he sought to manage populations of wildlife was to recognize the importance of the spatial and the temporal scale at which a given problem is addressed” (Hirsch & Norton, 2012: 318). Hence, he advised the readers of his essay *Thinking like a Mountain* (1949) to expand their mental models – i.e. the conceptual frameworks as the maps of the reality they act within (ibid.: 317) – in order to be able to remodel a certain problem at the scale of the mountain, which Litfin (2011) translates to “before acting, consider the web of relationships among organisms and their environing rock, soil, water, air, sun that will be affected” (p. 419). Hirsch and Norton (2012) apply Leopold’s lesson to a similar, yet contemporary problem of scale by asking: “how can we reconfigure our conceptual models so that, in the face of accelerating climate change, we can understand the expanded scale and context in which we must seek a virtuous path to the future?” (p. 318). While the mountain remains a local phenomenon, “for climate change the appropriate scale is surely the planet as a whole” (ibid.). Thus, in consideration of today’s interconnected challenges of the *global problematique*, a common guiding principle is “think globally, act locally”.

In this regard, Karen Litfin (2011) suggests “Gaia theory, an interdisciplinary scientific perspective that understands Earth holistically as an integrated, self-regulating biogeochemical system, [since it] offers a rich portfolio of concepts and imagery for ‘thinking globally’” (p. 419). *Gaia theory*, which poses a cultural phenomenon as well as a scientific hypothesis, was first proposed by the chemist James Lovelock and the microbiologist Lynn Margulis in 1970 (ibid.). As a whole-systems understanding of the planet’s functioning, it offers “both practical and philosophical guidance for addressing what is likely to become the preeminent question of the twenty-first century: how to harmonize human systems with the larger Earth system” (ibid.). As an archetypal metaphor for wholeness, interconnectedness and belonging (ibid.), *Gaia theory* is consistent with the quintessence of the *integral worldview* and *radical relationism*, which has been outlined above.

A socio-political reading of *Gaia theory* by Karen Litfin (2011) reveals that the three qualities of living systems, i.e. holism, autopoiesis and symbiotic networks offer important concepts “that can help to steer human systems toward sustainability [while] Gaia endows these with a planetary scope” (p. 421). Accordingly, the ultimate problem stems from the fact that “the global economy functions on a linear model that moves from resource extraction to

production to consumption to waste” (ibid.: 420), whereas the generativity of living systems and thus sustainability warrants thinking in circles, following the example of Gaia’s great biogeochemical cycles (ibid.). Gaia embodies the largest known instance of a living system, which in turn entails countless subsets in the form of nested living systems of biota and their environments, all of which show emergent properties that “transcend the logic of purely physical systems, requiring a more dynamic and holistic approach” (ibid.: 421). Those emergent properties indicate that the behavior of living systems is not reducible to their component parts, a principle that can also be referred to as Gaian holism, which corroborates a planetary perspective with a cautionary note as the current global changes compel us “to situate our lives at every level, from household to global governance, within the systemic logic of Gaia” (ibid.: 421-422).

Further, living systems, including human systems, the largest of which poses the global economy, are autopoietic, which means that they exhibit a self-generative quality that ensures systemic continuity through constant change. However, under a linear model, the self-generative capacity of the global economy is temporary and cannot be sustained endlessly (ibid.: 422-423). This concept entails a fundamental philosophical question regarding purpose. Although Lovelock did originally not ascribe any intentionality to the planet’s self-generativity, purpose – even it is misunderstood or simply ignored – is essential to human systems and thus “reconfiguring the system from its base requires identifying its purpose(s) and implicit values” (ibid.: 423). While growth constitutes the almost universally accepted underlying purpose of the global economy, it is its infinite desirability on a finite planet that causes Gaian-scale perturbations. Hence, it is indispensable to rethink this purpose beyond the growth imperative and to rather appoint – Leopoldian-style – the integrity and the stability of the Gaian system to be the core human purpose (ibid.).

The third quality of living systems, the symbiotic networks refer to the “radical concept of systemic interdependence [that] stands in contrast to modern political and psychological notions of human independence” (ibid.). Gaia’s nested collectives are thus inherently social and symbiotic and in contrast to the neo-Darwinist view of life, the leading principle would be cooperation instead of competition, which also constitutes the driving force of the global economy (ibid.: 424). Industrial societies that are structured around the linear model of the global economy are incompatible with these ecological principles, which are based upon cyclical processes and symbiotic networks (ibid.). However, the recent growth of movements which seek the creation of virtuous cycles, among them the agroecological movement, indicate that these principles are gradually being (re)introduced into human systems (ibid.). “Applying Gaia principles to human systems will require an epic shift, reorienting our thinking and actions toward a participatory embeddedness, in the greater whole” (ibid.) and might inspire us to rather focus on what we can learn from nature than on its exploitation.

As the environmental crisis signals quite clearly that most human systems do not assort well with the Gaian system, Litfin (2011) suggests to ask three crucial questions: “which of these systems have the greatest impact on the Gaian system, which are most vulnerable from a human security standpoint, and which are most amenable to constructive change” (p. 425). For all of these questions, the answer seems to be the world food system as it indicates to be the weakest link in our systems (ibid.: 420; 425). According to the 2019 report of the IPCC (Intergovernmental Panel on Climate Change), agriculture, forestry and other land use activities accounted for 23% of the total net anthropogenic emissions of GHGs and if emissions associated with the pre- and post-production activities of the global food system are added, then the estimation even rises to 21-37% of the total emissions (IPCC Report, 2019). Hence, (industrialized) agriculture appears to be deeply implicated in destabilizing all of the great Gaian cycles, among them not only the carbon cycle, but also the global phosphorus-,

nitrogen- and water cycles, while being of existential importance for the daily sustenance of every person. As a consequence, the benefits of a living-systems approach to food as it is supposedly represented by the agroecological movement are most promising “for both human and ecological communities, from the local to the global” (Litfin, 2011: 425). This represents a distinct feature of systems thinking and the ecological worldview, that “one thing done wrong can create numerous problems throughout the system [...] [yet] if something is done that fits, several problems are taken care of at once” (Jackson, 1987: 75), which also applies to agroecological ethics and to agroecology (Callicott, 1990: 48).

The mission would be to break the current vicious cycles of the world food system and to transform it “into a viable subset of Gaia, which means approaching it as a holistic and autopoietic living system rooted in symbiotic networks” (Litfin, 2011: 427). Following the lead of numerous food movements around the world, which are deeply dissatisfied with the industrialized food system, new food politics must adopt a sustainable way of thinking in circles, which implies “linking human and biotic communities together in virtuous cycles of exchange [...] [and establish] regenerative food systems that nourish both people and ecosystems” (ibid.: 427-428). Organic and agroecological farmers in particular express exactly this objective and experiment with the creation of various virtuous cycles and generative networks, acting as “entrepreneurs of symbiogenesis” (ibid.), while having adopted “a Gaian understanding of soil as a living web of symbiotic networks rather than an inert receptacle for chemical inputs” (ibid.). Letting go of the prevailing linear economic model, the new food economy would have to embrace the concept of generativity, which is not a biological phenomenon only, but a political and ethical one that affects human health, social justice and ecological sustainability, all of which are integrally connected (ibid.). On an international level, a Gaian approach to agriculture would initiate a fundamental revision of trade, aid and development programs promoting food sovereignty and global justice, carefully resorting the local and the global (ibid.: 429).

Being in line with *evolutionary idealism*, “Gaia can serve as a source of faith, humility, and inspiration, reminding us that we are an integral part – and an astonishing result – of an unfolding evolutionary process” (ibid.) with food and its production serving as an ideal medium for connecting person to planet in order to harmonize our lives with our home planet and to create a sustainable future (ibid.). By helping to shift the governing metaphor for human species’ earthly existence from machine to organism, *Gaia theory* may inspire the development of many creative possibilities “for rethinking our place in Gaia’s great food webs” (ibid.: 428). A new metaphor can further help to set in motion a cognitive transformation at the level of a whole society by raising awareness for the troubled system and by calling predominant models into question (Hirsch & Norton, 2012: 319). Following Leopold’s footsteps in recognizing the inappropriateness of the narrow economic metaphors of productivity requires the creation of new models and corresponding metaphors that are capable of recalibrating our value systems and readjusting our behaviors and actions. They must provide a spatial reference system for the evaluation of choices and actions that includes the atmosphere, the oceans, and the poles and ergo, enable us to think like a planet (Hirsch & Norton, 2012: 322). According to Hirsch and Norton (2012), the adoption of new cultural models, that are mental models shared by groups, are central to humanity’s ability to adapt to climate change as “these new representations allow us to conceive of our collective actions – and their impacts – at scales of space and time that extend beyond those defined by immediate economic concerns” (p. 324).

With regard to these cultural models as the collective mind and consciousness of societies and cultures, Fritjof Capra (1984) uses Gregory Bateson’s concept of mind “as a systems phenomenon characteristic of living systems, societies, and ecosystems” (p. 290).

Not only to overcome the Cartesian division of mind and matter, but to further remind us that in “the stratified order of nature, individual human minds are embedded in the larger minds of social and ecological systems, and these are integrated into the planetary mental system – the mind of Gaia – which in turn must participate in some kind of universal or cosmic mind” (p. 292). This systems concept of mind has radical implications for human’s interaction with their natural environment for “there is a continual interplay and mutual influence between the outer world and our inner world” (p. 294). Hence, a human being’s inner world – the psychological realm – mirrors the outer reality, yet it can initiate an individual as well as a society to act upon the outer world and shape the environment quite effectively, especially for the particularly human ability “to represent the outer world symbolically, to think conceptually, and to communicate our symbols, concepts, and ideas” (p. 295) regularly with the help of metaphors. By participating in the creation of collective mental patterns, and thus of a world of culture and values as an integral part of the natural environment, human individuals can “consciously alter [their] [...] behavior by changing [their] [...] values and attitudes to regain the spirituality and ecological awareness [they] [...] have lost” (p. 300). Thus, a (living) systems approach to food and agriculture together with a systems view of the human mind might present a feasible and promising endeavor to harmonize human systems with the earth system and to pave the way for a sustainable future.

2.3.3. Agroecology as the Expression of an Ecological Worldview and the Enactment of Social-Ecological Change

After having identified agriculture and the world food system as a viable point for intervention to tackle the environmental crisis and climate change, the following chapter will shortly present agroecology as an expression of the ecological worldview and will further touch upon the question how social-ecological change could be pursued by a transformative agroecological endeavor with a recourse to some important concepts from environmental sociology. Except for literal citations from the literature, I followed Berkes (2017) choosing “the term social-ecological, rather than socio-ecological, because social-ecological emphasizes that the two [social (human) and ecological (biophysical)] subsystems are equally important, whereas socio- is a modifier, implying a less than equal status of the social subsystem” (p. 3). Thus, I use the notions interchangeably, despite their disparity.

While “[i]ndustrial agriculture is precisely the translation of Classical Mechanics – the reigning Western paradigm from approximately the seventeenth century – into an agricultural vocabulary” (Callicott, 1988: 4), it was Aldo Leopold who was among the first to draw a counterdraft as he translated “the ecological world view into a vision of a whole, healthy, humane, and environmentally sound agriculture [...] [and thus] envisioned a scientifically informed agro-ecology” (Callicott, 1990: 45-46). Callicott (1990) identifies four vital conceptual features of the holistic, organic paradigm and the ecological worldview which apply to “[e]ach level of organization from atoms to ecosystems” (p. 36) and clearly differentiate it from the reductive mechanical paradigm while sharing fundamental characteristics of the concepts and guidelines presented above, i.e. *evolutionary idealism*, *radical relationism*, the *decolonial view on nature*, a *living systems approach* and *Gaia theory*. He basically adopts a systems view towards organisms, society and ecosystems, when recognizing that a genuinely systemic whole “(1) exhibits emergent properties, (2) exerts downward causation from whole to part, (3) is a systemically integrated whole, (4) the parts of which are internally related” (ibid.).

Further, the New Physics and ecology are identified as the intellectual cornerstones of the new natural paradigm: while the former offers a new construction of the physical world's fundamental nature at the most basic and universal level, the latter "provides a systemic, integrative, holistic understanding of reality at the level of organic terrestrial nature [...] at the most complex and local levels" (Callicott, 1988: 6). In accordance with the concept of *radical relationism*, the "reversal of ontologic emphasis from figure to ground and from *relata* to relationships is the foundation of ecology's [and *Gaia theory's*] vaunted holism" (Callicott, 1988: 7; emphasis in original). The focus on relationships is necessarily followed by the pursuance of organisms' integration into a (living) system, thereby painting a holistic picture of nature (ibid.).

Informed by this systems thinking, "[a]groecology translated this abstract new vision into a concrete agricultural vocabulary: The farmstead is regarded as an artificial ecosystem with a multiplicity of diverse plant and animal constituents interacting with one another and with enviroing natural ecosystems in complex and mutually supporting ways" (ibid.: 3). Thus, overcoming the Western environmentalism's duality of nature exploitation vs. nature conservation, the integration of agro-ecosystems and natural ecosystems, respectively of use and conservation, can lead to "an improvement on natural climax communities, by measures of ecological diversity, complexity, and integrity" (Callicott, 1990: 47) and hence draws upon a *decolonized view on nature*. Accordingly, from the perspective of an ecologic philosophy, "a 'correct' agriculture [...] should reflect, on a smaller, necessarily simpler scale, the integrated, mutually dependent, symbiotic relationships of coevolved species in a natural ecosystem" (Callicott, 1988: 8). The idea that "agro-ecosystems should mimic the biodiversity levels and functioning of natural ecosystems" lies at the heart of agroecology while "[s]uch agricultural mimics, like their natural models, can be productive, pest resistant and nutrient conserving" (Pimbert, 2015: 287). The (co-)evolutionary stance finds further expression in the portrayal of "[a]n agricultural system as an ecosystem-in-microcosm [that] could incorporate the dynamic, evolving character of the macrocosm" (Callicott, 1988: 8).

Thus, agroecology expresses the emergence of a "new paradigm in universal and absolutely central spheres of human experience – the production of food and the maintenance of organic health and well-being" (ibid.) and "may be just what the doctor ordered for the multiplying moral maladies of a moribund industrial agriculture" (Callicott, 1990: 49). However, the question remains, how – especially from within a Western culture and tradition – such (metaphysical) transformation from the Newtonian-mechanical to an ecological worldview and the adoption of a corresponding agricultural paradigm might be accomplished going beyond the local sphere in order to tackle the global environmental crisis and how an urgently needed social-ecological change can be initiated. González de Molina (2013), who defines agroecosystems as 'socioecological constructions', argues for a political agroecology and socio-economic structural reforms to achieve such social-ecological change on a global and whole food-systems scale and to reach agrarian sustainability (p. 46). According to him, the organization and management of agroecosystems requires more than merely technical and material considerations as he views them as "artificialized ecosystems that shape a particular subsystem within the general metabolism of society and nature; therefore, they are a product of the socioecological relations established within" (ibid.: 49).

Easing the focus from institutional mediation, Guzmán and Woodgate (2015) review some fundamental conceptual contributions of (environmental) sociology that are helpful to deepen "our understanding of social and socio-environmental relationships that are integral to a transformative agroecological endeavor" (p. 2). As it is true for at least the two preceding chapters of this paper, the key questions of (environmental) sociological inquiry center around

the relationship between individuals, respectively the society and the world around them, for it is this rapport that initiates social action and ultimately might enact social change (ibid.: 8). Thus, environmental sociology can function as a reminder of human beings' potential to change the conditions of their existence and further to raise awareness that "when we observe the world around us, it is like looking into a mirror in two important ways: what we see is what we have constructed from within our social context and its materiality – its ecology – has been impacted by our activities" (ibid.). As a consequence, "agriculture among human beings is a varied expression of various peoples' divers [sic] views of themselves in relationship to their environment" (Callicott, 1988: 3) and it is especially the "realm of interpretative or constructionist sociology, which provides us with ways into understanding how what people believe and the meanings and values they attach to things have discernible consequences in terms of their attitudes and behavior" (Guzmán & Woodgate, 2015: 8). This also constitutes a basic tenet for the empirical part of this study (Chapter 4).

Environmental sociology offers an integrated social ontology, which provides concepts to overcome the prevalent structure/agency debate of 20th century's sociology that either favored structural explanations of society (structuralism) or provided constructionist interpretations that primarily focused on human agency, "the capacity of individuals to act independently of structure" (ibid.: 9; 12). In this respect, Giddens' (1984) "duality of structure" (as quoted in Guzmán & Woodgate, 2015: 12) finds increasing appeal as "structuralists incorporating human agency and social discourse into their analytical frameworks, while scholars from constructivist traditions sought to understand how structures emerge and are changed by agency" (ibid.). To this end, political ecology poses a prime example, having structuralist roots while also encompassing constructivist elements in its investigation of nature's social construction in different discourses, e.g. "sustainable development" or "biodiversity conservation", principally "considering language to be constitutive of reality, rather than simply reflecting it" (Escobar 1996 as quoted in Guzmán & Woodgate, 2015: 13) – which is another central assumption to be considered in the present study.

This "integrated socioenvironmental theory" does not only enhance the body of thought concerning the dynamics of societies' relationships with nature but it "provides transformative agroecology with ways into understanding both the social processes that maintain peasant agriculture and the emergence of agrarian social movements in opposition to the depredations of the corporate food regime" (Guzmán & Woodgate, 2015: 13). Strongly criticizing the *human exemptionalist paradigm* (HEP), Catton and Dunlap (1978) suggest a *new ecological paradigm* (NEP) arising from environmental sociology, "stressing that human beings are biological [sic] constituted and ecological [sic] embedded as well as culturally constituted and socially embedded" (as referred to in Guzmán & Woodgate, 2015: 13). Following from this, "our actions are better defined as socioecological practices, embedded within socioecological systems, and enabled and constrained by socioecological structures" (ibid.: 15).

Norgaard adds to these concepts of society-environment relationships with his notion of coevolution, proposing "social and environmental change as the outcome of coevolution between social systems (values, knowledges, technologies and forms of organization) and environmental systems (climate, soils, biodiversity, etc.)" (in Altieri 1987 as quoted in Guzmán & Woodgate, 2015: 13), even suggesting this coevolutionary worldview as the epistemological basis for agroecology (ibid.). Fundamental to the agroecological approach and also a vital principle of environmental sociology is "[u]nderstanding nature as an active participant in historical processes of change [...] a fact which is now undeniable in the face of accelerated global warming and biodiversity decline" (ibid.: 15). Social-ecological metabolic consistency is therefore rendered a core principle of agroecology with its ambition to ultimately balance "the

entropy produced by socio-ecological catabolism [...] by the anabolic potential of solar radiation and biological processes” (ibid.).

Yet, the heterogenic but deeply interrelated and inseparable constitution of agroecology as agri-cultural practice, transdisciplinary science and agrarian and environmental social movement in pursuit of agroecological sustainability and food sovereignty necessarily carries varying reactions to the social and environmental crisis of modernity (ibid.: 16). To comprehend these reactions, Manuel Navarrette and Buzinde formulated the concept of *socioecological agency* (in Redclift and Woodgate 2010: 141 as quoted in Guzmán & Woodgate, 2015: 16). For them, countering the environmental crisis does demand, similar to Norgaard or Gonzalez de Molina, the conjoint co-creation of material and social structures that are yet to be conciliated by a “self-reflexive, or transcendental form of agency enacted by individuals in their interaction not only with society and the environment, but also with themselves: with their inner worlds” (ibid.). Simply put, it is the exploration of these “inner worlds” and the detection of the immanent worldviews, which are in turn socially constructed, that poses one goal of the reconstructive research agenda of this study (Chapter 4). Thus, being in consistence with Capra’s systems view of the human mind (Chapter 2.3.2.), Navarrette and Buzinde debate that transformative potential is “likely to emerge from a radical realization about the reciprocity and double directionality that exists between humanity and the planet as a whole” (in Redclift and Woodgate 2010: 141 as quoted in Guzmán & Woodgate, 2015: 16).

2.3.3. The Role of (Agricultural) Narratives and Metaphors

The constructivist assumption that language constitutes reality and does not merely reflect it (Escobar 1996 as quoted in Guzmán & Woodgate, 2015: 13) poses a central tenet for the reconstructive analysis of agricultural narratives conducted in the empirical part of the study (Chapter 4). Thus, the farmers’ narratives do not only have transformative potential for they structure agricultural paradigms and practices (Sanford, 2011: 284) but the specific use of language and metaphors is also revealing of the farmers’ relationship with what is commonly understood as *nature* or *the environment* in a Western cultural context. Their stories grant access to their subjective constructions of reality and patterns of interpretation, respectively their worldviews, that underly their narratives and practices, which in turn are dialectically related to each other: “story shapes practice, practice dialectically both influences and reinforces stories, a bi-directional process” (ibid.: 286). A metaphor is to be considered not only a figure of speech but “a pervasive, indispensable structure of human understanding by means of which we figuratively comprehend our world” (Johnson, 1987: xx). Changing how we comprehend our world and re-thinking the human-nature relationship with the help of metaphors and narratives can alter how we act upon the earth – and vice versa (Sanford, 2011: 286). Since language in its historical development is itself fundamentally determined by socio-cultural factors (Feilke, 2016: 9), it can also have a limiting and inhibiting effect on processes of change and transformation by simply lacking adequate options of expression and by reproducing undesirable power relations or perpetuating marginalizing logics – a dynamic that is probably most prominent in the gender debate.

While industrial agriculture, as the translation of the Western paradigm into agricultural vocabulary (Callicott, 1988: 4), “relies on a discourse of mechanistic relations between humans and a passive earth, language that has naturalized the chemically intensive monocultures” (Sanford, 2011: 284), agroecology is expected to rather resonate with metaphors of harmony, balance, cooperation and interdependence (ibid.: 285). Thereby, narratives and metaphors

also possess an ethical value and moral function for they create a space for imaginations, in which relationships with human and non-human actors, respectively nature can be (re)considered, and consequences of one's own actions can be assessed. In this way, stories can not only shed light on how something is, but also suggest possibilities for how something might and shall be (ibid.).

The main research objective of the thesis is to investigate – through the farmers' narratives – deeper structures of meaning and key concepts of their worldviews, especially regarding their relationships with nature. Yet, exploring the ontological basis of the agroecological practice within a Western cultural sphere, could thereby provide starting points for new transformative narratives and metaphors regarding human-nature relationships, possibly on a whole-society level. To this end, underlying ontological, epistemological and methodological assumptions and principles for this study's analysis of the agricultural narratives generated through in-depth interviews will be outlined in the following chapter (Chapter 3).

3. Methodology

In this section, the qualitative reconstructive research approach will first be assessed regarding its basic assumptions of reality and their more specific implications for the research process. After introducing these theoretical ontological and epistemological foundations in the form of axioms and principles (Chapters 3.1. - 3.3.), it presents the concrete case selection and access to the field (Chapter 3.4.), the data collection and collection instruments (Chapter 3.5.), as well as the *research object-specific heuristics*, that have been applied as *scanners* in the text analysis (Chapter 3.6.).

3.1. Research Paradigms

As discussed in greater detail above, the Western worldview maintains strong influence not only on agricultural thought and practice as well as on Western culture in general, but also on scientific approaches and research paradigms. As Descartes' belief in the certainty and absolute truth of scientific knowledge constitutes the fundament of Cartesian philosophy, it has become characteristic of Western culture and is still reflected in today's scientism (Capra, 1984: 57). This "overriding concern for certain knowledge has come to be called *Cartesian anxiety*, a *dis-ease* that is still reflected in the positivist (and post-positivist) search to find out "how things really are" and "how things really work" (Guba, 1990: 19; emphasis in original). The endeavor to explore how things *really* are reveals the realist *ontology* of positivism, the assumption that a reality exists "out there", which is determined by immutable laws and mechanisms (ibid.: 19-20; emphasis in original). This realist ontology is necessarily accompanied by an objectivist and dualist *epistemology*, for which it is both possible and necessary for the researcher "to adopt a distant, noninteractive posture. Values and other biasing and confounding factors are thereby automatically excluded from influencing the outcomes" (ibid.: 20). The most appropriate *methodology* that emerges from the positivist and objectivist approach thus is empirical experimentalism, where "questions and/ or hypotheses are stated in advance in propositional form and [are] subjected to empirical tests (falsification) under carefully controlled conditions" (ibid.).

Like the basic belief system – the paradigm – of conventional (positivist) inquiry has been characterized, by answering the basic *ontological*, *epistemological* and *methodological* questions, other research paradigms can be defined in an analogous manner, disclosing "the starting points or givens that determine what inquiry is and how it is to be practiced" (ibid.: 18). Thus, the qualitative reconstructive research paradigm of social theory will be defined in the following as it builds the foundation of the present study – once again aiming to transcend the so-called "conventional" Cartesian paradigm.

3.2. The Reconstructive Research Paradigm

The reconstructive research paradigm is necessarily based on a set of basic assumptions regarding reality and research practice, which particularly expresses itself in a specific *attitude*. Ralf Bohnsack described this concisely as a paradigm shift from 'what' to 'how': The predominant research interest is not the reality in a substantial manner (the 'what') but its practical and social genesis and its function (the 'how' and the 'what for'), which enables to shed light on the concrete existence of a contingent reality in the first place (Kruse, 2015: 26).

The epistemological break poses the fundamental characteristic of all approaches within the reconstructive paradigm, which are committed to three central axioms (Kruse, 2015: 145 et seq.):

1. Axiom: *Reality is always contingent because it is always constructed.*

Reconstructive social research is empirically applied constructivism. Qualitative research holds the basic scientific assumption, that the reality cannot be objective as it is always interactively and socially fabricated, i.e. constructed (*postulate of constructiveness*). Hence, there are different versions of reality, which prohibits the question of the truth of this reality and thus makes the positivist endeavor to find out, how things *really* are impossible. With this constructivist ontology it becomes clear, that reality is always contingent, i.e. it could always be different from what it is (*assumption of contingency*). However, this does not imply that reality is random or occurs accidentally. Reality always takes place according to specific rules and systems of relevance, which in turn can be constructed. Neither does a contingent and constructed reality presuppose that the reality in which social actors live cannot appear 'objective' to them, as is indicated by the *Thomas-Theorem*: "If men define situations as real, they are real in their consequences." (Thomas/Thomas 1928: 572 as quoted in Kruse, 2015: 146).

2. Axiom: *Everything makes sense or has a meaning.*

This insinuation, which follows from the postulate of constructiveness and the assumption of contingency is fundamental for qualitative and especially reconstructive social research. The terms 'sense' here, however, as in its first access to reality is conceptualized not in a normative or morally directive but in an existential and ontological way: a reality comes into existence and therefore it must have a sense and a reason why reality came into existence in this exact way. A valuation of the matter is made only in retrospect.

3. Axiom: *Nothing is self-evident.*

This third axiom is again a result of the two previous axioms. The fundamental questioning of the obvious poses a first precondition to disengage from everything that seems self-evident or *natural* with regard to one's own constructions of reality. This in turn is of essential significance for various dimensions and different phases within the process of qualitative research, which will be discussed in the following. In ethnography, this concept is referred to as the *alienation from one's own culture* (Amann & Hirschauer 1997 as quoted in Kruse, 2015: 146).

3.3. Three Principles of Qualitative Social Research

After having outlined certain fundamental ontological and first resulting epistemological assumptions of the reconstructive research paradigm in form of the three axioms, the following will build upon this foundation by formulating another three essential procedural principles. These principles constitute the three pillars of qualitative social research for they have fundamental implications for the process and the underlying logic of qualitative social- and interview-based research, as applied in this study: the principle of *foreign understanding*, the principle of *indexicality* of the human language and communication and the principle of *processuality* (Kruse, 2015: 59 et seq.).

3.3.1. Foreign Understanding

The first pillar and the central epistemological principle of qualitative and particularly reconstructive research is (*foreign*) *understanding*. As people try to understand the world and interpret reality every day, *understanding* must be considered as a process of attaching *sense* and constructing subjective meaning to experience. Yet, this subjective meaning (*subjektiv gemeinter Sinn*, Weber 1972 as quoted in Kruse, 2015: 60) is not an idiosyncratic construction of meaning for every person faces a reality, which other people have conferred meaning to before and which has thus been socially constructed. Hence, the process of *understanding* implies countless preceding abilities of understanding and comprehension, which have been performed by others. Accordingly, the attachment of sense and meaning gains a social dimension, which has been produced interactively via verbal and non-verbal symbols and refers to a social reality – a construct of solidified communicative sense. As a consequence, *understanding* is always *foreign understanding* like Alfred Schütz (1974) as well as Peter L. Berger and Thomas Luckmann (2012) already pointed out (as referred to in Kruse, 2015: 60-61). Thereby, human acts of *foreign understanding* are usually embedded in processes of communication, which brings the connection to the qualitative interview research and its data collection in this study to light (ibid.).

The communicative exchange of information between two (or more people) will be looked at from a social perspective, which focuses on the situational and contextual as well as processual and interactive construction of linguistic communication. Due to their interactive and contextual construction, messages do not rest on idiosyncratic conceptions of subjective meaning, which are questionable to even exist as they are always socially embedded and thus, in some respect collective. Accordingly, every verbalization of a message first contains the communicative context and, second, has been formulated with regard to the recipient, which is particularly important for the analysis of the interview material (ibid.: 62).

Understanding in the context of communication is a process in which communicator (A) necessarily interprets what communicator (B) said. Both communicate based on their respective background of knowledge and system of relevance. The message (a) from communicator (A) can only be understood by communicator (B) if he or she adapts his or her system of relevance (b). From a cognitive-psychological perspective, understanding is the translation of the message to one's own semantic-indexical system of relevance and is thus – once again – *foreign understanding* (ibid.: 65). However, if the assumption is that (*foreign*) *understanding* means to understand the communicated in the context of one's own subjective system of relevance, then paradoxically it is indispensable to have a certain *pre-understanding* of the matter, which refers to the previous understandings of a person having constructed his or her subjective system of relevance in the first place. This aspect of a necessary *pre-understanding*, which enables someone to understand what is supposed to be understood, is referred to as the hermeneutic circle, which is fundamental for every act of *foreign understanding*. At the same time, it poses a great risk for hermeneutic understanding since this preknowledge can lead to premature and tautological constructions of sense and meaning, when the said meaning is put into material rather than reconstructed from it. Hence, the crux of the matter requires a reflexive control of *foreign understanding* (ibid.: 67).

Further, it remains vague as a form of self-interpretation for it is only possible to *understand* through one's own system of relevance – in which other systems of relevance are again incorporated (Mannheim 1980: 190, 223; Scrubar 2009: 282 as quoted in Kruse, 2015: 68). *Foreign understanding* can therefore only exist as a regulative idea and with respect to the practical application for the study, it must be considered as a relative approximation. The *principle of openness*, which is central for qualitative interview research, is derived from this

exact rationale. As it is simply unfeasible to abandon one's own system of relevance, it is necessary to restrain and control it as much as possible which requires a reflexive theoretical sensitization to open it for the *foreign* and comprehend as well as ultimately reconstruct it, respectively the latent structures of meaning. This systematic (self-)reflexivity in the process of *foreign understanding* is vital to respond to the *site-dependency of cognitive processes* and moreover reconnects to the third axiom of the reconstructive research paradigm ('*Nothing is self-evident*') and its demand to disengage from everything that seems self-evident or *natural* with regard to one's own constructions of reality (Kruse, 2015: 70-74; 146).

3.3.2. Indexicality and Documentary Meaning(fulness)

The *indexicality* of human language and communication can be seen as its core characteristic and refers to the fact that the meaning of a term is constituted by both, the specific use of signs and its relation to other terminological concepts. Karl Mannheim (1980, 2004 as referred to in Kruse, 2015: 75) addresses this phenomenon of linguistic means as *documentary meaning(fulness)*. A distinction can be made between a *situative-contextual* and a *terminological-referential* dimension of indexicality, whereby both dimensions are tightly interwoven.

The situative-contextual dimension points to the circumstance that the meaning of a term or a concept only becomes apparent in its situative use and context, as can be illustrated by deictics, such as 'here' and 'there', or by the use of irony, yet applies to all terms and speech acts. Linguistic means (such as deictics, pronouns, forms of address etc.) as well as para-linguistic and body language signals (such as prosodic and melodic elements like intonation, rhythm, speech rate, volume, accentuation, gestures and facial expressions) or other activities that accompany speech (such as laughing or sighing) can work as *contextualization markers* (Gumperz in Auer 1999: 164-174 as referred to in Kruse, 2015: 76-77) helping to reduce the indexicality of linguistic-communicative production of meaning in a reflexive way for they are linguistic means themselves.

The terminological-referential dimension of indexicality suggests that the meaning of a term or concept is revealed by its *semantic network* of terms and linguistic concepts, which it is related to, as can be exemplified by the word 'village': depending on its semantic network it can be associated with either 'boredom', 'countryside', 'agriculture' or with 'community', 'contemplation', or 'save haven' (ibid.).

In his sociology of knowledge, Mannheim accounts for this problem of indexicality by differentiating between three types of 'sense' or meaning: the *objective meaning*, the *(intended) meaning of expression* and the *documentary meaning*. The latter can be understood as a '*meaning behind a meaning*', or a '*hidden meaning*'. This *documentary meaning* is primarily based on a social group's *conjunctive experience-based knowledge* (Przyborski 2004: 29 et seq. as referred to in Kruse, 2015: 80) and implies that linguistic terminologies and parlance function in the literal sense of the word as a *document* – an indicating label – for a specific, socially generated and therefore collectively rooted meaning. In this respect, the idea of the *homologue pattern* can be regarded as the concept of a consistent documentary meaning, which is again closely connected to Mannheim's notion of a *worldview* or *worldviewtotality* - the detection of which poses the actual goal of the reconstructive research agenda and thus for the present thesis. (Kruse, 2015: 34-36; 81).

As for the methodical implications of the problem of indexicality, it remains important to note that qualitative interviews ought to be *deindexicalizing*, for example by asking questions as "What do you mean by that?" for these can disclose the *documentary meaning* in the course

of the subsequent reconstructive-hermeneutic analysis. Accordingly, such deindexicalizing questions are conceptualized as a standard component in the interview guide (Table 2; Appendix 3). Thus, the decoding of indexical terms and speech acts poses a methodical basic principle of qualitative interview research. Thereby, it is this opening and the disclosure of communication situations that constitutes the strength of the qualitative approach since it enables the decipherment of indexical linguistic terms expressing the subjective constructions of reality by the subjects investigated (ibid.: 85). Two of the epistemological and respectively methodological basic problems come together at this point since a deindexicalizing interview technique presupposes the *alienation from one's own culture* (Amann & Hirschauer 1997 as quoted in Kruse, 2015: 146), which in turn builds the precondition for the (*foreign*) *understanding* of other indexical cultures (ibid.: 88).

3.3.3. The *Principle of Processuality*

As the third pillar of qualitative social research, the *principle of processuality* accounts for the processual perspective on empirical cognition. It presupposes that the research goal, i.e. expanding one's own system of relevance and the generation of new insights, can only be achieved through a complex process of epistemological understanding (Kruse, 2015: 92-93). It thus ties in with the first pillar of *foreign understanding* (Chapter 3.3.1.) by acknowledging that all cognition is dependent on some *pre-understanding* through the application of one's own concepts of knowledge and relevance during the process of understanding (Kruse, 2015: 67; 96), illustrating the infeasibility of a purely inductive approach. At the same time, the *principle of processuality* follows the *principle of openness* in the research process, by which the prior knowledge of the researcher, literature and existing theories should not have a (too) determining character, but rather a heuristic function. The *research object-specific heuristics* formulated in the process of the analysis (Table 3) are supposed to apply these principles methodically by serving as tentative guidelines in the dialectical process of theory-driven cognition and inductive data analysis (Kruse, 2015: 100-104).

3.4. Selection of Case Study Farms

For the case study, I analyzed the narratives of four agroecological farmers in Germany. In the last decades, the country has undergone a persistent land restructuration, where many smaller farmers were either forced to leave their profession or enlarge their farms to remain competitive (Domptail et al., 2018). Although Germany is trying to be at the forefront in mitigating climate change, the share of organic farms is comparatively lower than in neighboring France and Austria. The particular region concerned for the case study is characterized by large-scale arable farming but adjacent to more hilly grasslands.

The four farmers are members of a German small farmers association, called the *Arbeitsgemeinschaft bäuerliche Landwirtschaft e.V. (AbL)*, which stands up and fights for a socially equitable and environmentally sustainable agriculture and the respective underlying conditions. Its members include both conventional and organic farmers, chiefly from medium and small-sized farms. Other (occupational) groups are amongst the members as well, such as engaged consumers or environmental or animal-rights activists, all advocating for the preservation of peasant agriculture. However, these groups were not approached for the interviews of this study.

The main concern of the *AbL* is the representation of farmers' political positions and raising public awareness for social issues related to agriculture in order to counter environmentally and economically one-sided mindsets. Further, the *AbL* is a cofounder of the *European Coordination Via Campesina (ECVC)*, consisting of 27 peasants' organizations from 18 European countries, postulating a comprehensive reform of agricultural policy within the EU and worldwide. As a member of the international peasant's movement *La Via Campesina (LVC)*, the *AbL* takes part in the international fight for food sovereignty and social justice strongly opposing industrial agriculture and the corporate food system with its detrimental effects on the natural and social environment (AbL, 2019).

Considering the membership of the *AbL*, I could assume an engagement with a sustainable, non-industrial agriculture, whether they are certified organic producers or not. Following a purposeful sampling strategy, I was trying to identify suitable farms that apply agroecological practices. Jörg Weber, who is himself a member of the *AbL*, member of the board of *BIONALES e.V.* (club citizens for regional agriculture and food) and the *Bürger AG* (citizen corporation for regional and sustainable management) was particularly helpful in identifying interview partners and also established most initial contacts. I first met him as the main organizer of an organic farm tour in August 2019, which I attended to possibly meet suitable candidates for the interviews. By recruiting diverse farm types and farming systems (such as arable farming, mixed farming, horticulture and dairy), the attempt was made to portray various agricultural approaches and their underlying mindsets, their distinct hurdles within the German (agri)cultural landscape, as well as their confrontation with societal challenges such as the climate crisis and the respective coping strategies. The candidates were selected from an original sample of eight farmers, one of whom served as a pre-test interview partner. Another one was ultimately not included due to insufficient comparability of the agricultural approach and the lack of membership in the *AbL*. Two others unfortunately had to be omitted for reasons of scope. The selection criteria within the sample essentially consisted of comparability and broadest possible diversity of the agricultural approaches.

The final case sample consists of both female (Farmer B, D) and male farmers (Farmer A, C) in equal shares, located in Hesse, Germany. They are certified organic producers, with one being in the process of transition and certification at the time of the interview (Farmer C). Farm A is a grassland-based cattle rearing farm (330 ha) with an own slaughterhouse. Farm B is a mixed (arable/horticulture/cattle) farm (90 ha) with a clear focus on arable farming and

horticulture (cattle only extensive as caretakers of the landscape). Farm C is also mixed (milk-/meat production (cattle/pigs/chicken) and arable farming), 67 ha in size. Farm D cultivates 110 ha with mixed farming (arable/cattle/pigs/chicken/ewes) and also runs a farm kindergarten. More detailed descriptions of the case study farms are provided below (Table 1: Description of Case Study Farms). The collected information in the table is largely based on farmers' responses to the factual questions in Block 6 of the interview guide (Appendix 3) and should therefore be considered as self-descriptions rather than objective assessments.

Table 1: Description of Case Study Farms

Farm A	
Size (ha):	330 ha
Ownership status:	1/3 own land, 2/3 leased land; bought the land and the farm together with his wife 20 years ago
Labor force:	3 adults (himself, his wife, and a partner), his 6 children
Crops:	Arable farming on 20 ha in cooperation with another farm
Pasture and grassland:	Yes (only, except for the 20 ha arable farming)
Woodland	none
Unused area:	2-3 ha fallow land
Number and species of animals:	Cattle (250-300: 90 Suckler cows, 90 One-year-olds, 90 Two-year-olds)
Dairy farming:	no
Meat business:	yes
Suckler cow husbandry:	yes
Certification:	Naturland
Unions/clubs/associations:	AbL (LVC), Uria, Naturschutzbund
Gender:	male
Age:	48
Education:	graduate
Experience as farmer (years):	40 years total, 20 years on his own farm
Greatest motivation:	Family
Greatest challenge:	Family
<p>Farmer A started without his own farm and built up the present cattle rearing farm from scratch together with his wife in the area of [place A], Hesse, Germany about 20 years ago. They constructed their own slaughterhouse in order to be able to accompany the animals in a most respectful way up to their death and reduce their stress level by keeping the transportation distances as short as possible. As part of an integrated pasture management, the cattle spend at least 10 months a year outdoors on the pasture to maintain medium-high grass in order to increase soil fertility and to ultimately make a positive contribution to climate protection. By focusing on (almost) grassland only, they are able to feed the cattle without other external inputs. The farmer is further concerned about the life of insects and the structure of the ecosystem and therefore acquired a cost- and maintenance-intensive yet insect-friendly double blade mower. His wife and his children bear a large part of the work on the farm and share the enthusiasm for an environmentally and socially compatible small-scale agriculture with local and direct marketing, as well the farmer's international perspective and engagement in the global movement of <i>La Via Campesina</i>.</p>	

Farm B	
Size (ha):	90 ha
Ownership status:	15% own land, 85% leased land together with a partner farm
Labor force:	3
Crops:	Wheat, rye, barley, millet, pea, bean, grain fennel, sugar beet, various intermediate crops, sunflower (the following year), buckwheat Products of market gardening/Orchard meadow: Sweet cherries, apples (apple juice); nuts, mirabelles and others
Pasture and grassland:	40 ha
Woodland	none
Unused area:	None (even though flower strips and hedges officially count as fallow land, but she considers them as tillage and landscape elements)
Number and species of animals:	Suckler cow herd (red mountain cattle) and 3 horses
Dairy farming:	no
Meat business:	Yes, but extensive; cattle rather used as caretakers of the landscape and forage processors
Suckler cow husbandry:	yes
Certification:	Demeter
Unions/clubs/associations:	Active member only in <i>AbL</i> , paying member in other clubs/associations
Gender:	female
Age:	32
Education:	graduate
Experience as farmer (years):	10 years, 6 years with own farm
Greatest motivation:	Her two children
Greatest challenge:	Short days and having the strength to do what you want to do
<p>Farmer B has started organic farming together with her husband in 2013. In 2019 they cultivated 90 hectares of arable and grassland around [place B] in cooperation with a partner company. She is also an active member of the <i>Arbeitsgemeinschaft bäuerliche Landwirtschaft (AbL)</i> in Hesse. She is interested in interdependencies both on a small and large scale and has completed training in permaculture in Australia. Questioning common practices in agriculture, she is fascinated by the versatility of actual options emerging from the creative interaction of human activities and nature's productivity. For 2020, she planned to offer seasonal gardens to bring agricultural activities, knowledge about food and its production closer to the people and to offer place for community and social interaction.</p>	

Farm C	
Size (ha):	67 ha
Ownership status:	38 ha own land, 29 ha leased land
Labor force:	4 (himself as the manager, his wife, 1 partner, 1 trainee)
Crops:	Rye, wheat, barley (spring barley and winter barley), triticale, emmer, spelt, clover grass/red clover, field beans, linseed, maize, mustard, fodder beet, potatoes and others (15 different cultures in total)
Pasture and grassland:	40 ha
Woodland	0,17 ha
Unused area:	Hedges, streams, alders
Number and species of animals:	40 dairy cows and their female offspring, Swabian-Dutch pigs, 30 hens
Dairy farming:	yes
Meat business:	yes
Suckler cow husbandry:	no
Certification:	Since 1.07.2019 in transition from conventional to organic (Demeter)
Unions/clubs/associations:	AbL, BDM (Federal association of German dairy farmers), Interest group for healthy animals, Interest group for healthy manure, Breeder's association Swabian-Dutsch pigs (Advisory Board), Cattle breeding organization, Milch Kontrolle (Milk testing), choral society, sports club, fire department
Gender:	male
Age:	63
Education:	Graduate, doctoral degree (Agricultural Science)
Experience as farmer (years):	Self-employed since 1997 + 2 years together with his parents + education and internships
Greatest motivation:	Hard to tell, great enthusiasm for a lot of things, among them: healthy nutrition and the communication with fellow human beings, passion to (re)discover new (or actually old) things (like linseed), promotion of humus management, promotion of soil life, replenishment of cleared natural landscapes and many other things
Greatest challenge:	Living up to the family's needs
<p>Farm C has existed since 1635 and is run by Farmer C and his family in the 8th generation. The farmer and agricultural scientist gives lectures on more climate-friendly alternatives for manure spreading, GMO-free feed and healthy nutrition. Being aware that pasture farming is the most active contribution to climate protection, he has found a means to massively reduce ammonia emissions also for indoor systems. With two photovoltaic systems and a crop rotation of 15 different crops he enhances his contribution to environmental protection. He further established the first GMO-free region in the district and is strongly committed to the production of health-promoting foods and the dissemination of the corresponding knowledge, such as a milk that is rich in omega-3 fatty acids or the benefits of his self-produced linseed oil.</p>	

Farm D	
Size (ha):	110 ha
Ownership status:	30 ha own land, 80 ha leased land
Labor force:	7+ (herself as the manager, one permanent employee (her son-in-law), 1 person doing a voluntary ecological year (FÖJ), 2 office assistances, 2 cleaners and some other helpers on demand)
Crops:	Seven-unit crop rotation (wheat, barley, triticale, maize, fine-grained legumes (lucerne, clover grass, red clover seed production), coarse-grained legumes (field bean, soybean, lupine), sugar beet, hemp in the coming season)
Pasture and grassland:	10 ha (ungrazed), 5 ha (grazed by 25 ewes)
Woodland	none
Unused area:	none
Number and species of animals:	Cattle (100), pigs (200), laying hens (480), ewes (25)
Dairy farming:	no
Meat business:	Yes (Pig and cattle fattening)
Suckler cow husbandry:	No, but ewe husbandry
Certification:	Naturland (since 2012)
Unions/clubs/associations:	AbL, Naturland e.V., Association for organic farming in Hesse (VÖL), German Red Cross, VdK, several music clubs, Alliance 90/The Greens
Gender:	female
Age:	50
Education:	Apprenticeship as an educator, religious educator and farmer
Experience as farmer (years):	30 years, Operations Manager since 2008
Greatest motivation:	Making the world a better place
Greatest challenge:	Saving the world, remaining steadfast and powerful with all the stress that such a business entails and staying healthy
<p>Farmer D took over the business from her parents-in-law in 2008 and immediately began to set the course for conversion to organic farming. As a trained educator and religious teacher she runs the project “farm kindergarten” in cooperation with the federal working group “Learning Location Farm” to sensitize children from an early age for the origin and production of food and to introduce them to the interaction with animals, nature and agricultural activities. To further increase the general societal environmental awareness and to offer playful encounters with agriculture, she also organizes corn labyrinths with art stations by regional artists with changing mottos every two years – for 2020 it was supposed to be “upheavals”. Moreover, she offers seasonal gardens in order to provide a place for community, social interaction and the experience to plant, grow and harvest fruits and vegetables.</p>	

3.5. Data Collection

After having introduced the interview partners and their agricultural background, the following chapter will provide information on the process of contacting and recruiting the farmers for the research project (Chapter 3.5.1.). The conduct, structure and logic of the interview guide as the data-collecting instrument are presented in Chapter 3.5.2., the first block of which is depicted as an illustrating example (Table 2; for the whole guide see Appendix 3).

3.5.1. Contacting the Interview Candidates and Introductory Information

In three out of the four cases, my research project and my forthcoming contact was firstly announced to the farmers by the mutual contact Jörg Weber. Only for Farm A the very first contact took place in person in the context of an organic farm tour in August 2019, where I could briefly describe my research project and asked for the willingness to participate in an interview. After the interview guide was completed, I contacted all potential interview candidates via email, provided them with further information about the planned study and asked again for their participation (Appendix 1)

Thereby, I introduced the research project rather guardedly to prevent farmers from anticipating possible questions and thus reverting to preconceived reflections during the interviews, which would run counter to the reconstructive research logic behind the open narrative prompts. In terms of content, they were merely notified that I conduct the study within the scope of my master thesis in which I intend to explore the conceptions of nature and the worldviews of agroecologically-oriented farmers in Germany. I further briefly explained the format of qualitative interviews, informing them that it aims for an open conversation with no right or wrong answers and that they are supposed to tell freely what seems important and relevant to them. Based on the experience of one conducted test interview, I also provided an estimated timeframe of 30 to 60 minutes and offered options to interview them via phone, video call or in person on site. In addition, the email already contained information that the interviews would be recorded and transcribed for the subsequent analysis. Likewise, the confidential handling of the interview material and the guarantee of data protection were addressed.

At the time of the actual interview situation, I provided the farmers with this information again verbally (Appendix 2), in order to begin the interview and to offer a brief cognitive structuring. I placed particular emphasis once more on the open design of the interview, by which they have “all the time in the world” to elaborate their experiences and perspectives and assured them that they will not be interrupted by me under any circumstances. The underlying reason for this is that (biographical) excerpts of experience or fictional worlds are to be investigated, the overall character of which can only be grasped through an uninterrupted narrative (Helfferich, 2014: 560). Further, I informed them about the declaration of consent, which they would need to sign after the interview for the material to be used for the study at all (Kruse, 2015: 256-257; 270; Appendices 2; 5). The interviewees received more detailed information about the study in writing only after the interview (Appendix 5).

3.5.2. Conduct of the Interviews and Structure of the Guides

The in-depth interviews were conducted face-to-face at the farmers' homesteads (Farmer A, C, D) and one time at a café (Farmer B) between November 2019 and January 2020. A benefit of interviewing the interviewees in the places of their actual environment can consist in the fact that the location of the interview itself can have a structuring character on the production of the text (Kruse, 2015: 257). More case-specific information on the course of the individual interviews is provided in the individual case excerpts (Chapters 4.1.-4.4.) in the respective section *Research Documentation*.

The developed interview guide is situated between the poles of openness and structuring. It contains certain guiding questions that direct the interview and thereby seek to elicit specific aspects, and at the same time follows the *principle of openness*, which intends to leave room for the interviewees to unfold their subjective systems of relevance, granting them rights to speak in monologue (Kruse, 2015: 209-210). This alleged dilemma is accommodated by the design and structural principle of the interview guide, allowing for a flexible and dynamic approach in terms of an *open structuring*. The respective stimuli in form of open narrative prompts (*Erzählaufforderungen*) were set and formulated in a way that they focused thematically yet allowed the farmers sufficient opportunities for a self-structured positioning and thematization (ibid.: 212-213).

The interview guide consists of six different topic blocks addressing different research dimensions. The first three blocks each started with broad narrative prompts to open the respective topic field, while giving the interviewee room to elaborate her or his own perspectives and relevance settings. The content-related aspects (*Inhaltliche Aspekte*) were supposed to direct my attention to content I considered important with regard to the research questions. Without interrupting the narration, I signaled my attention and interest at times with para-linguistic expressions such as "mhm" or "aha", which intended to maintain the flow of speech. After a clear end of the farmers' narrations, the immanent follow-up questions (*Aufrechterhaltungsnachfragen/immanente Nachfragen*) were supposed to encourage further narration by taking up what had been said so far and by trying to deindexicalize the statements (e.g.: "What exactly do you mean by that?" "Can you further explain?"). If previously determined aspects (*Inhaltliche Aspekte*) were not or only briefly addressed, I also used exmanent, more concrete follow-up questions (*Konkrete/exmanente Nachfragen*). Through the separation of the phases, it was possible to investigate which topics were introduced by the interviewees themselves, which aspects were avoided, and what the meaning of thematization and non-thematization might have been (Rosenthal, 2014: 514). With this set-up, the guide moved along the continuum from the open to the more structured in each topic block, clearly prioritizing the respondents' space to unfold their systems of relevance (Kruse, 2015: 213-214).

The first block invited the farmers to openly narrate their farming life trajectories and will be presented as an example in the following (Table 2, for the entire interview guide see Appendix 3). Two more blocks with open narrative prompts followed this first block, one regarding the farmers' motivation and another one concerning their conception of nature. Block 4 framed the end of the interview with an open-ended question, giving the interviewee the opportunity to elaborate on aspects that have not been addressed (enough) so far. Block 5 provided the interviewees room for feedback, which I intended to use to reflect on and optimize the interview guide. In addition, it invited the participants to express their motivation for participating in the interview, which in turn was revealing regarding their endeavors and broader visions. The last block consisted of several factual questions and served to collect additional information about the farms and farming systems if these were not known or

communicated before. Since such factual inquiries can be counterproductive for maintaining open communication patterns, I deliberately placed them in a bundle at the end of the interview (ibid.: 288).

Immediately after the interview, I created bullet-point postscripts in which I documented particularities of the conversational atmosphere, specific interactional phenomena or disturbances that, due to their mostly para-linguistic nature, are regularly not reflected in the audio recordings (ibid.: 278, Appendix 4). However, they can be significant for the analysis and were included in the individual case excerpts, mostly in the respective *Research Documentations*. I subsequently transcribed the audio recordings of the interviews using the software *f4transkript*. For the transcription system and the interview transcripts see Appendix 6.

Table 2: Interview Guide Block 1

Block 1: Erzählaufforderung		
Wie sind Sie zu dem gekommen, was Sie heute machen? Also zu der konkreten Art der Landwirtschaft gekommen, die sie heute betreiben? Erzählen Sie mir doch mal von ihrem (persönlichen) Weg.		
Inhaltliche Aspekte	Aufrechterhaltungsfragen/ immanente Nachfragen	Konkrete Nachfragen/exmanente Nachfragen
<ul style="list-style-type: none"> • Entscheidende Momente im Leben • Biografisch • Identität • Positionierung • Abgrenzung • Bewusstsein • Verantwortung 	<p>Deindexikalisieren:</p> <ul style="list-style-type: none"> • Wie äußert sich das? • Wie setzen Sie das um? • Sie hatten vorhin erwähnt, dass [...] Was meinen Sie damit? • Was ist Ihnen dabei (besonders) wichtig? • Haben Sie das immer schon so gesehen? Wie ist es dazu gekommen? (Entwicklung) 	<ul style="list-style-type: none"> • Gab es da entscheidende Momente/Wendepunkte, an die Sie sich erinnern? • Wie würden Sie ihren (heutigen) Ansatz beschreiben?

3.6. Qualitative Reconstructive Research Design and Questions to the Data: *Research Object-specific Heuristics*

Bringing to light other people's systems of relevance is one of the central tasks and characteristics of qualitative research in general and implies the examination of how social meaning is constructed by the application of linguistic means (signs and symbols) and how such social meaning is expressed in a documentary manner (Kruse, 2015: 472). The basic assumption hereby is that the social reality is constructed through linguistic and non-linguistic actions and that the interviewed person's subjective perception of this reality can be analyzed through a hermeneutic reconstructive approach.

The present study aimed for the reconstruction of agroecological farmers' subjective patterns of interpretation and their worldviews, especially with regard to their relations with nature and society. While recognizing the manifold possible determinants behind the decision to adopt an agroecological approach, the particular interest focused on the reconstruction of the respective concepts of nature and the concomitant self-world relations.

Clearly departing from the normative paradigm with its strictly deductive approach, the here applied method, which is based on the *integrative basis procedure* (*Integratives Basisverfahren*) by Jan Kruse (2015), accounts for the impracticality of a solely inductive analysis. To this end, *research object-specific heuristics* (*forschungsgegenständliche Analyseheuristiken*) were used to openly structure and systemize the analysis. These heuristics can be understood as *sensitizing concepts* (Blumer 1954 as quoted in Kruse, 2015: 480) which functioned as *scanners* or interpretation guides for detecting the respective structures of meaning within the text, thereby accounting for the indexicality of all linguistic terms. Accordingly, all terminological concepts can only ever have a sensitizing character (Kruse, 2015: 480-481).

The qualitative reconstructive research design was set up as follows: in a first phase, the guideline-based narrative interviews were analyzed individually using a bottom-up approach. Alongside the bottom-up guided analysis, several *research object-specific heuristics* (Table 3) were deployed, which were then complemented with the respective bottom-up generated categories in order to identify new relevant dimensions in the course of the analysis. In iterative cycles, the "research categories develop[ed] *with* the research, not before it" (Lowenhaupt Tsing, 2015: ix, emphasis in original). Significant concepts in terms of semantic patterns on the level of content ('What') together with the concomitant *thematization rules*, i.e. patterns of the way something is expressed ('How'), were identified following these heuristics. Condensed into motifs, they were analyzed and interpreted in the individual case excerpts, supported and illustrated with central quotations (Chapters 4.1.-4.4.; Kruse, 2015: 618 et seq.). Following the key point analysis, the case excerpts each provide a concluding and more densified interpretation of the narrative with regard to particularly salient elements of the respective farmer's worldview and her/his conception of nature.

The second phase entailed a comparative analysis of the single cases (Chapter 4.5.). The material was examined with regard to consistent central motifs and *thematization rules* across cases. Without claim to generalizability, I identified striking similarities and interesting differences, thus elaborating constituent elements of the farmers' cosmovisions (Chapters 4.5.1.-4.5.6.) from which I then tried to derive their role in a Western society (Chapter 4.5.7.).

I explored the farmers' concepts of nature and the concomitant self-world relations by investigating five domains: (1) their understanding of nature and human-nature relations; (2) the profession of farming and its objectivity; (3) the nature of their knowledge; (4) human

responsibility towards the global crisis and climate change; and (5) their relation to the political and food systems.

The two overriding research questions I asked are:

- (1) How does the worldview of agroecological farmers in Germany make use of a decolonized perspective in order to reconstruct their relationship to nature?
- (2) Which place do farmers perceive for themselves in their environment regarding important societal challenges such as climate change?

In order to approach these questions, I formulated the following *research object-specific heuristics* for each domain (Table 3).

Table 3: Research Object-specific Heuristics Used as Scanners in the Text Analysis

<i>Understanding of nature and human-nature (power) relations</i>	How is nature described? Are there resonances with non-Western concepts of nature, e.g. Mother Earth, a home and living being or rather with Cartesian concepts, e.g. nature as a resource (for cultivation)?
	How does the interviewed person position him/herself in relation to nature? How are power relations conceptualized?
	How does the interviewed person perceive he/she reunifies his/her needs and the needs of nature through their activities? Is there a creative interaction between human activities and nature's productivity? Do they consider mutual transformation?
<i>Work conception, professional identity and spirituality</i>	Does the interviewed person mention spiritual aspects? What is the role of personal relationships to entities in the farming system, that is, the significance of emotion, instinct and intuition in the farming activities?
	How does the interviewed person describe his/her professional identity in relation to other farming approaches?
	Does the interviewee rather care about competition or cooperation? Does he/she mention (de)growth?
<i>Knowledge and systems thinking</i>	How does the interviewed person deal with the complexity of the natural system he/she interacts with? How does he/she perceive the role of scientific knowledge and technology? Does he/she mention uncertainty or the possibility of not-knowing?
	What is the aim of farm management (integrity and stability – or what other concepts are guiding principles)? Does the interviewed person make use of linear thinking or do they think in circles?
<i>Responsibility</i>	What is the perception of the interviewed person of his/her responsibility? At which scale (farm or world)? Do they

	hint at a “system” identity, such as planetary citizen or earth steward?
	How does the interviewed person perceive his/her (social-ecological) agency regarding the global environmental crises and especially climate change?
	How does the interviewed person describe his/her role in socio-political change? On what scale?
<i>Embeddedness/connectedness vs. individuality and autonomy</i>	How does the interviewed person position him/herself in the community, in society, in the world?
	How does the person relate to the higher systems he/she is embedded in, especially the political and food systems? Does the person strive for autonomy?
	Is the person’s agenda at the farm or local scale? Or is it connected with other people’s agendas and aimed at enacting change on a bigger scale?
	How is globalism perceived and what are the perceived relationships between the global and the particular, the whole and subsystems?

4. Qualitative Reconstructive Analysis: Results

The following section documents the results of the analysis first as bundled assessments in the form of case excerpts for each interview partner. Subsequent to an introductory and context-setting research documentation (Chapters 4.(1-4).1.), the individual case structures are presented in reference to their key points, which were elaborated along the *research object-specific heuristics* (Chapters 4.(1-4).2.). In a concluding interpretation, central concepts of the respective case are interpretatively related to each other (Chapters 4.(1-4).3.; Kruse, 2015: 618 et seq.). In a separate step, a comparative cross-analysis was conducted based on the results of the individual cases, focusing on striking similarities as well as interesting differences (Chapter 4.5.).

4.1. Case Excerpt Farmer A

4.1.1. Research Documentation

The first contact with Farm A was made through an organic farm tour, which took place on the 31st of August 2019 and had been organized by Jörg Weber as a member of the board of *BIONALES e.V.* (club citizens for regional agriculture and food) and the *Bürger AG* (citizen corporation for regional and sustainable management). Together with approximately 40 other people interested in local organic farming, I met farmer A's wife and some of his children, who presented their farm and hosted us with home-made soup and cake. Since farmer A had been indisposed due to another meeting organized by the *AbL*, his wife gave a presentation on their agricultural and political activities and especially on the specifics of their cattle rearing. Thus, I already acquired some valuable information on the farm and took the opportunity to introduce myself and the research project and to ask whether one of them would be willing to do an interview with me. Having been a student at the Justus-Liebig University herself, she agreed without hesitation and told me to contact her again via e-mail. Shortly after, I approached her with more detailed information about the study and she again confirmed her willingness to participate. After the interview guide had been finished, I then contacted her by phone as we had discussed to set an appointment. She then instructed me that it would be her husband, not her, giving the interview, since he is the regular contact person in matters of communication as he feels more comfortable with it. Thus, I called him and we set an appointment for the interview rather short-term on December 2nd, 2019 in the afternoon.

At the time of the interview, Farmer A was 48 years old. He and his wife have six children. They started without their own farm and built up the present cattle rearing farm from scratch in the area of [Place A], Hesse, Germany about 20 years ago. They constructed their own slaughterhouse in order to be able to accompany the animals in a most respectful way up to their death and reduce their stress level by keeping the transportation distances as short as possible. As part of an integrated pasture management, the cattle spend at least ten months a year outdoors on the pasture to maintain medium-high grass in order to increase soil fertility and to ultimately make a positive contribution to climate protection. Accordingly, the grass is stimulated to grow by the cows eating and can thus store large amounts of carbon dioxide. By focusing on (almost) grassland only, they are able to feed the cattle without other external inputs. The farmer is further concerned about the life of insects and the structure of the ecosystem and therefore acquired a cost- and maintenance-intensive yet insect-friendly double blade mower. His wife and also his children bear a large part of the work on the farm and share the enthusiasm for an environmentally and socially compatible small-scale

agriculture with local and direct marketing, as well the farmer's international perspective and engagement in the global movement of *La Via Campesina*.

Due to rather poor public transport accessibility, I arrived at Farm A by car together with my husband about 30 minutes early. We ran into Farmer A outside of his house when he noticed that he had completely forgotten about our appointment. He was just about to leave the farm in order to check on his cattle on a pasture a few kilometers away. Even though he seemed stressed, he was still very friendly and welcoming, immediately offered to address him on a first-name basis and spontaneously asked us to accompany him to his cattle, which we happily agreed to. During the ride in his pick-up truck, he already told us a lot about his (agricultural and political) activities and we engaged in an animated conversation. However, I had to remind myself and him not to over-anticipate certain themes as we were talking off-the-record. Having returned to the farm about another 30 minutes later, his son crossed our path, looking for a sheep that had escaped the slaughterhouse. Together with Farmer A we left the farm once more to help him retrieve the missing animal, which remained unsuccessful. Finally returning to the house, we sat down in his living room, where he offered coffee. My husband waited in a separate room in order for us to talk undisturbed – which was possible only for a limited time. The interview got interrupted several times by incoming phone calls, children entering the room and once because Farmer A forgot about another appointment, he had with two other people. One time we had to pause the interview for about 10-15 minutes as he had to slaughter a cow in his slaughterhouse next door. He asked us to accompany him once again, which we did and witnessed the whole procedure. Afterwards we returned to the house, where we continued the interview in his office hoping for less interruptions.

Due to these external conditions and especially because of the fact that he had forgotten about our appointment, the atmosphere was somewhat stressful and hasty even though he was always very friendly and endeavored to answer the questions. Unlike other farmers with different types of production who experience the winter and pre-Christmas season as rather relaxed and decelerated, Farmer A perceives this time as the most stressful and busiest of the year resulting from the seasonally high demand for meat. The interruptions combined with my own insecurities and nervousness – which arose also due to my inexperience as an interviewer since it had been the first real interview besides the pre-test interview – caused some difficulties as I found it challenging to tie in with the content where we left off and to keep the flow of speech going. Unfortunately, some thought processes could therefore not fully unfold. I also got the impression that the stress at times caused him difficulties focusing on the questions and/or he was irritated with the open design of the guide, as he repeatedly reassured himself what the exact question was after he had already started his flow of narration. The lack of time additionally induced the feeling to better finish quickly and restrained me from some more specific inquiries. This impression was confirmed by his noticeable relief at the end of the interview after about 45 minutes (net time). As the research set up allowed me to only share certain basic information of the study in advance (Appendices 1; 2), he appeared a little skeptical about the project and its intentions. Despite these somewhat difficult external conditions, I want to underline that Farmer A tried not to let me feel his stress and was very helpful and kind throughout.

4.1.2. Key Points Analysis

The following key points have been identified along the *research object-specific heuristics* in order to list significant concepts in terms of semantic patterns on the level of content together with the concomitant *thematization rules*, i.e. patterns of the way something is expressed. These patterns on both levels ('What' and 'How') are to be condensed into motifs in a first interpretative step and will be illustrated with anchor quotations as well as commented on with further annotations. In this way, initial readings will be worked out as a preliminary stage of a subsequent, more consolidated interpretation, making visible what was said and how (Kruse, 2015: 618 et seq.).

4.1.2.1. The Human-Nature Divide: A Colonial View

The following text passages point at internalized cultural patterns of meaning that reflect the typically Western human-nature divide. The concept of nature is described as ideally untouched by humans (romanticized images) as opposed to highly transformed areas such as monocultures which are not or less considered to be nature but industrialized pieces of land. Thus, Farmer A draws on the Western forms of environmentalism, i.e. the dichotomy of nature conservation (humans excluded) and nature exploitation (excessive use). At this point, the human subject is not described as necessarily embedded in the flow of natural constitutive relations but rather as – if present – a disturbing factor whose unavoidable negative influence should be kept to a minimum. The following text passages have been chosen as illustrating key points, which will be shortly commented and interpreted.

In paragraph 12, Farmer A forms a contrast of “pure nature” and his human agricultural activities as they are portrayed to be mutually exclusive. Implying that “pure nature” would preclude any human interferences, he understands his task as a farmer in the *Gestaltung* (design) of nature in order to produce food for humans. The two ends, i.e. humans and nature thus clearly come to light with him in active agency. Thereby he is aware of his power yet also of the concomitant responsibility to exert it in a most positive and sparing way for nature – on the other side of the spectrum.

also das ist nicht äh die PURE naTUR was hier hier beTREIBen [mhm] sondern
des is äh=es is eine=eine geSTALTUNG der natur [mhm] UM ein LEBENSmittel
zu erzeugen. (Transcript Farmer A, paragraph 12)

In paragraph 49 of the interview (a key section regarding Farmer A's concept of nature that will be analyzed in greater detail in Chapter 4.1.2.2.), he refers to “nature in the proper sense” as in the original meaning or purpose and explains that this original or proper nature can exist without and independent from humans. The prosody (accentuation and intonation) underlines the agency's reversal from active to passive and stresses the one-sidedness of this relationship of independence. The power relation is now turned around: humans need nature; however, nature does not need humans.

The human-nature dichotomy is even reinforced by his semantic pictures concerning his associations with nature. These entail high mountains, seas (as areas that are supposedly less or not at all exposed to anthropogenic influences) or even national parks as the epitome of the classic Western idea of nature conservation – not tolerating any kind of human use, except for contemplation. The local adverb “somewhere” could indicate a simple lack of knowledge concerning the exact location of these supposedly untouched “original” places yet

could also signal a certain indifference in the sense of “somewhere, but not here”. What is decisive at this point is his marking “on the one hand”, because this concept of nature by no means covers his entire conception, as I will outline in Chapter 4.1.2.2., but represents only a small part of what Farmer A associates with nature due to his socio-cultural context.

also (.) [mhm] naTUR im EIGentlichen SINNE (.) BRAUCHT den MENSCH ja NICHT (.) [mhm] die naTUR existiert !OHNE! uns (1) äh:m (3) na!TUR! wenn ich an NATUR denke=denke ich vielleicht an (.) an=an HOCHgebirge oder an (1) an vielleicht noch an die MEERE oder an JA vielleicht irgendwo welche (.) NATIONALPARKS (.) auf der EINEN SEITE. (Transcript Farmer A, paragraph 49)

Another key point illustrating the typical aspects of the Western human-nature divide can be found within the same paragraph, when Farmer A states in contrast to what he associates with nature, what he does not or much less considers to be nature, i.e. industrialized forms of agriculture resulting in monocultures for which the soil only forms a substrate on which a raw material is produced (Cartesian paradigm). He thereby also touches upon the – once again typical Western – instrumental consideration of nature as a resource and its excessive use by humans. Together with the romanticized images of nature above, Farmer A addresses both hegemonic currents of Western environmentalism, which political ecologist Martinez-Alier named the ‘Cult of Wilderness’ and the ‘Gospel of Ecoefficiency’ (as quoted in Muraca, 2016: 32). He rather implicitly dismisses the latter by not recognizing it as nature, which for him presents a highly positively connotated term or even the ideal. Nature appears as the overriding model, a nature-oriented mode of production based on this model is therefore desirable, and an industrialized form of agriculture is constructed as a counterpart. This creates a hierarchy with three levels: pure, unspoiled nature as the highest, near-natural modes of production, when humans cannot be excluded as the middle, and an industrialized mode of use as the lowest. The near-natural production method, which possibly breaks up this dichotomy, will be discussed separately below (Chapter 4.1.2.2.)

wenn ich an=wenn ich an=äh eine MONOkultur an ne !MAIS! oder WEIZEN monokultur denke (.) des hat für MICH (.) schon (.) verhältnismäßig !WENIG! mit naTUR [mhm] zu tun (.) [mhm] sondern DA bildet der BODEN (.) ein SUBS!TRAT! auf dem ein ROHstoff erzeugt wird (.) [mhm] äh also das IS eine- das is !KEINE! natUR (.) natürliche oder naturNAHE produktionsweise. (Transcript Farmer A, paragraph 49)

The last key point, where Farmer A seems to take a recourse to internalized cultural patterns of meaning that reflect the typically Western human-nature divide, can be found in paragraph 53. In this section he once again positions himself as someone who intervenes massively with nature, which for him is an unavoidable and inevitable fact for it poses the basis for (his) life. The inevitability of his intervention with nature is reinforced by the parenthesis “des muss ma so sagen”, which he even repeats once more and further can be interpreted as his acknowledgement of its indisputability: he stands by his actions, accepts the consequences and takes on the responsibility – even though he seems to have a guilty conscience. His prosody underlines that he is aware of the extent and intensity of his interventions (“MASSIVEN !EINGRIFF!”). However, even though he once more affirms his attempts to intervene in a sustainable and sparing way, he cannot reach the ideal scenario, i.e. untouched nature. Thus, he seems to face a constant trade-off between his means of livelihood and the culturally internalized ideal of pristine nature.

JA man muss- (.) ich=ich bin jemand der=der=der en MASSIVEN !EINGRIFF! in die naTUR VORnimmt (.) [mhm] des muss ma so sagen (1) ich versuch das auf ne ART zu TUN (3) JA die möglichst SCHONend ist [mhm] die=die aber (.) aber die=die=die naTUR (.) nicht so LÄSST wie se Elgentlich WACHSEN würde so gern ma des im idealfall gern tun wöllte (1) aber (1) JA unsere lebensGRUNDlage is äh sch- <<Telefon klingelt>> IS hier der EINGRIFF in die naTUR des muss mer [mhm] so sagen. (Transcript Farmer A, paragraph 53)

4.1.2.2. *Striving for Equal Relations: Towards a Decolonial View*

The more Farmer A goes into detail about his actual practices and takes time to reflect on his interactions with nature, the more the initial impression of a nature-human divide and the dominant dualism of nature conservation and the excessive use of natural resources is softened as his practices reveal a striving for more equal relations between humans, nature and other non-human agents. The following key passages have been chosen for the illustration of this finding.

In paragraph 8, Farmer A gives examples of how his self-proclaimed philosophy of sustainability is reflected in his agricultural activities. He therefore refers to the cost- and maintenance-intensive yet insect-friendly double blade mower as well as to their self-constructed own slaughterhouse which enables them to reduce the animals' stress levels by keeping the transportation distances as short as possible. These illustrating examples disclose that he values the lives of insects and small mammals – (also) due to their significance for the biodiversity of the ecosystem – as well as of his cattle as he regards them as living beings who deserve to be treated with care and respect even though he ultimately kills them. Both acquisitions are representative of his attempts to establish more egalitarian relations and to reconcile the conflicting interests of human needs for food production and securing one's livelihood with the needs of nature and non-human agents. By mentioning that they were the first in the state of Hesse to acquire the costly double blade mower, he stresses his strong conviction to do the right thing as he is not deterred even by hurdles such as high expenditure or limited experience.

zum BEIspiel (.) warn wir jetzt die ERsten in HESSEN (.) die angefangen ham wieder mit (.) in DEM UMFANG mit nem DOPPELmessermähwerk zu MÄhen (.) das heißt wir ham uns ein=eine maschiNe angeschafft=eine MÄHtechnik angeschafft (.) die inSEktenschONend scho- äh MÄht (.) u:nd=ä:hm (.) !JA! was mit viel RIsiken verbunden WAR=auch mit !VIEL! (1) ÄRger und AUFWand ZEITlich und FInanziell [mhm] (.) äh: wo wa aber jetzt doch äh IMmernoch der überzeugung sind dass DAS (.) das RICHTige is (.) !UM! (2) eine möglichst POSitive !FORM! der landbewirtschaftung zu prak-praktiZIERN (.) [mhm] ODER wir habn uns jetzt en SCHLACHTHAUS (.) geBAUT hier am HOF äh dass wir die tiere nicht mehr TRANSSportIERn müssen. (Transcript Farmer A, paragraph 8)

With “auf der ANnern SEITE” he ties in with his previous remarks concerning his associations with nature in paragraph 49 (analyzed in Chapter 4.1.2.1.) and thus signals the beginning of his comments that point at other decisive components of his conception going beyond the Western human-nature divide. He emphasizes in an urgent way – marked by strong accentuations – again the above-mentioned one-sided relationship of dependence and appeals in an active collective agency to assume responsibility for preserving and protecting the foundations of human life. One key point for the recognition of his thought process is

particularly striking: in his call to preserve the natural foundations of (human) life, he swings from “in einer (.) möglichst REINEN” to “möglichst in!TAKTEN! form”, thus opening up the possibility of a relationship that is inclusive of human beings. After all, this appears to be the overall goal of his farming practice. For the first time he seems to mitigate the human-nature dichotomy he referred to before. However, it could also indicate that he does not consider “pure nature” an option for the mere presence of humans and thus concludes that the damage resulting from human existence must be kept as low as possible.

auf der ANnern SEITE denk ich natürlich an <<Telefon klingelt>> unsere (.) natürlichen (.) LEBENSGRUNDLAGEN (.) die WIR versuchen zu (2) erHALTEN und äh JA und überhaupt die die !GRUND!LAGE sind für unser (.) für unser DASEIN und (.) äh (.) die wir auch !BRAUCHEN! (.) [mhm] !UM! (1) SO zu LEBEN (.) äh wir MÜSSEN (.) mit diesen naTÜRLICHEN GRUNDlagen das HEISST (.) unsern BODEN (.) unser WASSER unsere (.) <<Telefon klingelt>> Artenvielfalt die LUFT (1) äh=äh die sind für !UNS! WICHTig und die müssen=müssen !WIR! in einer (.) möglichst REINEN oder was=möglichst in!TAKTEN! form erHALTEN (.) um existTIEREN zu können (.) [mhm] also ich denke mal SO RUM muss man die SACHE schon !DENKEN! (.) [mhm] und=äh WIR sind GRAde daBEI diese LEBENSgrundlagen (1) massiv zu zerSTÖRN (.) und DAMit auch (1) UNSERE geWACHsene geSELLSCHAFT äh:m (2) naja die lebensGRUNDlagen zu ent!ZIEHEN!. (Transcript Farmer A, paragraph 49)

Yet, in the further course of paragraph 49 he continues to dissolve the dichotomy by clearly stating that his concept of nature can include human existence and use. He cites prime examples such as permaculture or agroforestry for the illustration of an egalitarian and symbiotic relationship, which can encompass many different species. Thus – as opposed to his initial statements – nature for him is not necessarily untouched by humans but can also include nature-oriented production methods that are beneficial for all parties involved. By further referring to the geological epoch of the Anthropocene he acknowledges the significant human influence on basically every ecosystem on the planet leaving no more room for untouched nature. The incipient internalization of this awareness can be seen again in the last sentence when Farmer A corrects the terminology from “NATUR” to a more inclusive “FÜR die=für die ÜBrige umwelt”.

also natUR is für mich auch eine !WIESE! eine artenreiche wiese (.) wo=wo=wo TIEre drauf laufen auf denen ich aber auch (.) ein FLEISCH erZEUGE (.) was äh (2) was der=der erNÄHRUNG dient (1) [mhm] ähm (2) en ACKER (.) eine=eine geMÜSEKULTUR eine MISCHKULTUR also=äh=äh die (.) kann es=die=die=die NA!TUR! (.) wenn ma davon ausgeht dass sie vom MENSCHEN gestaltet is und dass (1) wir LEBEN nun im=mim ANTHROPOZÄN [mhm] ähm (1) es KANN aber einen GANZ (.) einen HOCH (1) komplexes BIODIVERSES system sein wenn ich an=an PERMAKULTUREn oder AGROforst denke [mhm] wo ich !GANZ! VIELE verSCHIEDENE (.) SPEZIEs auf=auf kleinem RAUM=äh=äh ihre existENZ haben (.) WAS aber auch UNSERER (1) unserer lebensgrundlage zu !GUTE! kommt (.) [...] es gibt produktionsweisen=!HOCH!PRODUKTIVE produktionsweisen also auf denen ich auch INTENSIV und (.) äh=äh=öh richtig ähm (.) also (.) !VIEL! NAHRungsmittel erzeugen kann DIE aber auch (.) ähm (1) naturNAH oder (.) SO gestaltet werden dass sie FÜR die (.) NATUR oder FÜR die=für die ÜBrige umwelt (.) eine GRUNDlage bildet. (Transcript Farmer A, paragraph 49)

His conception of human embeddedness in nature and a striving for more equal relations manifests itself once more very clearly in paragraph 51, when he describes the relationship between the land, the animals and humans as a triangle within which each party must react to

the others. The agency changes from passive to active as humans need to react to circumstances, but also shape nature from within as they are embedded in nature. The rather prominent stuttering in this paragraph (“und=und=und“, “wir=wir=wir=wir“) can be interpreted as a wrestling for the right words in order to describe this complex more egalitarian relationship that departs from Western topoi depicting humans as the deciders and conquerors of nature and further gives an indication of the struggle to adopt a different mindset.

JA (.) des äh des is für uns SCHON also natürlich wenn wir DRAUSSEN unterwegs sind und da is die WIEse da is des (1) da sind die KÜHE und da sind WIR (.) äh dann is das schon son (.) son DREleck in dem wir uns und=und=und naJA unsre LEBENSWEISE (.) äh is auch äh: (.) natürlich wir=wir=wir=wir sind äh (1) SEHR stark EINGEBETTET in die naTUR wir LEBEN mit heiss und kalt und äh den UMSTÄNDEN wenn die pflanzen wachse:n=wir müssen=wir müssen daRAUF REAGIEREN (.) [mhm] wie die natur und DA sind wir schon natürlich hm (.) naJA wir sind en erHEBLICHER TEIL also wir geSTALTEN die natur ja. (Transcript Farmer A, paragraph 51)

4.1.2.3. Denial of Spiritual Aspects: Staying on the Safe Side

The following text passages illustrate the impression that frontal questions whether spiritual aspects play a role for his work provoked rather fast and less-reflected responses which yet have been revealing of cultural patterns of meaning and Western topoi, granting insight into Farmer A's socio-cultural background. Accordingly, he initially either denied or was rather reluctant regarding the significance of spiritual aspects, such as feeling, emotion and intuition for his agriculture and interactions with nature and rather positioned himself as a rational human being. His insecurity and uneasiness with addressing these aspects in a professional context manifested among others in longer pauses, the usage of weak verbs, various terminations of his sentences and delay particles.

In paragraph 43, Farmer A shows some indecisiveness and uncertainty whether spirituality plays a role for him as a farmer as he claims to need more time to think about the question and uses weak verbs, such as “glauben” to describe his thoughts. The paragraph allows the listener to participate in the process of his train of thought and his inner disunity as he seems to wind back and forth between denying and confessional elements. Hence, he firstly states not to be a very spiritual person – which surely leaves room to be a spiritual person up to a certain extent – however he then rows back a little by admitting being emotionally moved by certain moments with nature. He pauses his remarks twice for about two seconds to be able to further reflect and contemplate, followed by “äh” as another deceleration particle which can be interpreted as a cognitive gear shift that synchronizes his thinking and speaking. By breaking off his phrases and interrupting himself with a strongly accentuated “NEE das kann ich ned SAgen dass ich jetzt” he on the one hand seems to deny himself to further illustrate his supposedly spiritual side. On the other hand, he thereby negates to be a spiritual person as such. Accompanied by an insecure laugh, he continues to describe himself as a too rational person – in the sense of being too rational to be spiritual – and again inserts the weak verb “glaub”, which further reinforces the impression of uncertainty. In contrast to this, the subsequent sentence, which he formulates with way more confidence (“aber natÜRLICH”), again grants some significance to spiritual aspects although in a rather unspecified way (“JA da is was”). Thus, he never closes the gate completely as he seems highly insecure about presumably both, his actual attitude or conviction and about the mere act of talking about it. It

appears to be a sensitive topic, which he feels uneasy to talk about, thus indicating the existence of a personal boundary and limit to the scope of the topic.

da müsst ich jetzt LÄNGER drüber NACHDENKEN (1) also (2) ich glaub NICHT dass ich jetzt ein sehr spirituELLER MENSCH bin (.) [mhm] natürlich hat man seine momENTE in der !NATUR! (.) [mhm] (1) die einen be!WEGEN! (2) aber (2) also ich=äh ich kann- NEE das kann ich ned Sagen dass ich jetzt- ich bin glaub zu <<lachend>rationAL> (.) [mhm] äh: (1) aber natÜRLICH gibts momENTE wo ma=wo ma sacht JA da is was. (Transcript Farmer A, paragraph 43)

The impression of arising discomfort concerning spirituality related themes is further fortified by Farmer A's statements in paragraph 24, when he mentions the term "MITgeschÖPFE". Applying this biblical and usually theologically employed word in the context of his desired assumption of responsibility by his children, he immediately tries to mitigate the spiritually assonant expressiveness of the term by saying that this might seem pathetic and emotive and thereby adds a negative and derogatory connotation. Instead of "MITgeschÖPFE", he then suggests the more wordly terms of environment and society.

ich wünsch mir einfach ne LEBENSEinstellung DIE mmmhh (2) die ge- die gePRÄGT is von der MITVERANTWORTUNG gegenüber unserer UMWelt gegen uns über= unsern (.) [mhm] gegen- !JA! gegenüber den (2) gegenüber den !JA! zum einen gut MITgeschÖPFE is jetzt vielleicht en bisschen PATHETISCH aber (.) äh=äh gegenüber der UMWelt und gegenüber unserer geSELLschaft. (Transcript Farmer A, paragraph 24)

Different from paragraph 43, in which Farmer A answered the question regarding the role of instinct, emotion and spiritual aspects for his work rather reluctantly and self-consciously, he seems more self-assured talking about the role of technology and scientific knowledge. To these he assigns a much greater importance and he even seems joyful addressing these matters ("naJA die spielen dann in unserm LEBEN doch ne (.) <<lachend>!VIEL! GRÖSSere ROLLE", §45). He does not at all refrain from ascribing significance of emotion and feeling to machines and technology in a form of an almost childlike enthusiasm, which he considers to be gender-related ("also oft sind die- ist die TECHNIK ja auch en SPIELZEUG für die=für die GROSSEN BUBEN (.) [mhm] und=äh ich glaub DA spielt EMOTIO:N (.) mittler- also spielt ne !GROSSE! ROLLE (.) [mhm] äh wenn ma=wenn die BURSCHE auf ihrem großen TRAKTOR sitzen und sich freuen wie BOLLE dass se so ne MASCHINE beWEGEN können", §45). Thereby he is not uncritical of this excitement for machines and technology and tries to put it into perspective by classifying them as a means to perform his work in a 'rational' and/or 'sustainable' way ("verNÜNFTIG oder was heißt vernünftig äh JA (1) NACHHALTIG", §45), not assigning them a self purpose. His choice of words is particularly telling since it first seems that he tries to moderate his expressed emotionality by emphasizing his 'rational' and 'reasonable' ("verNÜNFTIG") approach and then quickly reconsiders his wording, switching to the adverb 'sustainably' to describe his method. Thus, he differentiates in an interesting way: to act sustainably seems to appear 'reasonable' in the sense of 'appropriate' to him and yet might encompass more than just the 'rational'. Thereby he implicitly paves the way to consider and adress feelings, emotions and a more sensual relationship to nature in his agricultural approach.

However, the impression remains that it is a lot easier for him to position himself as a rational person with a certain enthusiasm for technology and machines than to talk about emotion in connection with his attitude towards nature. While he appears rather inwardly

inhibited with the latter, he seems to have to restrain himself with his remarks on his and his sons' enthusiasm with the former in order to not appear too technophile. He is walking a tightrope trying to meet the assumed expectations of a (Western) society as a whole (by not being too spiritual or even esoteric) and those of his peer group (who believe in systemic changes rather than in technological fixes) at the same time.

naJA die spielen dann in unserm LEBEN doch ne (.) <<lachend>!VIEL! GRÖSSere ROLLE> [mhm] also allein die AUSwirkungen die wer ham oder die TECHnik spielt natürlich ne=ne !IMMENSE! ROLLE ähh ja es is auch was was meine SÖHNE natürlich beGEISTERT und äh (.) wo wir immer dran ARBEITE:N maschinen REPARIEREN und maschinen FAHRN und welche=welche ART der technik (.) <<seufzend>JA:> des is äh ich=es=VIELLEICHT auch en !PROBLEM! in de LANDwirtschaft dass (.) diese TECHNIKBE!GEISTERUNG! von äh grad von MÄNNERN vielleicht (.) [mhm] dess dass sich eine FORM der LANDwirtschaft !HERAUS!gebildet hat !WIE! se sich HERAUSgebildet hat (.) also oft sind die- ist die TECHNIK ja auch en SPIELZEUG für die=für die GROSSEN BUBEN (.) [mhm] und=äh ich glaub DA spielt EMOTIO:N (.) mittler- also spielt ne !GROSSE! ROLLE (.) [mhm] äh wenn ma=wenn die BURSCHE auf ihrem großen TRAKTOR sitzen und sich freuen wie BOLLE dass se so ne MASCHINE beWEGEN können (1) [mhm] ABER (1) hm da=da verSUCHen mer- also da sind wir SCHON en bisschen (2) äh disTANZierter (1) wir versuchen die technik SCHON zu beTRACHTEN als MITTEL UM (1) verNÜNFTIG oder was heißt vernünftig äh JA (1) NACHHALTIG unsere=unsere=unsere ARBEIT zu machen. (Transcript Farmer A, paragraph 45)

Moreover, through the frequent use of vocabulary usually related to the semantic field of the industrial model and productionism, such as “HOCH!PRODUKTIVE produktionsweisen” “INTENSIV”, the impression is strengthened that Farmer A seeks recognition and membership of the (Western) society with the general goal of growth and productivity. In this way, he may want to show that one can be successful and competitive even with a different mode of production (other than industrial, i.e. agroecological or near-natural) and not be labelled as an esoteric, spiritual or alternative person, who lives apart from the 'normal' 'rational' (Western) society.

ABER es gibt produktionsweisen=!HOCH!PRODUKTIVE produktionsweisen also auf denen ich auch INTENSIV und (.) äh=äh=öh richtig ähm (.) also (.) !VIEL! NAHRungsmittel erzeugen kann DIE aber auch (.) ähm (1) naturNAH oder (.) SO gestaltet werden dass sie FÜR die (.) NATUR oder FÜR die=für die ÜBrige umwelt (.) eine GRUNDlage bildet. (Transcript Farmer A, paragraph 49)

4.1.2.4. The Beauty of Nature and Fellow Creatures

Despite Farmer A's initial reluctance and insecurity regarding the significance of spiritual and emotional aspects and especially their verbalization, his further explanations and illustrations of his work and relations with nature continue to point at the importance of spirituality and emotions – at least by implication.

Hence, Farmer A seems to gain some self-confidence regarding the importance of spiritual aspects and emotions during his remarks, which can be seen for example in his more natural use of the term “mitgeSCHÖPFEN” in paragraph 55, which he now does not seem to find as pathetic as he did earlier in paragraph 24.

dass mer=dass mer unsere lebensgrundLAGEN erHALTEN [mhm] und auch die lebensgrundlagen von (1) ANDEREN mitgeSCHÖPFEN. (Transcript Farmer A, paragraph 55)

In response to a later, again quite frontal, inquiry as to whether instinct or emotion play a role in his interactions with nature, he now quite openly attests a certain value of emotion, but less of instinct. Emotion refers to the beauty he can recognize in the diversity of complex ecosystems, which for him is something “WUNDERBARES”, indicating that he accounts for something that cannot be rationally explained as the word alone derives from “wonder” as the root of the word. He sees the beauty, is in awe of nature and thus expresses his subjective feelings in a professional context.

inSTINKT vielleicht WENiger (.) geFÜHL NATÜRLICH (.) einfach weil ich auch eine sch- in der natur eine !SCHÖNHEIT! SEHE (.) [mhm] äh die=die=die es zu erHALTEN gilt (.) [mhm] und wenn ich en MAISmonokulturacker seh (.) da kann ich keine !SCHÖNHEIT! äh=äh [mhm] entdecken wenn ich aber einen (.) VIELFÄLTIGES äh: wunderBARES: geSTALTETES (.) zusammenWACHSEN von GANZ verschiedenen ARTEN und ein im prinzip äh in dem fall dann en (.) en=en=en komplex ÖKOSYSTEM sehe dann (.) JA dann ist das für MICH was WUNDERBARES ja. (Transcript Farmer A, paragraph 57)

4.1.2.5. The International Perspective: Climate Justice and World Solidarity

The subsequent text passages provide insight into how Farmer A's concept of (social) embeddedness also manifests itself in the connection to other people in a global context. His reflections on climate change exemplify his international and solidary perspective as he seems less concerned about the local effects and the potential impacts for him personally than about the consequences for people in countries of the Global South. For him, climate change poses a synonym for the (human) inability to preserve their *life-basis*, i.e. nature. He sighs, indicating that this is a toilsome topic that lies heavy on his shoulders. His subsequent laughing about the personal consequences could be interpreted as his attempt to loosen up this heavy theme but also as a sign of his insecurity and nervousness regarding the climate crisis. This impression is reinforced by him considering possible positive effects of climate change (such as warmer winters) as a phenomenon with otherwise negative connotations throughout. However, as soon as he talks about the global impact and especially the effects of the climate crisis on people in less stable regions of the world, his seriousness returns, and he even speaks of fear. This fear refers not only to the immediate effects of global warming but also to the resulting social conflicts, once more demonstrating his awareness of climate justice and his solidarity with people on the entire globe.

der KLIMAwandel ist für MICH einfach !AUCH! ein syno!NYM! wie wir es nicht SCHAFFEN (.) UNSERE LEBENSgrundlagen unsere geWACHSenen LEBENSgrundlagen zu erHALTEN (.) ähm (3) <<seufzt>> wie weit der mich jetzt perSÖNLICH be!TRIFFT! (1) <<lachend> NEGATIV oder vielleicht sogar> POSITIV [mhm] weils im winter ned mehr so KALT is oder (.) äh aber ich hab so SCHON (1) ne gewisse (.) ANGST daVOR (1) [mhm] einfach weil sich äh (.) vor allen dingen auch !GLOBAL! gesehen die LEBENSbedingungen für VIELE ver!SCHLECHTERN! [mhm] und=äh ich nicht weiss (1) welche konSEQUENZEN auch welche soZIALEN und äh (1) konFLIKTE daraus entSTEHEN (.) [mhm] ich denk mer mal wir LEBEN hier immernoch inner reGION (1) wo eine geWISSE (1) flexibiliTÄT also äh=äh ne gewisse !SPANNBREITE! DA is das heisst wir KÖNNEN

(.) wenns bei uns jetzt ZWEI grad wärmer wird dann=naJA es=es=es wirkt sich !AUS! es wirkt sich auf die (.) ARTENVIELFALT aus es wirkt sich auf die PRODUKTIONSarten aus=aber (.) viel SCHLIMMER betroffen sind natürlich LÄNDER die sowieSO am RANDE (1) äh sach mer ma an=an=am=an der GRENZE zu (.) zur beWIRTSCHAFTBARKEIT wo die lebensGRUNDLAGEN äh viel exTREMER sind wenn DA en bisschen was ändert da (.) [mhm] die sind natürlich viel STÄRKER betroffen (.) [mhm] durch die (.) durch den klimawandel ja. (Transcript Farmer A, paragraph 63)

The importance of connecting with other people is also expressed in paragraph 34, where Farmer A has already addressed his international perspective, which he feeds and lives out mainly through his political activity at the global movement of *La Via Campesina*. He emphasizes here above all – reinforced by his prosody (“was mich !PERSÖNLICH! (1) mich persönlich jetzt schon (.) SEHR STARK ähm (.) AUFbaut wo ich meinen SPASS demit hab”) – how much he personally draws from this collective political work and the attendant connection to people in this global movement. Most striking, however, seems to be his perceived condition and its justification for this international cooperation: for him it appears quite obvious (“naTÜRLICH”) that this is only and exclusively (“!NUR!”) possible through the shared agricultural background as this enables people to communicate on the same level in order to achieve a meaningful and sustainable result for society. This shared agricultural background encompasses professional knowledge as well as similar values and a shared conviction. Thus, he strives for equal relations not only with nature and fellow creatures (natural environment) but also with fellow human beings on a global level (social environment) – through a presumably shared conception of nature.

nun bin ich en MENSCH der sagen wer mal (1) TEIL also=äh NEBEN dem landwirtschaftlichen (.) äh:m (1) eine SEHR (1) JA! (.) INTERNATIONALE SICHTWEISE [mhm] auf die dinge in die wiege geLEGT bekommen hat (1) und=ähm durch meine POLITISCHE arbeit (1) werd ich in die LAGE versetzt mit sehr VIELEN BAUERN äh und mit einer äh=äh gloBALEN BEWEGUNG WELTWEIT in berührung zu kommen [mhm] was mich !PERSÖNLICH! (1) mich persönlich jetzt schon (.) SEHR STARK ähm (.) AUFbaut wo ich meinen SPASS demit hab (.) äh zu SEHEN mit- äh oder zu erLEBEN äh mit vielen anderen LEUTen in einer beWEGUNG zusammen zu ar-arbeiten (.) was naTÜRLICH !NUR! GEHT !MIT! diesem (.) LANDwirtschaftlichen BACKground (.) [mhm] weil man dann auf einer EBENE (.) mit den leuten KOMMuniziert (.) [mhm] um zusammen zu versuchen (1) für eine (.) ZUKunftsFÄHIGE gesellschaft was aufzubauen ja. (Transcript Farmer A, paragraph 34)

4.1.3. Concluding Interpretation

Based on the concepts and motifs identified above, a condensed and summarized interpretation will follow, attempting to capture the main features of Farmer A's worldview and the central motifs in his conception of nature.

4.1.3.1. Inner Conflict and Damage Control

Farmer A's inner conflict and duality regarding his conception of nature becomes apparent as the first main characteristic. Thereby, this tension and duality manifests on different levels.

First, he seems torn between his self-perception as an active and powerful *Gestalter* of nature, who at the same time has to bend to it and adapt to its ‘corset’. His agency thus

alternates several times between active and passive. 'Nature' is constructed as a dialogue partner and some sort of antagonist with its own agency. He ultimately recognizes a one-sided relationship of dependence in favor of nature, which results from humans' embeddedness in it: humans need nature as it presents their *life-basis*, however nature could easily abandon humans. Despite his feeling of embeddedness (in terms of a dependency), he and humans as such do not appear as a part of nature in the sense of living in a harmonious symbiosis that entails a refined balance. Instead, Farmer A creates three hierarchical levels: the first corresponds to the classical Western ideal of untouched nature, which in the age of the Anthropocene hardly exists. As a complete counter-model to the first ideal level, landscapes exploited by industrial agriculture and monocultures would be placed on a lowest rank as an undesired state. These two dichotomous levels thereby correspond with the two forms of Western environmentalism, the 'Cult of Wilderness' and the 'Gospel of Eco-efficiency' (Martinez-Alier 1997 as quoted in Muraca, 2016: 32). Yet he construes a middle level, on which he seems to assign himself and his agricultural activities in the form of a near-natural production method. The overall aim of which is to perform the unavoidable *Gestaltung* and influence by humans in a way that is as gentle and unharmful as possible, seeking to preserve the basis of life for the human species and other non-human agents in the form of soil, air, water and biodiversity. Yet, he does not convey the impression that his actions are accompanied by a good conscience. Rather he seems to take on a burdensome responsibility in the awareness of having to cause a certain damage to nature – by his and humans' mere existence – and thus never being able to reach the first stage through his own actions. This results in the central and overarching goal of his activities, namely, to preserve nature as the basis of life in a form that is as 'intact' as possible, i.e. at least functional.

Even though this seems to place him in a very stressful situation, the creation of this intact basis of life appears to be a compromise or even an overcoming of the two extreme forms of untouched vs. exploited nature, which are based on a purely utilitarian Western view. Farmer A is able to recognize beauty and 'something wonderful' in highly complex and biodiverse ecosystems in which he conceptionally includes *Gestaltung* through humans, seeking to unite the interests of all human and non-human actors involved. He further displays qualities of an emotional – if not spiritual – person. This seems to cause further tension since his self-image rather corresponds with a rational person who upholds classical Western values such as productivity and growth in order to gain recognition in Western society and run a competitive business.

4.1.3.2. An Enactment of "Think Globally, Act Locally"

Another key feature of Farmer A's view of the world is his strong international perspective and his systems thinking that derives from his understanding of embeddedness, not only in the ecological but also in the social systems. His distinctive sensitivity towards interdependencies and his conception of causal relations leads to a sense of responsibility that makes him consider the consequences of his (agricultural) activities on a global scale. Thus, he ties his actions to challenges such as the climate crisis and the concomitant social inequalities as well as ethical and political problems (climate justice).

His efforts to achieve local direct marketing with as little external inputs as possible, the renunciation of imports from other countries and the strengthening of regional structures to improve or relieve situations in countries of the Global South represent an enactment of "think globally, act locally". Further, he seems to be aware of his Western privilege as he fights for more egalitarian relationships in the global social-ecological systems. Thus, he positions

himself as a world citizen, aware of his heavy burden and responsibility, but also drawing much joy and strength from connecting with others who share his values and fight with him for a better world.

4.2. Case Excerpt Farmer B

4.2.1. Research Documentation

Farmer B has been among of the farmers who Jörg Weber suggested to me as suitable interview partners on the organic farm tour on the 31st of August 2019. He roughly informed them in an e-mail in advance about my plans and my forthcoming contact. Thus, when I contacted her after the completion of the interview guide in November 2019, she quickly responded and was willing to participate. However, she asked for some questions in advance in order to be able to prepare herself for the interview. Thereupon, I explained the open structure of the interview guide, so she would be aware what awaits her without specifying the exact questions, which would stand in the way of the open approach of the free narrative challenge. Luckily, she was still willing to go along and thus we set the appointment for December 17, 2019.

At the time, Farmer B is a 32-year-old farmer, who has started organic farming six years earlier together with her husband with whom she has two children. They cultivate 90 hectares of arable and grassland around [Place B] in cooperation with a partner company. She is also managing director of the *Arbeitsgemeinschaft bäuerliche Landwirtschaft (AbL)* in Hesse. She is interested in interdependencies both on a small and large scale and has completed a training in permaculture in Australia. Questioning common practices in agriculture, she is fascinated by the versatility of actual options emerging from the creative interaction of human activities and nature's productivity. The following year, she planned to offer seasonal gardens to bring agricultural activities, knowledge about food and its production closer to the people and to offer places for community and social interaction.

On the morning of December 17, 2019, we met at Friedberg train station, as she kindly offered to pick me up there by car, which was very helpful for me as I did not have to rent a car myself this time. Since she has been the only interviewee who had a separate living and working area and hence did not live on the farm, we conducted the interview in an organic bakery with an adjacent café located in the center of Friedberg. Owing to our small age difference and partly similar life situations, having young children and sharing generally similar interests, there has been a great sympathy from the start. We engaged in an animated conversation about private and professional topics as there has been a very open and friendly atmosphere. Since the interview was conducted in a public and much-frequented place, the background noise has been relatively loud, though this did not negatively affect the interview itself. We were able to focus on each other very well and the interview was only interrupted once because of an incoming call from one of her family members. Although the atmosphere was open and candid with regard to the (private) conversations off the record, a certain nervousness and restraint was noticeable on both sides at the beginning of the actual interview, which, however, mostly subsided as the interview progressed. Still, some of the questions have been answered rather shortly – in very rare cases even only with 'yes' or 'no' – which I tried to deindexalize (*deindexikalisieren*) with maintenance inquiries (*Aufrechterhaltungsnachfragen*). Yet, this has not always been quite successful and as a still inexperienced interviewer, I found it challenging to keep the flow of the speech going, which resulted in a rather short interview (approximately 35 minutes net time).

4.2.2. Key Point Analysis

The following key points have been identified along the *research object-specific heuristics* in order to list significant concepts in terms of semantic patterns on the level of content together with the concomitant *thematization rules*, i.e. patterns of the way something is expressed. These patterns on both levels ('What' and 'How') are to be condensed into motifs in a first interpretative step and will be illustrated with anchor quotations as well as commented on with further annotations. In this way, initial readings will be worked out as a preliminary stage of a subsequent, more consolidated interpretation, making visible what was said and how (Kruse, 2015: 618 et seq.).

4.2.2.1. Nature as an Inspiring Role Model: Being in Awe and Being Afraid

The following text passages illustrate how nature is seen and portrayed as perfect and therefore represents an inspiring role model which should ideally act as a guide for agricultural activities. This perfectness stems from balanced relationships, synergies and the diversity that can be found in nature: a perfect functioning system, which Farmer B is fascinated by. This perceived perfection is also accompanied by a reverential attitude that encompasses both a deep admiration and also a certain fear concerning unplanned consequences that might result from (human) interventions in this balance.

Right in the opening phase of the interview, Farmer B mentions her fascination for large and small connections and interdependencies in nature, which she has noticed and observed since her childhood. Even though she does not at all exclude humans from these relations – which will be addressed in more detail below (Chapter 4.2.2.2.) – she gives credit to nature's own capabilities and further mentions the lack of necessity to (too strongly) intervene with these structures and processes

ich hab mich schon IMMER für zusammenhänge im GROSSEN interessiert (.)
[mhm] und auch im KLEINEN (.) wie ähm (.) TOLL die natur viele dinge auch schon
REGELN kann und der mensch eigentlich GAR nicht so weit (.) eingreifen (.)
!MUSS! hab ich schon als KIND ähm beobachtet und fand das immer faszinierend.
(Transcript Farmer B, paragraph 3)

Several times within paragraph 3, she expresses her fascination for these perfectly functioning systems, which for example permaculture tries to use and partly reproduce ("und das hat mich TOTAL fasziniert", §3; "ja des FESSelt und beschäftigt mich jetzt schon seit (1) ZEHN jahn", §3).

Her first association with nature is therefore 'perfection' – even though again, she does not exclude the human species from this perfection *per se*. Thus, she concludes that one (the human being) only ("grad") must see nature's diversity, which is constructed as the key attribute to this perfection, take it up and use it as an orientation. By using the adverb "grad" she conveys a certain amount of casualness and the impression of some sort of easiness in doing so.

perfekTION (2) [mhm] die natur ist eigentlich IN SICH schon perFEKT [...] man
muss eigentlich grad die VIELFALT der natur ähm SEHEN aufgreifen und sich
dadran orientieren. (Transcript Farmer B, paragraph 39)

In paragraph 47, Farmer B describes the role she plays in her interactions with nature as reverential. The choice of words is particularly interesting, as the German word “Ehrfurcht” (awe/reverence) or the corresponding adjective “ehrfürchtig” (reverential/awe-struck) are made up of the two word parts “Ehre” (honor) and “Furcht” (fear). Ergo, her being in awe of nature is accompanied by a certain fear. Nature is thus constructed as sublime and superior, which she also begins to elaborate: no matter how hard she tries, one never manages to reach [this perfection] – thereby changing the agency from individualized (“ich”) to anonymized (“man”). The conspicuously long pauses in this section, stretched words, delay particles, as well as the complete sentence break and her own revocation of what was said (“das ist jetzt verKEHRT (1) ähm (2) nein”) clearly show her struggle in finding the right words and her effort to describe this relationship or rather her definition of the word “Ehrfurcht” correctly. After dismissing her first attempt, she thus repeats the word “EHRfurcht”, yet, she now includes a definition that describes nature less as godlike and thus as unattainable but rather as ever surprising and therefore also as unpredictable. She is the one who observes and perceives these things (surprises) in nature and so the strong hierarchy from her first definition seems a bit flattened in her second attempt of the definition.

eine EHRfürchtige rolle (3) wei:l (4) so SEHR ich mich be!MÜHE! (.) die: (2) ähm (.) man SCHAFFTS doch NIE (.) an diese (1) na (??) das ist jetzt verKEHRT (1) ähm (2) nein EHRfurcht (.) die natur überrascht mich immer wieder mit den DINGEN die ich an ihr beobachte und die ich wahrnehme. (Transcript Farmer B, paragraph 47)

She once more reinforces this fearful component of her respect and amazement in paragraph 53, by now explicitly naming the fear. The many interlocking aspects and interdependencies within the elaborate system(s) of nature frighten her regarding the unforeseeable consequences in relation to climate change.

und (.) also des sind so !VIELE:! (.) viele DINGE die da ineinander greifen und des is- des beÄNGSTIGT MICH. (Transcript Farmer B, paragraph 53)

The other component of her reverence tends to have more positive connotations, in the sense of worship or amazement and hence connects to her spiritual side, which she addresses in paragraph 63. In contrast to many other farmers who she thinks are spiritual in a religious manner – which in a Western context is commonly associated with Christianity and attending church services – she characterizes herself as a spiritual person as well but in a more pantheistic form: instead of believing in a personified deity, she sees the divine in nature, which she illustrates with the examples of a flower and a blade of grass, yet she opens the frame even further to “everything that is around us”, that is the world or even the whole universe. Thus, she reinforces once again her characterization of nature as perfect and infallible in itself, namely divine.

weil ich weiss dass VIELE landwirte sind sehr !GLÄUBIG! ne (1) [mhm] und (1) SEHR sehr spi=SPIRITUELL ich denk ich bin auch SPIRITU (.) ELL aber ich=äh (1) seh halt irgendwie (.) ne (.) den GOTT oder so in jeder BLUME jedem !GRASHALM! [mhm] und (.) in diesem ganzen um uns RUM. (Transcript Farmer B, paragraph 63)

In this context, she also criticizes the sometimes limited and reductionist approach of science, which she believes often fails to do sufficient justice to these larger connections and interactions. Even though she does appreciate the latest scientific findings, she sees her and other farmers' indispensable contribution in putting these findings into the right frame of reference and in supplementing theory with practice, advocating for a transdisciplinary approach.

aber man MUSS auch gucken dass man mit den wissenschaftlern (.) ZUSAMMEN arbeitet (.) weil die auch manchmal wirklich nur ganz beGRENZT sich mit einem thema beschäftigen [mhm] und des dann gar nicht SCHLECHT ist wenn man nochmal nen (.) größeren zuSAMMENHANG REINBRINGT oder erLEBNISSE aus der PRAXIS. (Transcript Farmer B, paragraph 27)

4.2.2.2. *Humans as a Part of Nature*

Another crucial point in Farmer B's view on nature and her general conception of the world is that she conceptualizes herself and the human species as a part of nature. Therefore, they obtain a legitimate position in the ecosystem earth – as a matter of principle. According to her, the distress in form of imbalances in the system(s) does not result from the mere existence of humans as factors of disturbance but rather from the inappropriate treatment of their environment. In fact, humans are seen as even having the potential to make a positive contribution to the system. This overall picture emerges from various key points of the interview, which will be analyzed and commented below.

Even if paragraph 3 provides primarily information about Farmer B's admiration of nature, it also shows very clearly that there is no strict human-nature divide in her conception. This impression is created by her use of apparently casual but nevertheless decisive words: firstly, she claims that nature is able to take good care of *many* (“viele Dinge”) things, which implies that there are also realms, where nature could use and indeed needs help (by humans). Further her use of “auch schon” interestingly conveys a power relation that seems contrary to the otherwise constructed superiority of nature. Although this formulation gives the impression of a general underestimation of nature's abilities and thus also holds an appreciation, it contains a certain kind of hierarchical evaluation in the form of a ‘smaller or equal’. The passage is almost reminiscent of a parent who has previously underestimated their young child's abilities, basically anticipating that the end results of the child's effort will, of course, not quite match their own abilities or accomplishments (due to less experience and immaturity) yet are astonishing precisely because of that immaturity. This feeling is further supported by the second part of the sentence (“und der mensch eigentlich GAR nicht so weit (.) eingreifen (.) !MUSS!“). The adverb *actually* (“eigentlich”) signifies that what she is about to say is contrary to the appearance, i.e. her own expectations which have been formed by her Western socialization and thus implicitly reflect the expectations of mainstream society: the human being does not have to intervene *so much*. Thus, she basically grants the human being the right for intervention and merely criticizes the disproportionate extent of such.

ich hab mich schon IMMER für zusammenhänge im GROSSEN interessiert (.) [mhm] und auch im KLEINEN (.) wie ähm (.) TOLL die natur viele dinge auch schon REGELN kann und der mensch eigentlich GAR nicht so weit (.) eingreifen (.) !MUSS! hab ich schon als KIND ähm beobachtet und fand das immer faszinierend. (Transcript Farmer B, paragraph 3)

Even more clearly, Farmer B assigns human beings a very valuable if not indispensable role in nature and the ecosystem within paragraph 15. By describing a human-nature relationship characterized by a balanced give and take – the balancing of which she describes as a tightrope walk – she sets herself apart from other supposedly more familiar opinions that appear dominant within the Western culture. These other dominant voices say (“ja ANDERE SAGEN”) that you have to leave nature completely alone in order to protect it and do it some good. Hence, she implicitly touches upon the 'Cult of Wilderness' as a dominant form of Western environmentalism and the classic idea of conservation before she clearly distances herself from it (“aber des SEH ich dann wiederum NICH so”). This is followed by her remarks on fruitful *co-creations* involving animals, nature in the form of soil, meadows and flowers as well as humans leading to the greatest humus build-up, which functions as a central indicator for successful management as is it beneficial for all parties involved. For Farmer B, the human species plays a crucial role in this tripartite symbiosis, since (bio)diversity as another key quality criterion for the ecosystem depends (at least to the extent of it) *exclusively* on human management, in this case mowing and haymaking (“die:se ganzen (.) ARTEN die gibts nur wenn jemand da HEU macht und des gras auch m=MÄHT (.) [mhm] schneidet (.) und wieder WEGfährt”). Maintaining a balance between all the actors involved is the basic prerequisite for a sustainably functioning ecosystem and therefore the overarching goal of her agricultural activity, albeit a major challenge: a tightrope walk.

natürlich muss ich auch damit GELD verdienen (.) [mhm] und ich muss auch was ERNTEN aber ich ähm (.) möchte immer (.) dass auch äh ja (.) der !REST! der (.) !WELT! davon profitiert DASS ich das mache (.) [mhm ja] also ich will da en guten fussABDRUCK hinterLASSEN [mhm] und NICH nur entnehmen (.) [mhm (.) okay] woBEI des natürlich schwierig is (.) also: [ja] es is natürlich äh=auch so ne GRATwanderung weil äh (.) ja ANDERE SAGEN (.) dann muss man die natur ja ganz in RUHE lassen ver-also (.) ne [mhm] für SICH !WACHSEN! LASSEN (.) [mhm] aber des SEH ich dann wiederum NICH so weil wenn man dann (.) ne fläche GAR nich mehr bewirtschaftet dann ähm (2) is das nich unbedingt viel BESSER also den höchsten humusAUFBAU hat man (.) unte:r WIESEN die mit RINDERN beweidet werden (.) [mhm] und wo ganz viele GRÄSER drauf wachsen und BLUMEN und die:se ganzen (.) ARTEN die gibts nur wenn jemand da HEU macht und des gras auch m=MÄHT (.) [mhm] schneidet (.) und wieder WEGfährt also=äh (1) des äh (.) is immer so des (1) GLEICHgewicht was eingehalten werden muss. (Transcript Farmer B, paragraph 15)

Furthermore, paragraph 39 is very instructive regarding Farmer B's idea of the human-nature relationship. At first, she seems to spontaneously employ internalized cultural patterns of meaning that reflect the typically Western human-nature divide: she describes nature as perfect in itself, from which she seemingly starts to derive a superfluous or negative role for humans. However, she does not formulate this suspected thought further but interrupts it with several pauses and delaying particles in order to re-sort her thoughts. Thereupon she clarifies that humans *naturally* (“naTÜRLICH”) do have their legitimate position within nature, but all too often are exploitative – which for her is simply wrong. Plagues, such as the bark beetle, function as indicators of this widespread inappropriate behavior and the unsettlement of nature's balance, caused, for example, by creation of monocultures. Still, she once more affirms the significance and indispensability of humans within nature with regard to the creation of habitat (“LEBENSraum”), such as species-rich meadows (“DA is der mensch dann wiederum geFRA:GT”). Two basic principles crystallize here for human interaction with nature: on the one hand, orientation towards natural diversity and (“man muss eigentlich grad die VIELFALT der natur ähm SEHEN aufgreifen und sich dadran orientieren”), on the other, the

moderation of interventions ("ich denk ÜBERall wo der mensch ÜBERmässig in die natur eingreift ist es (4) ist es zu VIEL"). If these two principles are respected, the human species appears as a harmonious and legitimate part of nature.

perfekTION (2) [mhm] die natur ist eigentlich IN SICH schon perFEKT und äh (1) wo der mensch EINGREIFT (2) und oft äh (2) also (1) der mensch hat naTÜRLICH seine position in der naTU:R (3) abe:r (.) er nutzt die oft zu SEHR (1) zu SEINEM nutzen (.) [mhm] also FORSTwirtschaft zum beispiel dass einfa:ch (.) der wald (.) ne riesen MONOkultur teilweise is an Fichten da ham wir jetzt die rechnung mim BORKENkäfer (.) oder des is nur (.) reine buchenwälder und sowas ANgelegt wird des is eigentlich FALSCH [mhm] man muss eigentlich grad die VIELFALT der natur ähm SEHEN aufgreifen und sich dadran orientieren (.) [mhm] ich hab vorhin gesagt WIESEN (2) sind so ARTENreich und (.) son ARTENreicher LEBENSraum (.) DA is der mensch dann wiederum geFRA:GT (1) [mhm] ich denk ÜBERall wo der mensch ÜBERmässig in die natur eingreift ist es (4) ist es zu VIEL. (Transcript Farmer B, paragraph 39)

Permaculture is an approach that takes up this very idea of a symbiotic interconnectedness of human and non-human agents and tries to use and partially imitate the processes within the natural ecosystems and the cycles in nature. This type of compatible use includes humans and as the embodiment of systems thinking exerts a great fascination on Farmer B and thereby also greatly influences her farming activities. Thus, since humans are conceptualized as a part of the ecosystems, the plants that are grown within are all edible for humans (paragraph 3).

UND ähm (1) hab mich dann mit PERMAkultur besch-beschäftigt (.) permakultur ist eigentlich ne (.) PERMANente agrikultur also nen sysTEM wo PFLANZEN zusammen auf nem stück LAND wachsen die sich gegenseitig erGÄNZEN und somit ein kleines ökosystem in sich (.) bilden und alle pflanzen in diesem ökosystem sind für menschen ESSBAR (.) [mhm] sind auch TIERE integriert (.) die schweine die danns gemüsebeet umGRABEN und die hühner die nach den äh WÜRMERN scharren und so weiter (.) und das hat mich TOTAL fasziniert. (Transcript Farmer B, paragraph 3)

Her training in permaculture has shown her how the landscape can preserve and nourish itself: however, this does not happen by itself but through the creation of ponds and irrigation systems *by man* ("die man dann in der landschaft integriert"). Every element of land has special properties that must be perceived and used (wisely) by humans. Thus, she consistently appears to include humans in her conception of nature, ideally in the role of reverential designers, responsible creators of symbiosis and balance keepers, i.e. tightrope walkers.

und ähm (.) ja ansonsten schlüsselerlebnis in auSTRALIEN hab ich ne PERMAKULTUR kurs geMACHT [mhm] ähm (.) ne permakultur AUSbildung (1) und=äh (.) DA gabs auch ähm (1) !EINIGE! schlüsselerLEBNISSE WIE einfach die land (.) SCHAFT sich auch ähm (1) ja NÄHRT einfach durch anlage von TEICHEN und bewässerungssystemen die man dann in der landschaft integriert (.) [mhm] (1) dass doch auch (.) JEDE ecke quasi JEDER=jede fläche seine GANZ spezielle EIGENSchaft hat die es äh zu SEHEN und zu nutzen gilt. (Transcript Farmer B, paragraph 9)

4.2.2.3. Nature's Ambassador: Her Versus the Others

A central motif, which can be found throughout the interview is Farmer B's self-positioning as someone who does things differently, as a creative unconventional thinker and someone who swims against the current.

She does so for the first time in paragraph 9, when she talks about a key experience from her childhood: a conflict with her mother, which can be read symbolically for the self-perception of her own character that has not changed until today. She wanted to plant her bed crosswise ("QUER") instead of straight and at an early age questioned common conventions already by asking 'why not?'. Thereby, she literally positions herself as an unconventional thinker from childhood on, who sees the wide range of possibilities in the design of landscapes and the associated diversity. In addition, she shows her willpower and determination, for she was discussing *forever* ("!EWIG!") with her mother and wants to do things differently until today. At this point, the impression of an almost childlike stubbornness arises, which she wraps up in a humorous way by laughing herself ("tatsächlich heute auch immer noch wieder an so (.) <<leicht lachend>punkten steh> wo ichs dann einfach aber !DOCH! anders machen möchte")

ja also son ganz- son SCHLÜSSELERLEBNIS würd ich sagen (.) mein eigenes BEET im GARTEN wo: ähm (.) ich irgendwann ne auseinandersetzung hatte mit meiner mutter (.) warum ich was äh (1) QUER statt äh (.) GERADE pflanzen wollte (.) wo ich dann einfach mir überlegt hab WARUM (.) äh (.) warum soll das NICHT gehen (.) des is bis HEUTE so denk ich bei vielen dingen (.) ähm (.) die in de:r- im ACKERbau GANG und gebe sind wieSO: (.) macht man das nicht ANDERS (.) [mhm] und oft ist es auch tatsächlich so dass es einfach äh noch nicht AUSprobiert wurde obs auch ANDERS GEHT und man hat ne wahnsinnich große (.) !BAND!breite an möglichkeite:n (.) wie man äh die landschaft ja VIELseitich gestalten kann (.) [mhm] und das ist BESTIMMT son SCHLÜSSELERlebnis dass ich da !EWIG! mit meiner mutter diskutiert hab [mhm] und des äh (.) tatsächlich heute auch immer noch wieder an so (.) <<leicht lachend>punkten steh> wo ichs dann einfach aber !DOCH! anders machen möchte. (Transcript Farmer B, paragraph 9)

In paragraph 11, Farmer B further separates herself from *the others* by starting to talk about *her* way of farming ("meine (.) art der land (.) wirtSCHAFT"). The keyword here again is the *diversity* with which she seeks to compensate and counteract the shortcomings of others in active agency ("ich versuch ganz viel AUSzuGLEICHEN"; "da versuch ich irgendwie GEgenzuSTEUERN"). These shortcomings manifest themselves in lacking diversity as in monocultures, and she therefore describes the surrounding landscape as a vast wasteland ("ne große (1) !ÖDNIS!"). The responsible of this condition thereby remain in passive and anonymous agency, which she in turn encounters in active and determined agency. However, even if she appears decisive and convinced in her actions, her choice of terminology also reveals the difficulties of her endeavors: thus, her actions remain *an attempt* ("ich versuch ganz viel", "da versuch ich irgendwie", "ich ähm (.) versuch meistens" "ich versuch kulturen anzuBAUEN"). She is *trying a lot, somehow* and *most of the time* to stand strong in her fight as *David vs. Goliath*.

Most interestingly, she begins to describe her counteractions (which for the most part consist in her attempts to gain back (bio)diversity) as nature preserving ("ähm (2) ja (.) ich (.) mach schon (.) en zimmich ähm (1) naturSCHÜTZENDE (.) ode:r naturschutz äh=ja: (.) wie sagt man denn"). However, as she seems aware of the common associations of the term that exclude any form of human use, she reconsiders her choice of words. Nevertheless, the core message remains that through her agricultural activities, she tries to make a positive

contribution to the ecosystem by taking care of many different species and thus providing a shelter in the middle of desolation. In contrast to classical Western nature conservation, she does not achieve this by completely staying out of the territory but through her very actions, interventions and (wise) use of nature. Thus, she applies the controversial and highly loaded term in the literal sense: she tries to *protect* nature from the *others* by doing it *differently*. As she seems aware that those others might not approve of her approach (“wo sich dann andere vielleicht sagen oh GOTT (.) <<lachend>was macht die da> (.) [ja] das sieht ja unordentlich aus”), she once more distances herself from them (“abe:r ich seh des NICH so”) and legitimizes her doing using productivist arguments: she is the one that ultimately profits from greater biodiversity and healthy crops through a better harvest. (“ich denk halt je größer die VIELFALT ist umso gesunder sind die pflanzen auf meinem ACKER die ich dann ERNTEN will”).

ICH würd sagen (.) meine (.) art der land (.) wirtSCHAFT ist ne !VIELFÄLTIGE! art der landwirtschaft (.) ich versuch ganz viel AUSzuGLEICHEN was im natürlichen (.) ökosystem (.) verLOREN gegangen ist weils kaPUTT gemacht WURDE (.) [mhm] also: (.) wenn man (.) in die LANDschaft SCHAUT (.) sieht man (.) eigentlich ne große (1) !ÖDNIS! (.) FAST (.) also man sieht wahnsinnich große flächen ohne vielFA:LT äh (.) einfach mit einer kultur bestande:n (.) kaum hecken (1) des sind so dinge (.) da versuch ich irgendwie GEGenzuSTEUERN [mhm] also ich ähm (.) versuch meistens pflanzen im geMENGE anzuBAUEN (.) BLÜHstreifen sind am JEDEM meiner FELD!RÄNDER! [mhm] zum- an der GRENZE zum nächsten ACKER (.) ich versuch kulturen anzuBAUEN die blühen wenn sonst !NICHTS! blüht in der landschaft (.) [mhm] (.) ähm (2) ja (.) ich (.) mach schon (.) en zimmich ähm (1) naturSCHÜTZENDE (.) ode:r naturschutz äh=ja: (.) wie sagt man denn (.) ne LAND (.) wirtschaft wo ich drauf achte: (.) dem ökosystem was gutes zu tun (.) [mhm] ich lass immer was STEHEN für die inSEKTEN weil ichs nicht übers HERZ bringe <<lachend> alles abzumähen> und (.) [ja] wo sich dann andere vielleicht sagen oh GOTT (.) <<lachend>was macht die da> (.) [ja] das sieht ja unordentlich aus abe:r ich seh des NICH so (.) [okay] ich seh des eigentlich äh ja (.) durch die land (.) wirtschaft die ich beTREIBE hab ich die möglichkeit GANZ vielen ARTEN (.) en SCHUTZraum auch zu bieten (.) [mhm] SEI es die FELDhasen sei es äh (.) irgendwelche: (.) HEUSCHRECKEN (.) sonst irgendWAS und ich denk halt je größer die VIELFALT ist umso gesunder sind die pflanzen auf meinem ACKER die ich dann ERNTEN will. (Transcript Farmer B, paragraph 11)

Farmer B specifies in paragraph 15 what exactly she understands by her intention to do things *differently*. She therefore explicitly names the reciprocal relationship between her and nature. Unlike the others, she also wants to give something back and not just take something out, which she identifies as the decisive difference. However, being embedded in a capitalist system connects her to these others: just like them, she intends to earn money and therefore needs to produce and harvest something in order to assure her livelihood. Gaining monetary profits from her agricultural activities is thus a necessity, not a priority. It functions as a linking element to her profession and as a justification of her endeavors within a Western profit- and purpose-oriented world. What she puts first instead are possible benefits that could accrue to *the rest of the world* through her very actions (“aber ich ähm (.) möcht imme:r (.) dass auch äh ja (.) der !REST! der (.) !WELT! davon profitiert DASS ich das mache (.) [mhm ja] also ich will da en guten fussABDRUCK hinterLASSEN [mhm] und NICH nur entnehmen”). Maintaining the balance between giving and taking is difficult and thus once more a tightrope walk. The semantic image she draws by using the metaphor of *leaving a footprint* underlines the potent agency she assigns to herself, while nature or the world remain passive.

ähm (.) ICH wills SO machen (.) dass- oder ICH will meine landwirtschaft so machen dass nich (.) !ICH! (.) ALLEINE von ihr profitiere [mhm] sondern es geht nicht dadrum ne landwirtschaft zu machen wo ich die (.) LANDWIRTSCHAFT (.) oder die LANDSCHAFT die NATU:R quasi be!RAUBE! oder (.) ne [mhm] ihr nur entNEHME sondern ich will auch (.) GEBEN (.) [mhm] und ähm (1) glaub des is so mit der entSCHEIDENDE unterschied ähm (.) oder was ich meine mit ANDERS (.) natürlich muss ich auch damit GELD verdienen (.) [mhm] und ich muss auch was ERNTEN aber ich ähm (.) möcht imme:r (.) dass auch äh ja (.) der !REST! der (.) !WELT! davon profitiert DASS ich das mache (.) [mhm ja] also ich will da en guten fussABDRUCK hinterLASSEN [mhm] und NICH nur entnehmen (.) [mhm (.) okay] woBEI des natürlich schwierig is (.) also: [ja] es is natürlich äh=auch so ne GRATwanderung. (Transcript Farmer B, paragraph 15)

She ties on this sense of responsibility in paragraph 17 when she talks about her motivation. Not only does she name her children and future generations in this regard but again derives her accountability from the fact that someone has to persevere and look after creatures like earthworms and bees in order to ultimately maintain our livelihoods. If she (and her like-minded colleagues) do not take care of it, she believes no one would and natural resources would be further only overexploited. From this scenario she derives the importance of her work (“des is ja so WICHTIG dass wir genAU das tun was wirs- was wir TUN weils würde ja SONST keiner machen”), to which she feels obligated. Hence, she perceives this self-assigned duty also as a limiting burden and describes her work as a struggle and great effort (“das ist SO viel ARBEIT des is SON KAMPF (.)”, “poah (.) ne (.) ich KANN eigentlich nich mehr”). However, especially because of her sense of ‘her against the others’, giving up is not an option (“aber eigentlich is die verANTWORTUNG die wir ham mit unserem beRUF viel zu gross umse einfach abzulegen”).

meine motivaTION sind eigentlich meine KINDER (.) [mhm] und die zukünftigen generatILIONEN (.) [mhm] weil (.) ähm wir haben (.) auch schon öfters an dem punkt gestanden wo wir gedacht haben hier (.) das ist SO viel ARBEIT des is SON KAMPF (.) warum tun wir uns des eigentlich AN wir könnten uns doch AUCH irgendwie en job aufm amt suchen (.) und=äh (.) soundsoviel GELD aufm konto haben und=äh nach vierzich stunden in der woche FEIERABEND (.) [mhm] EGAL was für ne <<lachend> jahreszeit> (.) in urlaub fahren [mhm] OHNE schlechtes gewissen OHNE ähm (.) den geDANKEN man müsste doch jetzt und des WETTER zu hause (.) aber DANN wiederum (.) des is ja so WICHTIG dass wir genAU das tun was wirs- was wir TUN weils würde ja SONST keiner machen [mhm] das wird ja sonst (.) AUCH die=äh FLÄCHEN nur (.) wieder so ARM bewirtschaftet we:rden (1) eh (.) ja auch einfach nur weiter (1) RAUBbau unsrer LEBENSgrundlage be-äh (.) also (.) beTRIEBEN werden und=ähm (.) einer !MUSS! ja (.) die REGENwürmer füttern und äh blumen für die BIENEN SÄHEN (.) und des is einfach (.) des wo ich dann auch immer denke (.) poah (.) ne (.) ich KANN eigentlich nich mehr aber eigentlich is die verANTWORTUNG die wir ham mit unserem beRUF viel zu gross umse einfach abzulegen. (Transcript Farmer B, paragraph 17)

4.2.2.4. Potential for Community on a Local Scale

However, as much as she distances herself from the *others* and positions herself almost as a resistance fighter in advocacy of nature, Farmer B also shows the desire to reach out to the people and connect with her social environment – mainly at a local and regional level. For her, working in and with nature through her agricultural activity offers a great potential to integrate and relate people with each other and to enable them to experience a deep connection with nature. Thus, she plans to offer seasonal gardens to introduce people to agricultural activities, spread knowledge about food and its production and to create places for community and social interaction. She also plans a project in cooperation with the local elementary school in which children can plant, grow, cultivate and harvest their own potatoes. Above all, this should give them a feeling for fertile soil and valuable food.

She sees the value of this joint and unifying work especially on an emotional and spiritual level, for there is a beauty to be discovered and an essential experience to be made in this meaningful work in and with nature that has the potential to strengthen the bond between people through their shared connection with nature.

mhh (1) ich sag mal mein- die landwirtschaft (.) hat !GANZ! viel potenTIA:L (1) um MENschen einzuBINDEN (.) [mhm] wir bieten zum beispiel ab nächstem jahr SAISONGÄRTEN an (.) das heisst äh wir (.) STELLEN (1) FAMILIEN oder wer MÖCHTE (.) stellen wir (.) GÄRTEN zur verfügung die ham wir be!PFLANZT! (1) und dann äh die-is man fürs hacken giessen und ERNTEN zuständig (.) für die SAISON (.) kann man dann mit seiner familie hinkommen und des machen (.) WANN man WILL (.) und hat so quasi das erlebnis von selbst angebauten LEBENSmitteln und=äh (.) das hat natürlich auch GANZ viel potenzial einfach für (.) GEMEINSCHAFT (.) [mhm] mit seinen GARTENnachba:rn und man kanns AUSprobieren des is oft der (2) der MUT FEHLT (1) dass der MUT fehlt um sowas anzuFANGEN (.) entweder weil man in der stadt wohnt und kein garten HAT oder weil der garten einfach nicht so gestaltet ist dass man geMÜSE anbaut oder weil man nich weiss WAS man neben WAS pflanzen muss (.) das sind lauter so hindernisse da ham wir uns eben überlegt (1) dass WI:R (.) dem gern entgegenkommen würden und bieten des nächstes jahr AN (.) wir machen auch nächstes jahr en KARTOFFELprojekt mit der GRUNDschule bei uns vor ORT (.) [mhm] wo die dritten klassen dann kommen und (.) kartoffeln (1) PFLANZEN=PFLEGEN=ERNTEN (1) um den kindern einfach auch das geFÜHL (.) von (.) FRUCHTbarem BODEN und LEBENSmitteln (.) ähm ja: (.) zu bieten (.) und denen des äh (.) ja WEITERZUGEBEN (.) also des sind so- (.) SOLCHE ansätze in diese SOZIALE richtung und dann natürlich (.) würden wir auch RAUM (1) bieten natürlich für (.) ARBEITSPLÄTZE (.) [mhm] je ME:HR (.) verschiedene sachen man (.) AN (.) BAUT umso (.) ja MEHR arbeit ist es natürlich (.) auch wobei da fehlt (.) einfach der RAHMEN dass man (1) mit der landwirtschaft (1) !SCHWIERICH! genug geld verdient um=äh gut beZAHLTE arbeitsplätze zu bieten (.) [mhm] (1) und es gibt auch immer weniger menschen die einfach (.) in der landwirtschaft ARBEITEN wollen weil sie des nicht mehr KENNEN LERNEN (.) [mhm] FRÜHER hat JEDER noch in der landwirtschaft gearbeitet und (.) wenn wir JETZT im sommer hatten wir (.) ganze FAMILIEN bei uns (.) die ham uns geHOLFEN (1) beim RÜBEN RODEN und ham sich danach beDANKT wie SCHÖN des WA:R oder beim (.) !SÄEN! waren kinder dabei und die ham des !WOCHENLANG! ihren eltern erZÄHLT dass des so !SCHÖN! war (.) des mit uns zu machen (1) mh das sind so erinnerungen und erLEBNISSE die sind total ESSENTIELL (.) [mhm] und die gehen verLOREN und wir wollen eigentlich äh (.) !MEHR! menschen integrieren (.) bei uns (.) und dieses erlebnis mit denen !TEILEN! was es heisst ne geMEINsam (.) äh ne ARBEIT zu (.) verrichten die

vielleicht nicht äh vom KOPF her so ANSPRUCHSVOLL ist (.) aber total viel GIBT (.) weil sie einfach SINNVOLL ist (.) und sie ist an der frischen LUFT und sie ist draussen und die sonne SCHEINT und (.) es (.) ist einfach !SCHÖN!. (Transcript Farmer B, paragraph 23)

4.2.3. Concluding Interpretation

Based on the concepts and motifs identified above, a condensed and summarized interpretation will follow, attempting to capture the main features of Farmer B's worldview and the central motifs in her conception of nature.

4.2.3.1. *Potential for a Harmonious Cohabitation*

A first essential characteristic of Farmer B's worldview may be that she sees the potential for a harmonious cohabitation on the planet earth that includes human and all sorts of non-human agents. She perceives nature as perfect and this perfection is mainly derived from the flawlessly functioning nested highly complex systems that interact on different scales and thereby are in fascinating balance with each other. It is this perfection within the highly complex relationships that she is in deep admiration of and hence, she perceives nature as a role model for her agricultural activities. Nature's creativity and above all its diversity appear as key guidelines, which she observes, tries to sustain and even to further facilitate in her interactions with nature. She thus enters into a creative and equal partnership with nature (which she assigns its very own agency and qualities) and takes on the role of garden or habitat designer, providing a living environment for numerous species through her agricultural work. Consequently, she considers humans and herself to be a legitimate part of nature, who can even contribute positively to the ecosystem by fostering certain characteristics that can, in turn, be used in the interest of all human and non-human agents. This would result in an ideal scenario of a harmonious and symbiotic give and take relationship, which can only be achieved by maintaining a certain balance within these nested and highly complex systems – an undertaking which she describes as a tightrope walk.

4.2.3.2. *Nature's Ambassador on a Landscape Scale*

Farmer B's role and self-perception further derive from the inadequacy of *the others*. She thus distances herself from many conventional farmers who, in her opinion, are responsible for the surrounding wasteland in the landscape and the industrial agricultural desert. This troublesome condition is caused by not respecting the extensively discussed natural balance, as through the establishment of large monocultures and the exploitative use of natural resources in general. On this basis, she positions herself as a sort of resistance fighter in advocacy of nature, who tirelessly tries to counteract the destructive tendency of other humans and particularly farmers. Even though she is aware of global issues, her main focus and sphere of responsibility connected to her farm appears to lay on the landscape and local scale as she tries to provide a shelter for many species through her specific practices. She perceives these efforts as a struggle and great challenge, yet she profits from a healthy and rich harvest and even more from her good feeling and conscience as she seeks to generate benefits for *the rest of the world*.

As far as global challenges such as the climate crisis are concerned, she considers herself as being able to actively contribute to its mitigation, however she is also aware of the need for collective and political action. Within the scope of her possibilities, she therefore does what she can (primarily on a landscape scale), has not given up hope in her fellow human beings and at the same time feels at the mercy of politicians and those in power.

4.3. Case Excerpt Farmer C

4.3.1. Research Documentation

Farmer C has also been among the farmers who Jörg Weber recommended to me on the organic farm tour as potential candidates for my research project. He informed them in advance in an e-mail roughly about my plans and forthcoming contact. Thus, when I contacted Farmer C in November 2019 after the completion of the interview guide, he quickly responded and was willing to participate. We set an appointment for the interview on December 7th, 2019 at his farm where he lives with his family.

Farm C has existed since 1635 and is run by Farmer C and his family in the 8th generation. The 63-year-old farmer and agricultural scientist, who at the time is the *AbL*'s state spokesman for Hesse, gives lectures on more climate-friendly alternatives for manure spreading, GMO-free feed and healthy nutrition. Being aware that pasture farming is the most active contribution to climate protection, he has found a means to massively reduce ammonia emissions also for indoor systems. With two photovoltaic systems and a crop rotation of 15 different crops, he enhances his contribution to environmental protection. He further established the first GMO-free region in the district and is strongly committed to the production of health-promoting foods and the dissemination of corresponding knowledge, such as a milk that is rich in omega-3 fatty acids or the benefits of his self-produced linseed oil. Since July 2019 his farm has been in the process of converting from conventional to organic farming.

On December 7th I arrived together with my husband at the farm about 30 minutes early. Farmer C spotted us outside of his house and kindly asked us to come in and join him and his family for lunch. We gratefully accepted the warm-hearted offer and sat down at the table with him, his wife and two of his already grown-up sons and ate a delicious soup made entirely from self-grown and self-produced ingredients including a homemade sausage. We engaged in an animated conversation and once more I had to pay attention not to anticipate information that could be relevant for the interview as we were, of course, still talking off the record. Like himself, his wife and his son have also studied at the *Justus-Liebig-University* in Giessen, so we shared some commonalities and had plenty to talk about – privately and professionally. Even though the atmosphere has been relaxed and rather casual we kept addressing each other formally with '*Sie*' throughout the conversation and the subsequent interview. After we finished lunch, Farmer C and I went to the separate living room in order to be able to conduct the interview without greater disturbances or interruptions. Except for two short incidents (one interruption by his wife and one by his son), the interview actually remained uninterrupted and focused. Thus, he was able to give an elaborate narrative, which resulted in a rather long interview (net time: 1:18 h).

4.3.2. Key Point Analysis

The following key points have been identified along the research object-specific heuristics in order to list significant concepts in terms of semantic patterns on the level of content together with the concomitant *thematization rules*, i.e. patterns of the way something is expressed. These patterns on both levels ('What' and 'How') are to be condensed into motifs in a first interpretative step and will be illustrated with anchor quotations as well as commented on with further annotations. In this way, initial readings will be worked out as a preliminary stage of a subsequent, more consolidated interpretation, making visible what was said and how (Kruse, 2015: 618 et seq.).

4.3.2.1. *The Farming Scientist and the Scientific Farmer*

A central motif in Farmer C's self-perception and his relation to nature and the land is his self-positioning as a natural scientist. Hence, he shows strong systems thinking from a scientific perspective.

Already in the opening narrative (paragraph 3) the content focuses on the fact that although he was born into farmer's family that had planned the path of life for him as a farmer (only), he developed a strong scientific curiosity and interest in the connections of things. This tendency had further been encouraged by his success in his school and later academic career.

im prinzip durch geBURT [mhm] (.) durch geBURT kommt man zu so etwas (.) äh
als ich geboren wurde sachte (.) MEIN vater DEIN name steht aufm !DACH! (.)
(??) [okay] damit wa:r der ZUKünftige lebensweg (.) gepla:nt (2) ALLERdings hat
sichs (.) deutlich anners erGEBEN. (Transcript Farmer C, paragraph 3)

The negotiation process with his parents regarding his professional path is repeatedly re-staged in scenic presence, which is noticeable as a linguistic pattern throughout the interview.

da hab ich gesacht ich mach fachoberschule=u=um !GOTTES! WILLEN du machst
den betrieb zu hause=nee ich mach fachoberschule (.) [...] du bleibst in ALSfeld
(.) das is RELativ (.) WOHNort !NAH! (.) dann kannst du NACHmittags oder abends
immer HELfen [...] !DU! (.) machst den BAUERNHOF (.) ICH mach NICHT den
bauernhof (.) DU MACHST den BAUERNHOF (1) nein ich bewerb mich für ein
studium !WAS! (.) ja: ich bewerb mich fürn studium (1) ja was willst du denn
MAchen (.) ach (1) SOZIALpädagogik macht mir spass (.) vermessungstechnik
macht mir spass (.) WENN du was stuDIERSTdann NUR LANDwirtschaft (.) [mhm]
(2) ich hatte mich (.) beWORben (.) und hatte dann auch ZUsagen von
verschiedenen STELlen (1) nein du machst nur landwirtschaft=also bin ich nach
witzenhausen gegangen. (Transcript Farmer C, paragraph 3)

What further stands out here is that his success in his school and later academic career seems just to be happening to him as his agency mostly remains passive in this regard. He sometimes even switches to the third person when he is actually talking about himself ("und der [Name von Farmer P. H.] wusste es HAARKlein") as if he was not involved. Contrary to the opposition of his parents, the intellectual demands in school and university did not seem to have been a challenge for him. Thus, he emphasizes several times how easy things have been for him and how he achieved the best results up to his doctorate seemingly effortlessly.

und äh da hat ich relativ leichtes SPIEL=also mir sind die sachen SEHR !LEICHT! geFALLen (.) der [Name von Farmer P. H.] hat immer zum FENster rausgeguckt=hat en (.) sehr geLANGweilten eindruck gemacht und der lehrer glaubte JEDES mal MICH zu erTAPPEN (.) fragte dann und der [Name von Farmer P. H.] wusste es HAARKlein (.) geNAU (.) [mhm] zu erzählen und konnte des wunderBAR (.) DARstellen [...] beRUFsfachschule fiel mehr SEHR leicht die zwei jahre (2) öh ich hatte SEHR gute NOten un da hab ich gesacht ich mach fachoberschule. (Transcript Farmer C, paragraph 3)

hab in witzenhausen STUDIERT (.) [mhm] erste semester (.) SEHR gut (.) hab mit als BESTER abgeschnitten (.) ZWOTes semester (1) wa:r AUCh sehr gut gelaufen (.) und dann gabs die möglichkeit für die (.) EIN prozent !BESTEN! absolVENTEN (.) ÜBERzuwechseln auf die universiTÄT (.) [mhm] nach giessen [mhm] (1) und DREI (.) der studenten ham sich dort beWORBen (.) zwo wurden ANgenommen (1) und ICH WAR einer DERer die angenommen WURden=hab dann geWECHselt nach GIEssen und hab dort mein (.) !LAND!wirtschaftsstudium [mhm] an der universität fortgesetzt [mhm] auch des lief SEHR gut (.) hat SPASS gemacht (.) äh WAR zwar nicht mehr GANZ so praxisnah wie (.) witzenHAUSEN (.) [mhm] aber=ich hab mir dann meine LEIDenschaften rausgegriffen (1) und hab auch GUT abgeschlossen. (Transcript Farmer C, paragraph 3)

However, after describing his extraordinarily successful early academic career, he seems to continue to live up to a certain self-praise taboo by referring to his completed doctorate as a *small scientific background*.

dann hatten die ELtern natürlich WIEDER ge=gejammert (.) KOMMT aufn hof (.) dacht ich joa ich mach landwirtschaft GERNE hab mittlerweile auch en kleinen (.) !WISSEN!schaftlichen hintergrund hab auch en guten PRAKTISCHEN hintergrund WARUM NICH. (Transcript Farmer C, paragraph 3)

It is precisely this scientific background that seems to have had a quite formative influence on his (agricultural) activities, problem-solving skills and his way to look at the world, which can be retraced in various accounts throughout the interview, however in a condensed form in paragraph 11 when he describes his practices and different products that he manufactures himself. As a first example, he cites his specially developed process for refining liquid manure, which enables a type of fertilization that has a less structure-cleansing effect than conventional processes. In doing so, he always has the entire cycles and interrelationships (down to a molecular biological level) in view, showing a strong and scientifically based form of holistic systems thinking. With this scientific background, he further tries to legitimize his alternative innovative methods and more compatible products and to secure them against reservations that are commonly anchored in Western culture towards marginal science, like esotericism. By seeking to provide scientific evidence for his supposedly rational choices he tries to counteract all resistance and skepticism as he generates a connection to the German mainstream society (“und fangen se mer BLOSS nicht an mit esoTHERIK (.) sacht ich es liegt mer SEHR FERN (.) ICH werde das wissenschaftlich beLEGEN”).

da sacht ich joa: liebe FRAU ministerin (2) hamse denn auch mal drüber nachgedacht dass es vielleicht (1) ANdere verfahren (.) alternaTIVE verfahren gibt die (.) den gleichen effEKT erZIELEN (.) die aber !NICHT! SO STARK strukturbeREINIGEND WIRKEN (.) [mhm] wie=sie des momentan durch die technischen vorgaben planen [...] sie wollen da was spezielles mit der gülle machen (.) und fangen se mer BLOSS nicht an mit esoTHERIK (.) sacht ich es liegt mer SEHR FERN (.) ICH werde das wissenschaftlich beLEGEN [mhm] (1)

und AUS dieser situation raus hab ich dann letztendlich ne gülle verEDELt [mhm] (.) die fütterung umgestellt dass die tiere !WENIGER! (1) an EIWEISS AUfnehmen (1) STICKstoff is ja en eiweissbaustein [mhm] und dieser (??) eiweissbaustein (.) wird dann entsprechend reduziert (2) U:NSERE tiere fressen dann WENIGER Elweiss (2) produzieren dennoch eine SEHR gute MILCH (1) [mhm] sind WEsentlich langlebiger (1) die ÜBERSchüsse des (2) STICKSTOFFS (1) wird heute geMESSEN im (.) HARNstoffgehalt bei der MILCH (.) [mhm] und da wird immer empfohlen ja die bauern sollten etwa zweihunderfuffzich milligramm im liter ANstreben (.) des is für mich VIEL zu HOCH (.) ich sag hundert reichen völlig AUS (1) und=äh dadurch sind die tiere wesentlich geSÜNDER (.) [mhm] sind LANGLEbiger (.) es wird WENIGER stickstoff in den kreislauf EINgepumpt [mhm] das heisst die (.) trinkwasserbelastung geht zurück (.) die amoniakAUSgasung geht zurück (.) des is nur !EINS! (.) dieser beispiele die wir (1) UMsetzten wo ich an andere PREISE gehe. (Transcript Farmer C, paragraph 11)

Further examples within paragraph 11 (which for reasons of scope cannot be cited in full) illustrate his scientific and analytical approach in his attempts to tackle not only ecological but also social and public health problems like increased cardiovascular disease through his agricultural activity (“u:nd da hab ich gesagt WIE kann ICH des als landwirt beeinflussen”). Ergo, one focus lies on the production of health-promoting food such as his linseed oil, which has a balanced and favorable ratio of omega 3 and omega 6 fatty acids. He also takes this scientific knowledge into account when feeding his animals in order to transfer these positive characteristics to the meat and milk he produces – which are ultimately consumed by humans. Thus, he emphasizes the direct link between production, the quality of food and human health.

In his considerations, activities and interactions with nature he appears as an active *Gestalter* (“ich (2) produziere ein LEINöl (.) und DIESES leinöl (1) versuch ich SO zu (.) gestalten dass es auch SEHR schmackhaft ist”; “also hab ich meine gesamte kuhherde (.) durch langjährige zuchtarbeit (1) und seleKTION (.) auf ne reine A ZWEI herde umgestellt”), who tries to shape the natural processes and cycles in a positive way for all actors involved. Thereby it seems particularly important to him and his wife to share and transfer their knowledge with and to the public for it to have an impact (“ich halte dann auch EINIGE vorTRÄGE oder meine FRAU hält auch vorträge zu dem THEMA (1) über gesunde erNÄHRUNG dass man (.) [mhm] des verhältnis von omega sechs zu omega drei im AUGE behalten muss”).

His theoretical work as a natural scientist, the practical implementation of his research findings and realization of his ethical values through his agricultural activities thereby lead to a deep inner satisfaction and fulfilment.

also von DAHER (1) das was man WISSENSchaftlich einmal !MIT!genommen hat (.) !AUf!gebaut hat (.) beKOMMT jetzt plötzlich nen richtigen DRIVE (1) und es gibt einem (.) !LEBENS!zufriedenheit [mhm] des gibt einem (.) wirklich en glück (.) [mhm] und diese glücksmomente (.) diese zufriedenheit (1) die machens AUS. (Transcript Farmer C, paragraph 11)

His scientific background and his experiments account for a large part of this contentment as they repeatedly function as a justification of his activities and encourage him in his work because they give him a sense of certainty of his knowledge and endeavors as well as recognition and credibility in a Western society (“wissenschaftlich abgesichert”).

und des ganze haben wir mit VIER (.) wiederHOLungen gefahren also WISSENSchaftlich gut abgeSICHERT (.) [...] und solche sachen ANgeschubst zu haben und die dann RAUSgefunden zu haben durch (.) WISSENSchaftliche

versuche die ABgesichert sind (1) DAS sind so sachen die einen zufrieden machen
(.) [mhm] also von DAher kann einen landwirtschaft schon zufrieden machen.
(Transcript Farmer C, paragraph 11)

4.3.2.2. *Spiritual Systems Thinking*

Another significant component in Farmer C's worldview is his holistic conception and vision of a mindful coexistence and sense of a oneness of humans, animals and plants. Thus, he shows a strong form of systems thinking on a more spiritual level, which complements his scientific approach in a holistic way.

As a consequence, his conception of nature encompasses everything that surrounds him, including the human species ("poa (1) das (2) alles was um mich rum ist (1) [mhm] egal ob des en MENSCH ist (.) OB des en TIER ist (.) OB des die pflanzen sind also es is exTREM vielFÄLTIG", Transcript Farmer C, paragraph 25).

He clearly dissociates himself from a Cartesian industrial understanding of nature that considers the soil merely as a production site for raw materials, which must be exploited to the maximum with the help of chemical pesticides, and once again shows a strong form of systemic thinking from which he draws a deep respect for the soil. When he describes how some indifferently acting people, like many conventional farmers, consider the soil as a '*steriles individuum*' he seems to have made an interesting slip of the tongue: as they do not grant the soil any rights of its own, they treat it quite contrary to an *individuum* in the sense of a moral subject as the term is used in common parlance. A use of the term in the system-theoretical sense cannot be assumed here for the time being, since its meaning as a living system with specific system properties, which continues to interact with its environment, is shown to be rather incompatible with the adjective *sterile* in this context. It is precisely these system properties and interactions with the environment that are usually not respected or let alone perceived by his conventional colleagues. Once more he shows a scientific way of looking at things and relationships as he explains his respect for the soil by attributing it to the quantity of living beings above and below the ground level in an analytical and scientific terminology. In contrast to many conventional farmers, who cultivate the soil *intensively* with mineral fertilizers and chemical pesticides ("wenn DIE dann noch intensiv bewirtschaftet wird mit pflanzenschutzmittel und (.) mit minerALISCHEN düngern (1) des !SCHADET!", Transcript Farmer C, paragraph 25), Farmer C respects its soil *very intensively* ("!SEHR! intenSIV") – especially for the living beings it contains.

ähm wenn ich sehe wie ACHTLOS manche menschen mit ihren BÖDEN umgehen
ja den BODEN lediglich als steriles individuum s=sieht wo man (1) en DÜNGER
DRAUF gibt wo man PFLANZENSchutz DRAUF gibt und dann SOLL IRgendwie
was wachsen (.) <<seufzt>> es is ja mittlerweile so dass (.) IM BODEN (.) UNTER
dem boden (2) VIEL MEHR (1) an LEBEwesen (1) an tonnAGE (.) an lebewesen
existiert (.) äh als wenn oben drei kühe drauf stehen (1) äh und der faktor ist
vielleicht (2) ZEHN (.) es=sind quasi an geWICHTEN zehn mal mehr=u:nter jedem
hektar sind etwa: (1) fünfzehn tonnen LEBENS- Lebende organsimen und wenn
da drei kühe drauf stehen dann stehen da (.) vielleicht zwoenhalb tonnen drauf (.)
also von DAHER (.) ACHte ich den BODEN !SEHR! intenSIV. (Transcript Farmer
C, paragraph 25)

Connectedness with Animals

Starting from this sense of connectedness, he actively seeks bonding with his animals through an affectionate physical contact, the importance of which he emphasizes several times in the interview. He even makes the very (!) close contact between him and the animals his motto (“des hab ich mir auch SO bissel zum LEITSPRUCH genommen (1) des ich heute miten tieren en SEHR sehr engen KONTAKT“; „äh binden en SEHR sehr (.) ENGES verhältnis“, §9). Not only does he obviously profit in a material sense from the animal products but also and most importantly from the meaning and satisfaction he experiences through his work, as he also senses gratitude from his animals (“merkt ma die kühe dankens einem über kurz oder lang“, §9). In this relationship, which he seems to perceive as symbiotic, he reveals an emotional and even spiritual side as a receiver of signals from his animals and thus assigns them agency on their own (“dass die (.) KÜHE wenn se mich dann SEHEN AUCH letztendlich dieses signAL zurückgeben ja [mhm] also die KOMMEN und (.) und wollen dann äh schon so RICHTICH STREICHELeinheiten PROVO!ZIEREN!“, §25).

wenn ICH jemals mal (.) landwirtschaft machen SOLLTE oder WIEDER machen sollte (1) dann werd ich genau in DIESER zeit wo ICH hier im STAU stehe (1) meine STALLzeit verbringen (.) [mhm] und die verbring ich SINNVoll (1) verbring se umweltFREUNDlich (1) und verbring se SO (.) dass tier und mensch in engen konTAKT stehen (.) und des hab ich mir auch SO bissel zum LEITSPRUCH genommen (1) des ich heute miten tieren en SEHR sehr engen KONTAKT habe (1) [mhm] wenn die tiere beispielsweise im sommer (.) GANZtags auf der weide stehen (.) gehen wir immer mal raus zu den tieren (.) gehen MITTEN in die herde REIN (1) STREICHELN die tiere (.) BERÜHREN die (.) t=tiere (1) äh binden en SEHR sehr (.) ENGES verhältnis (.) und=äh AUS diesem guten verhältnis RAUS (1) merkt ma die kühe dankens einem über kurz oder lang (.) [mhm] und äh (1) en SOLCHES (2) ARBEITEN (.) ein solches VORgehen (1) macht zufrieden (.) macht glücklich (1) und=äh ist FERN=fern ab von=von irgendeinem stau (.) der autobahn. (Transcript Farmer C, paragraph 9)

ich hab ja EINgangs schon gesagt wie ICH mit den kühen umgehe (.) ja dass ich auf die WEIDE gehe dass ich den körperlichen KONTAKT suche dass ich die STREICHEle dass die (.) KÜHE wenn se mich dann SEHEN AUCH letztendlich dieses signAL zurückgeben ja [mhm] also die KOMMEN und (.) und wollen dann äh schon so RICHTICH STREICHELeinheiten PROVO!ZIEREN!. (Transcript Farmer C, paragraph 25)

Connectedness with Plants

His respectful attitude towards the non-human and non-animal entities appears to be initially solely based on the direct benefits for animals and humans and their functional significance within the system (“des: sind ja letztendlich AUCH TRÄGER von=von vielen TIEREN die dann (.) sich in der natur bewegen ja“, §25). He therefore clearly condemns the excessive use of nature by many of his colleagues and calls for an *inner transition* (“!INNERE! WENDE“, §25) which firstly seems to aim at recognizing this very functional importance and appreciation of the individual landscape elements, such as bushes, trees and hedges within (eco-)systems.

ähm <<seufzt>> (1) dass ich äh (2) m:mit den FÖRstern hie:r DISkutierte (.) wie kann man so etwas AUFbauen dass ICH es (.) fü:r (2) ECHT scheisse halte (.) wenns landwirte gibt (1) die die LANDschaft KOMplett ausräumen das heisst es: hat (.) kein STRAUCH kein BAUM (.) KEINE hecke mehr ne chance zu überLEBEN (1) [mhm] ähh des: sind ja letztendlich AUCH TRÄGER von=von vielen TIEREN

die dann (.) sich in der natur bewegen ja [mhm] ne ausge (??) landschaft ist ne LEERE (.) äh fast tote landschaft [mhm] und wenn DIE dann noch intensiv bewirtschaftet wird mit pflanzenschutzmittel und (.) mit minerALISCHEN düngern (1) des !SCHADET! (1) [mhm] und DEShalb sag ich okay wir müssen uns wieder beSINNen (.) wir MÜSSEN auch HIER (.) die (.) WENDE (1) die !INNERE! WENDE (.) [mhm] VORleben (.) wir müssen uns sagen (1) es is <<hustet>> tschuldigung es is auch gut wenn wieder mal (1) en BAUM auf ner wiese steht oder en baum a:m WEGrand steht (.) äh oder en ganzer heckenzaun (.) ange=angepflanzt wird. (Transcript Farmer C, paragraph 25)

However, as the expression of the *inner transition* already suggests, the appreciation of the plant environment seems to go beyond its pure relevance to the natural structure and the direct benefit for humans and animals in this regard. Even though he clearly shows some insecurity and strongly relativizes his statement by sort of discrediting himself (“OBS nun ne spinnerEI is oder nich WEISS ich nich”), he also includes plants next to animals in his emotional and spiritual dimension of his worldview. Thus, he considers the possibility to build an emotional bond with plants and to receive signals in the form of certain waves not only from animals but also from trees – once again assigning non-human agency. His insecurity and the opening of the possibility of being somewhat crazy, as well as the termination of his train of thought, point to a boundary of thematization that presumably results from his socio-cultural background as a natural scientist in a Western society in which spiritual aspects receive only little recognition. In this context, acknowledging emotional connections and more so assigning agency seems to present a significantly higher internal hurdle for Farmer C than in the case of animals.

wenn dann en SCHÜLER tatsächlich auch (.) den KONTAKT zu nem BAUM sucht und den baum umARMT (2) is für mich (.) nix anderes als wenn ich zu meinen tieren geh und streichel die und bekomme DANN letztendlich AUCH (.) ne geWISSE WELLE zurückgeSENDet [mhm] ja: (.) selbstverständlich [mhm] und ich hab auch im FELD (.) BÄUME die mag ich ganz beSONDERS und dann [mhm] (1) äh (.) FREU ich mich jedes mal wenn ich dann in seiner nähe bin also [mhm] des (2) OBS nun ne spinnerEI is oder nich WEISS ich nich aber (.) MIR persönlich tuts GUT und [ja] okay. (Transcript Farmer C, paragraph 35)

For the same reason he reacts rather reservedly to the frontal question about the role of spiritual aspects. For example, although he is convinced of the effects of homeopathic remedies and uses them regularly to treat his cows in the rare case of emerging diseases, he is reluctant to communicate this alternative method to the public, unlike his other alternative yet scientifically proven methods (“häng ich nicht an die große glocke”; “des mach mer nich zum (1) zum !DOGMA! (.) [ja] des mach mer nicht zum (.) zum=zum äh=!ALLHEILMITTEL!”, §15). As a pseudo-science, homeopathy stands in contrast to scientific knowledge and is thus in clear contradiction to his existence as a natural scientist, which could account for this reluctance and uneasiness to talk about its application.

ja gut (.) INSTINKT=w=wä:re vielleicht en bissl WENIG (.) spirituelle effekte <<seufzt>> (2) häng ich nicht an die große glocke (.) also beispielsweise arbeiten wir zwa:r !SEHR! viel mit homöopaTHIE (.) [mhm] und=äh bei unsern Kühen (1) [mhm] is der gesundheitsstatus SEHR GUT und=äh (1) durch unsere spezielle HALTUNGSverfahren kennen dann die=diese KLAUENkrankheit nur (??) und wenn TATsächlich mal ne !EUTER!entzündung bei [mhm] ner kuh auftritt (.) was wirklich SEHR sehr selten ist (.) dann wird die: zunächst erstmal homöoPATHisch behandelt (.) [mhm] UND (.) in NEUNzich fünfundneunzich prozent der fälle (.) führt das (.) zum erfolg [mhm] zu nem VÖLLich ausreichendem erfolg (.) also von DAHER schon mit (1) mit gewissen ANDERN ANsätzen aber (.) des mach mer

nich zum (1) zum !DOGMA! (.) [ja] des mach mer nicht zum (.) zum=zum
äh=!ALLHEILMITTEL!. (Transcript Farmer C, paragraph 15)

4.3.2.3. His Role: The Mindful Innovator

Within this connectedness of basically everything that surrounds him, he sees himself *naturally* (“äh=SELBSTverständlich”, §31) as a part of a whole and thus also as a part of nature. He describes the relationship to his natural environment as a respectful cooperation in which his contribution is the careful use of resources, the appreciation of other living beings and, above all, the maintenance and restoration of their health within the higher-level system, which he tries to achieve with alternative but mostly scientifically proven methods.

en ACHTsames miteinander (.) [mhm] (2) also letztendlich (1) WIE gesucht es
fängt an äh (.) dass ich den BODEN (.) dass ich des WASSER entsprechend
SCHOne dass ich die (.) die TIERE (.) WERTschätze (.) dass ich die PFLANZEN
(1) äh so behandle dass ich sie auch (1) mit alterNATIVEN methoden gesund
erHALte und nicht unbedingt jetzt MIT (1) PFLANZENschutzmitte:l. (Transcript
Farmer C, paragraph 33)

Furthermore, he appears as a mindful, innovation-driven scientist and active *Gestalter* who does not shy away from experiments in this natural environment that he values. He describes himself somewhat self-deprecatingly as cheeky to start extravagant attempts like truffle cultivation, however he basically sees the interaction between humans and the natural environment as something commonplace and the basis for his living (“des tägliche BROT”). Thereby he shows no sign of the existence of the classical Western ideal of untouched nature but includes human use and creative innovations by humans in his conception throughout his narrative.

ja (.) ich wa:r (1) VOR fünf jahren so frech und hab (2) ne HASEL (.) hecke auf ner
WIESE auf nem HANG aufge (.) PFLANZT (1) die: haseln warn mikrotiert mit (.)
nem PILZ (.) u:nd zwar mit nem TRÜFFELPILZ (.) [aha] weil ich einfach mal
ausprobieren WILL (1) können wir denn auch gut in der region (.) TRÜFFEL ernten
(1) ich weiss es werden trüffel (.) mittlerweile in südSCHWEDEN gefunden (.)
[mhm] und warum können wir das nicht AUCH mal probieren (1) also von DAHER
ist die interAKTION zwischen (2) naTUR zwischen innovatIOn (.) und zwischen (.)
MENSCHen (.) zwischen TIERen (1) des tägliche BROT. (Transcript Farmer C,
paragraph 25)

However, he does not use his creativity and his wealth of ideas purely out of scientific curiosity or to solely satisfy his own (business) needs. Rather, through his sense of connectedness, he particularly bears in mind the health and the well-being of the (animal and non-animal) environment. His innovations and ideas thereby enable him to build and strengthen this connection, which contributes significantly to his own inner emotional satisfaction.

da liegt mir jetzt VIEL DRAN(.) zu sagen (2) LASS uns doch HIER in der region
(1) genauso wie beim bruderHAHN (.) [mhm] en bruderKALB (.) AUFbauen und
lass uns des hier in der region AUSmessen (.) dass NACHvollziehbar ist (.) dass
mit den tieren kein SCHINDluder passieren [mhm] kann (2) u:nd solche viSIONEN
die=die treiben mich AN ne [mhm] also des=des RUHT einfach nicht in MIR [ja] (1)
und=äh ich hab grad neulich zu meiner frau gesucht (.) ich hab noch SO viele
IDEEN (.) die reichen für noch DREI leben (.) [mhm] und diese=diese vielen IDEEN
die=äh (3) die !MÖCHT! ich umsetzen oder en GROSSteil davon möchte ich

umsetzen ABER die geben mir auch ne INnere zufriedenheit (1) [mhm] FERN ab
(.) von JEGlicher (.) betriebswirtschaftlicher orientierung. (Transcript Farmer C,
paragraph 21)

4.3.2.4. *Connectedness with the Social Environment*

Farmer C's strongly pronounced striving for a close contact and connection to his fellow human beings contains several components which in turn allow conclusions to be drawn about his worldview.

As a former advertiser and generally as a businessman, he is concerned with customer connectivity *inter alia* in a rather commercial sense since he self-evidently also has a business interest in selling his goods. The special features and qualities of his products, some of which are highly innovative and therefore unknown, require a certain amount of explanation, communication and a close exchange with his customers to ensure that they sell. Ultimately, however, he seems more concerned with the dissemination of knowledge for it could contribute to the preservation of human health and the communication of the values and convictions behind his products than with his own economic success ("ALSO des sind dann so sachen die: einen AUFbauen", §7; "des sind dann SCHON: (.) SAchen wo ma sagen kann (.) ach mensch die leute HAMS kaPIERT die: [mhm] wissen was dahinter steht", §19). Hence, he lists communication with people even among his greatest motivations (§75).

mir lag dann die !KUNDEN!bindung SEHR sehr nahe [mhm] ich hab gesagt ich WILL keine anonyme MASSENware [mhm] produzieren (.) ICH will keine (1) ÜBERSchüsse produzieren (.) ich will en ENGEn kontakt (.) zu meinen (.) KUNDen zu meinen verbrauchern ham [mhm] und den ham wir jetzt im laufe der jahre AUFGEBAUT (1) des geht sehr GUT ich WEISS dass es (.) MENSCHEN gibt die DURCHAUS BEREIT sind (1) etwas MEHR fürn lebensmittel AUSzugeben wenn sie wissen wies zusammengesetzt ist=wos herkommt=wies produziert wurde (2) und=äh: wenns lebensmittel dann besonnern GUT is (1) dann (.) geht es über !MUND! zu MUND propaganda DERmassen gut weiter (.) des mer uns heute zum teil gar nicht mehr RETtenn können [mhm] vor nachfragen (.) ALSO des sind dann so sachen die: einen AUFbauen. (Transcript Farmer C, paragraph 7)

die produkte die (.) LEbensmittel die wir herstellen (.) si:nd zum tei:l so: !NEU! für die menschen (.) DASS einfach ne kommunikation erforderlich ist (.) [mhm] wissen sie was ne a zwei milch ist? [nee] (1) also des is dann SCHON (.) [mhm] erKLÄRungsbedürftig [mhm] [...] !ABER! des zu kommuni!ZIEREN! [mhm] äh des verkauft sich nicht von alleine [ja] des muss (.) muss [ja] bekannt gemacht werden [...] und des muss AUCH kommuniziert werden des is !SEHR! (2) <<seufzt>> erKLÄRungsbedürftig (.) [mhm] und DEShalb diese produkte die WIR halt (1) so HERstelle:n (.) BRAUchen en gewissen erklärungsbeDARF (.) ABER wenn die des- LEUTE das erst einmal AUFgenommen haben verINNERlicht haben (.) dann machen wir automatisch werbung für dieses produkt weiter [ja] ja und des (1) is dann HERRlich wenn ma unsere (.) UNsere (.) äh LEINöle heute bis (2) bis nach (??) LÖRRach nach HAMBurg nach (1) äh GÖRLitz (.) selbst ins AUSland in die schweiz oder nach ESTland oder nach NORwegen verschicken (.) [mhm] des sind dann SCHON: (.) SAchen wo ma sagen kann (.) ach mensch die leute HAMS kaPIERT die: [mhm] wissen was dahinter steht. (Transcript Farmer C, paragraph 19)

However, since communicating and connecting with his fellow human beings contributes significantly to securing his livelihood it in turn enables him to farm in a way that can be free

from excessive economic pressure and thus is consistent with his values. Accordingly, he derives a deep inner satisfaction not only from the effects of his products and of his and his wife's educational work on public health but also from the mode of his agricultural praxis that has beneficial effects for both humans and nature ("w=WAS ich produziere (1) versuche ich (.) !SEHR! gut zu machen (.) [mhm] und AUCH letztendlich für die MENSCHheit (.) GUT zu machen (.) u=!UND! für die natur gut zu machen (.) [mhm] und des gibt einem en gutes GEFÜHL", §11). As these processes are interdependent and mutually beneficial, he created both a functioning business model as well as a virtuous cycle of *co-creation* involving humans, animals and plants.

ich halte dann auch EINIGE vorTRÄGE oder meine FRAU hält auch vorträge zu dem THEMA (1) über gesunde erNÄHRUNG [...] und DAMIT vielen (1) KRANKheiten vorbeugen kann die so im mittleren ALTER oder im höheren ALTER AUFTreten (.) [mhm] und=äh des geht SEHR gut (.) und es gibt doch nix schöneres wenn dann leute kommen (.) JA (.) herr [Name von Farmer P. H.] ich war beim ARZT und der hat mein blut untersucht und hat gesacht die BLUTwerte sind so gut geworden [...] ja des is natürlich was GANZ hervorragendes ja (.) [mhm] und so auf die art und weise (.) bekommen sie dann auch ne befrie- befriedigung und sagen (1) das ist (3) JA: (.) geLEBTE (1) zuFRIEDENHEIT des is (2) <<seufzend>JA> (.) man hat gut gemacht [...] DAS sind so sachen die einen zufrieden machen (.) [mhm] also von DAher kann einen landwirtschaft schon zufrieden machen (1) wenn man !FERN! weg ist von dem (.) DRUCK dass man NOCH wirtschaftlicher (.) NOCH billiger produzieren MUSS (??) würd ich sagen (.) [ja] ich WILL (.) und ich KANN nicht am billigsten produzieren (1) aber des alles (.) w=WAS ich produziere (1) versuche ich (.) !SEHR! gut zu machen (.) [mhm] und AUCH letztendlich für die MENSCHheit (.) GUT zu machen (.) u=!UND! für die natur gut zu machen (.) [mhm] und des gibt einem en gutes GEFÜHL. (Transcript Farmer C, paragraph 11)

Farmer C shows his emotional or even spiritual responsiveness in relation to his social environment in paragraph 37 by attesting a genuine interest in the diverse motivations of his fellow human beings, by seeking intellectual and emotional exchange with different people in other professions and by greatly appreciating the emergence of familiar structures ("verTRAUTE strukTUREN") at a local level. He again uses the semantic image of the wave to illustrate his emotional connectedness with his human social environment as he did before when he discussed the reception of certain signals from his non-human environment, that is, from plants and animals. In this context, he further advocates osteopathy as another alternative medicine after homeopathy that is not evidence-based and largely contradicts modern scientific findings, thus demonstrating his openness to the scientifically inexplicable.

The intensity of the relationships he seeks and highly values with his fellow human beings is indicated through his use of terminology that can be assigned to the semantic field of intimacy and partnership ("und=äh:=REGEN uns AN gegenseitich und (.) dieses: sich GEGENSEITICH (.) !AN!REGEN (.) dieses gegenseitige beFRUCHTEN diese [mhm] GEGENSEITIGE (4) !VERSTÄNDNISSE! (.) FINDen", §37). It is through these intimate relationships and close connections within his community that he is trying to (co-)create something fruitful for the future. Several times he prosodically stresses the reciprocity of the process ("GEGENSEITICH", §37).

The metaphor of the circle he applies ("wenn ma diese KREISE weiter AUSbauen würde", §37) is thereby suggestive in several respects: not only does it connect the past represented by people's longing for something old-fashioned (such as making bread or sauerkraut together) with his visions for the future. It also picks up on the design concept of

circularity that prevails in nature (*Gaia*), which in turn stimulates associations of close interlockings, symbiotic togetherness and thus again a certain intimacy for various connections that Farmer C desires for interpersonal relationships within a community.

ohh gibt noch SEHR SEHR VIELES also: (1) die ACHT beispielsweise (.) ähh vor LEUTen die: (.) SEHR KÜNSTLERISCH: motiviert sind ja sabines GROSSvater war [mhm] KUNSTmaler und (.) da <<hustet>> hat uns jetzt en paar bilder zukommen lassen was hat IHN bewegt er [mhm] hat auf SARDINIEN gelebt (.) WARUM hat er auf sardinien gelebt (.) äh WAS hat IHN angetrieben [mhm] ähh (.) NUR EIN beispiel oder (1) ich hab dann kunden die=die zu mir kommen und sagen ja: sie ham ne schmuckSCHULE und wir ARbeiten da: und öh machen DIESES und JENES und wir FINDEN IHRE ARbeit gut und (.) wir tauschen uns AUS und=äh (1) es is dann SCHÖN (1) WENN auch aufm flachen LAND (.) richtig verTRAUTE strukTUREN entstehen wo ma sagt (.) okAY (.) MAN (3) schwimmt auf der gleichen !WELLE! (.) [ja] ja: also man äh (.) man MAG sich man unterSTÜTZT sich und (2) wir haben nen (.) osteoPATHEN <<hustet>> en osteoPATHEN der uns SEHR hilft und (.) wir diskutieren dann immer (.) SEHR intensiv wenn wir bei ihm in behandlung sind und=äh:=REGEN uns AN gegenseitich und (.) dieses: sich GEGENSEITICH (.) !AN!REGEN (.) dieses gegenseitige beFRUCHTEN diese [mhm] GEGENSEITIGE (4) !VERSTÄNDNISSE! (.) FINDen und s=sagen okay (.) geMEINSAM können wir was anderes !ERREICHEN! (1) äh (.) des KOMMT bei uns in der gesellschaft im moment SEHR sehr KURZ (.) [mhm] auch=äh (1) WERDEN wir SEHR häufig abgelenkt (.) durch (3) FUSSBALL (1) durch (1) was weiss ICH unterhaltens- äh unterhaltungssendungen durch (.) durch FERNsehen INSgesamt ja (1) die zwischenmenschlichen beziehungEN die gehen !SEHR! SEHR (.) stark in hintergrund (1) und wenn man dann wieder MENSCHEN sieht (.) DIE sagen (.) ACH (.) ich würd gern mal mit euch zusammen SAUERKRAUT machen oder ich wär gern mal beim BROt backen mit bei (1) dann weiss ma okAY (.) die leute haben ne gewisse SEHN!SUCHT! [mhm] ZU WAS (2) altHERgebrachten (.) WAS ne gewisse befriedigung GIBT (1) wenn ma diese KREISE weiter AUSbauen würde (1) das wäre in meinen augen [mhm] SEHR sehr WERTvoll und HILFREICH (.) [mhm] auch für unser künftiges zusammenleben. (Transcript Farmer C, paragraph 37)

4.3.3. Concluding Interpretation: A Holistic Health Promoter

Based on the concepts and motifs identified above, a condensed and summarized interpretation will follow, attempting to capture the main features of Farmer C's worldview and the central motifs of his conception of nature.

Farmer C's understanding of nature is characterized by a deep and, above all, holistic form of systems thinking. This includes both, a scientific and a more emotional or spiritual component.

Holding a PhD in natural sciences, Farmer C has a detailed understanding of interlocking natural processes and cycles down to and beyond a molecular biological level. As a result, he is aware of a certain material connectedness of basically everything, i.e. humans, animals, plants, water and soil. He therefore carries out experiments and scientific trials within his agricultural activity and is interested in the development of innovations, which could be conducive to the maintenance, restoration or improvement (of the health) of these systems. Thereby he understands his own effectiveness and agency as very potent – even towards severe global challenges such as the climate crisis.

He is driven by his manifold visions to make the world a better place, with the overarching and unifying goal of contributing positively to the (physical and emotional) health of the above-mentioned human and non-human stakeholders and the overall system(s), which leads to an existence far beyond that of a 'pure' farmer. In what he deems a desirable scenario of mindful interactions between all the actors involved, he grants humans a beneficial role that he pursues due to a great sense of responsibility towards his family, future generations and the entire human and non-human world. His (*Gaian*) understanding of the world includes a strong spiritual and emotional sense of connectedness between people, between people and animals as well as plants such as trees – which he perceives through an exchange of certain signals and waves.

Yet, due to his socio-cultural background as a natural scientist in a Western culture, the spiritual component of his systems thinking gets somewhat overshadowed by the scientific component in its thematization, which might be for reasons of credibility and recognition within the Western (scientific) community. Although his immediate sphere of influence through his farming activity is centered on the landscape and local scale, he also strives for bigger dimensions through further communication and the dissemination of respective knowledge regarding his products and their health impacts (for example, through public lectures and the distribution of its products abroad).

4.4. Case Excerpt Farmer D

4.4.1. Research Documentation

Farmer D is also one of the farmers Jörg Weber suggested for my research project as a suitable interviewpartner and whom he informed in advance about my plans and forthcoming contact. When I contacted Farmer D in November 2019 after the completion of the interview guide, she quickly responded and was willing to participate. We set an appointment for the interview on January 23rd, 2020 at her farm, where she lives with her family.

Farmer D took over the business from her parents-in-law in 2008 and immediately began setting the course for conversion to organic farming. As a trained educator and religious teacher, the then 50-year-old farmer runs the project *farm kindergarten* in cooperation with the federal working group *Learning Location Farm* to sensitize children from an early age for the origin and production of food and to introduce them to the interaction with animals, nature and agricultural activities. To further increase the general societal environmental awareness and to offer playful encounters with agriculture, she also organizes corn labyrinths that include art stations by regional artists with changing mottos every two years – for 2020 it was supposed to be *upheavals*. Moreover, she offers seasonal gardens in order to provide a place for community, social interaction and the experience to plant, grow and harvest fruits and vegetables.

In the morning of January 23rd, 2020, Farmer D kindly picked me up from the nearest train station with her car. Since she was expecting another appointment at her house and was generally under time pressure, she seemed a bit stressed at first. Nevertheless, she has been friendly and cordial throughout and tried to create a pleasant atmosphere for the conversation. She also offered me the ‘*Du*’ during the car ride already, which further lightened the general mood. At first, the interview was supposed to take place in the family’s living room, but since it was too noisy due to craftsmen’s work, we changed the location and the interview took place at the kitchen table.

As in the previous interviews, both the interviewee and me were initially a little nervous yet became increasingly relaxed as the interview progressed. The open invitation to tell her story seemed to be somewhat unsettling to her as she reassured herself several times as to what exactly the question was and also showed a desire to read up on the questions in the guide itself in order to make sure that she had understood them correctly. The interview was disturbed repeatedly by incoming calls, the ringing at the front door by an acquaintance, and once had to be paused because of the entry of her mother-in-law. Due to my increasing interview experience, however, I found it easier to pick up the thread after the interruptions than in previous occasions. The interview therefore lasted about 45 minutes (net time). After the recording we continued to engage in an animated conversation and she kindly offered to drive me back to the station.

4.4.2. Key Point Analysis

The following key points have been identified along the *research object-specific heuristics* in order to list significant concepts in terms of semantic patterns on the level of content together with the concomitant *thematization rules*, i.e. patterns of the way something is expressed. These patterns on both levels (‘What’ and ‘How’) are to be condensed into motifs in a first interpretative step and will be illustrated with anchor quotations as well as commented on with further annotations. In this way, initial readings will be worked out as a preliminary stage of a subsequent, more consolidated interpretation, making visible what was said and how (Kruse, 2015: 618 et seq.).

4.4.2.1. Think Globally, Act Locally and Vice Versa

One recurring and central motif within Farmer D's remarks is her desire to make a global impact through her local both social and agricultural activities and thus to improve or even to save the world. She perceives this as her greatest challenge (“make the world a better place <<lachend>oder so> <<beide lachen>> die welt retten [ja] hm is meine größte herausforderung”, §116). Within this endeavor, two dominant strategies emerge for approaching this overriding goal.

The first one results directly from her agricultural activities and their management as she aims to achieve a closed business cycle, which is characteristic of small-scale rural and organic farming. With this form of agriculture, she tries to prevent global wars that are based on the fight for land and natural resources and thus shows a powerful and globally oriented agency. However, it seems as she tries to mitigate this audacious project of *saving the world* with an accompanying laugh, the impression of which is reinforced by her own statement “so schlimm sichs- das jetzt anhört” (§15).

also ICH glaube dass w=wir mit ner kleinen bäuerlichen ÖKOlandwirtschaft (.) ähm (1) KRIEGE verhindern könnten (.) [mhm] WEIL es sich da DOCH sehr viel auch um ROHstoffe (.) LAND (.) und RESSOURCEN (.) ähm DREHT (.) und (.) ich DENKE des is (1) DER ANSATZ ähm (.) <<lachend> die welt zu retten> [mhm] so schlimm sichs- das jetzt anhört. (Transcript Farmer D, paragraph 15)

In paragraph 19, she once again establishes a close link between her local actions and global impacts and illustrates her efforts to create a closed operating cycle that refrains from importing raw materials from other regions of the world. By producing 100% of the feed for the fattening of her animals herself or by using technology to reduce the consumption of plastics, Farmer D strives to relieve the burden on other countries, especially those that are poorer in water and resources. Thus, she shows global solidarity and a clear enactment of “think globally, act locally”.

ähm (.) also wir FÜTTERN hier zum beispiel nur hundert prozent eigenes FUTTER (.) [mhm] (1) WEIL ähm dieser (.) äh (.) NÄHRstoff (.) TRANSPORT aus (.) von anderen KONTinenten oder so entspricht ja immer einem wasserraub=man sacht ja auch virtueller (.) WASSER und LANDRAUB [mhm] und ähm DAS möchten wir hier absolut verMEIDEN (1) [mhm] ähm (3) ja globaler ASPEKT (.) ähm (.) anSONSTEN bemühen wir uns (.) PLASTIK zu verMEIDEN (.) [mhm] wir ham hier ähm (.) DAS PRINZIP (.) ähm SILAGE STRANG (.) [mhm] da (.) wurde hier in deutschland bei uns (1) ein <<lachend> ERLkönig eingesetzt> [mhm] ähm für eine maschine die (.) den PLASTIKverbrauch um drei viertel reduziert [mhm] in der SILAGEherstellung [mhm] beispielsweise also DA machen wir immer gerne MIT [mhm] bei solchen SACHEN [mhm] und anSONSTEN versuchen wir wie geSACHT hier unsere rohstoffe die wir für die MAST der tiere brauchen auch SELBST herzustellen [mhm] weils (1) sonst äh nicht in unser prinzipien [ja] äh (.) in unsre prinzipien passt. (Transcript Farmer D, paragraph 19)

Besides this first strategy of exerting a global influence, Farmer D is pursuing another one, which relates less to her own local cultivation of food and feed than to raising awareness and a certain mindset within society, especially among young people. By coaching high school students in organic farming and sending them to Brazil for an internship, she has a direct international influence, the extent of which she tries to belittle once more by an accompanying laughter and the weakening “son bisschen” (§9). Interestingly, she introduces these efforts

with the saying “LOKAL DENKEN und GLOBAL HANDELN” (§9), which is a distortion of the actual expression “think globally, act locally”. This alleged slip of the tongue could reveal that she perceives her globally oriented agency as very effective – she not only *thinks* globally, she *acts* globally.

und (1) und PARALLEL dazu ähm (.) gibt es (1) eine BEKANNTSCHAFT zu einer brasilianischen familie und [mhm] LANDwirtschaftsschule dort wird ÖKOlandwirtschaft unterrichtet und das wird geTRAGEN von der franziskaner proVINZ (.) [mhm] (.) wo MEINE KINDER auch (.) ähm (.) zur SCHULE gingen (.) auf en FRANZISKANER gymnasium [mhm] und (.) ähm (.) und das hat mich nochmal darin (.) beSTÄRKT (.) DASS (.) dass wir echt LOKAL DENKEN und GLOBAL HANDELN müssen [mhm] WEIL (.) ähm (.) weil des sonst nicht LÄUFT (.) [mhm] wir beKOMMEN (.) mittlerWEILE (.) ähm (1) im schnitt alle zwei JAHRE von (.) einer oberstufenKLASSE [mhm] dieser schule (.) beSUCH und coachen hier SCHÜLER die nach brasilien ins praktikum gehen [mhm] für ÖKOlandwirtschaft und des find ich ganz TOLL dass wir da auch son bisschen <<lachend> in die weite welt hinaus> [mhm] (.) dringen. (Transcript Farmer D, paragraph 9)

Through her on-site social and agricultural activities, such as the farm kindergarten or offering school internships, she not only succeeds in sowing plants locally, feeding animals and ultimately people (thereby having an indirect global impact) but she also sows awareness among (young) people (“ziemlich VIEL (.) !SÄEN! kann an beWUSSTsein in jungen menschen”, §11). She focuses on young people who then go out into the world as multipliers of these attitudes and values and thereby strengthen her global influence.

JA (.) also was mich auch noch GANZ doll fasziniert ist dass (2) NÄCHSTE woche wieder zwei schülerinnen hier ANFANGEN die früher mal im bauernhofkindergarten waren (.) [mhm] und machen hier en zweiwöchiges SCHULpraktikum (.) andere kommen dann zum FÖJ hierher zurück (.) ODER studieren dann auch (.) [mhm] ähm LANDWIRTSCHAFT (.) und ähm des FASziniert mich SEHR dass man (.) DAMit doch äh (.) ziemlich VIEL (.) !SÄEN! kann an beWUSSTsein in jungen menschen [mhm] und die dann das (.) WISSEN (.) was sie hier (.) erWERBEN (.) oder (.) ähm (1) die !HALTUNG! die sie hier erwerben auch multiplizieren und damit in die welt hinausgehen [mhm] des find ich ganz (.) !PRIMA!. (Transcript Farmer D, paragraph 11)

4.4.2.2. Social Connectedness on a Local Level

Alongside and accompanying Farmer D's sense of connectedness with other people on a global level, she shows an equally strong form of connectedness with her social environment on a local level, which she can live out through her farm.

Her professional background as an educator and religious teacher is of crucial importance in this respect. Not only does she see herself and her profession as very social and diagnoses herself in a somewhat exaggerated form with the helper syndrome, but many of her social-agricultural activities are also strongly pedagogically motivated. By offering regional social projects related to agriculture, such as the farm kindergarten, she establishes a direct and close connection to the local society and her village community, which is of great importance to her (“des is ganz WICHTIG [ja] dass wir hier nicht ALLEINE wirtschaften (.) sondern innerHALB (.) unserer ORTschaft unserer gesellschaft [mhm] ja”, §9).

JA GENAU und ansonsten als ERZIEHERIN (1) ähm (.) hat man ja eh so (.) das HELFERSYNDROM [mhm] und so ähm (.) JA (.) is in der regel ein sehr soZIALER mensch und (.) und ich glaube das STRAHLT hier noch so mit RAUS dass [mhm] wir regioNALES (.) ANbieten (.) DASS wir den lernort !BAUERN!HOF anbieten [mhm] draussen sind ja grade die kinder vom BAUERNhofkindergarten [mhm] der auch seit zweitausendfünf schon unseren HOF (.) [mhm] regelmässig einmal die woche besucht und (.) des is ganz WICHTIG [ja] dass wir hier nicht ALLEINE wirtschaften (.) sondern innerHALB (.) unserer ORTschaft unserer gesellschaft [mhm] ja. (Transcript Farmer D, paragraph 9)

Her desired connection to her fellow citizens through her farm is guided by two basic principles, which allow certain conclusions to be drawn about her worldview and her view of human nature: equality and openness. Thus, she tries to ensure that everyone, regardless of their social background has access to her educational and pedagogical services (e.g. through a non-profit association) and pays all her employees the same hourly wage (§11, §21).

seit zweitausendfünf auch einen geMEINnützigen verEIN (.) [mhm] der (.) träger ist für kunst und kultUR [mhm] am hof (.) träger für umweltSCHUTZmassnahmen [mhm] und träger für den lernort BAUERNHOF [mhm] ähm (1) IN diesem verEIN (.) ähm (.) ist es möglich SPENDEN einzugeben sodass dann (.) KLASSEN und kindergartengruppen AUS sozialen brennpunkten hierher kommen KÖNNEN (.) [mhm] !OHNE! einen beitrag dafür zu beZAH:LEN [...] ich !GLAUBE! das is einfach (.) das WIRKEN (.) als OFFENER bauernhof der so [mhm] etwas bewirkt [mhm] be (.) WIRKT [mhm] ne. (Transcript Farmer D, paragraph 11)

On several accounts during the interview she emphasizes the importance of the openness and welcoming culture she nurtures on her farm and the effect she can achieve with it (“das WIRKEN (.) als OFFENER bauernhof”, §11; “wir sind (.) ein SEHR OFFENES HAUS (.) [mhm] ähm wo eben MENSCHEN die hier oben (.) HEIMAT FINDEN wollen die auch finden [mhm] !KÖNNEN!”, §21; “ein (.) !SCHÖNER! (.) !EIN!LADENDER (.) bauernhof zu finden ist [mhm] (.) weil das einfach auch GANZ viel ähm (1) mit den MENSCHEN MACHT”, §33). As a believing Christian and theologian, she has a religious focus and maintains a close relationship with the local churches. However, she does not exclude other groups by any means (“diese: KIRCHENGemeinden aber auch (.) ANDERE gruppierungen (.) unserer stadt”, §21), but integrates them, for instance, through her culturally and artistically influenced community projects, such as the maize labyrinths.

also (.) bei uns bekommt jeder mitarbeiter ähm (1) AUSSER (.) unserem festangestellten LANDWIRT zehn EURO die stunde [mhm] von der putzfrau bis ähm zur büroKRAFT (.) [mhm] dann also weil=weil ich denke alle arbeiten sind WICHTIG [mhm] und keine ist der anderen überLEGEN (.) [...] ähm (1) also (.) wir sind (.) ein SEHR OFFENES HAUS (.) [mhm] ähm wo eben MENSCHEN die hier oben (.) HEIMAT FINDEN wollen die auch finden [mhm] !KÖNNEN! (2) wir machen ganz viele GEMEINSCHAFTSPROJEKTE: (.) wie: ähm SAISONGÄRTEN wie (.) die EIERABOS [mhm] die wir ANBIETEN (.) ähm (.) wir arbeiten mit (.) den nidderauer KIRCHEN zuSAMMEN (.) ähm (.) JEDEN (.) pfindstMONTAG seit (.) ZWANZIG JAHREN jetzt (.) um achtzehn uhr treffen sich hier OBEN (.) in der grünen MITTE unserer stadt wo sich vier ortsteilgrenzen schneiden (.) zum teil vierhundert menschen um einen gemeinsamen pfindstgottesdienst [mhm] zu FEIERN (.) was hinter natürlich auch noch <<lachend> bier und bratwurst gibt> [mhm] ähm (.) und (.) und AUCH nochmal ein (.) ANDERER blick auf LANDwirtschaft geworfen werden KANN (.) [mhm] ähm (.) diese: KIRCHENGemeinden aber auch (.) ANDERE gruppierungen (.) unserer stadt

GEBEN sich dann auch in das projekt KUNSTmais also unsre MAISlabyrinth
[mhm] EIN die immer einen sehr (1) äh (.) ph=philosophisch politischen
hintergrund HABEN <<handy fängt an zu klingeln>> [mhm] (1) wir (.) lassen die
alle ZWEI jahre stattfinden (.) im jahr zweitausendachtzehn war das thema ERD (.)
TÖNE (.) [mhm] dieses jahr wird das thema UMBRÜCHE sein. (Transcript Farmer
D, paragraph 21)

The connection into society thereby clearly aims to confront people with the production of food and agricultural activities, to generate a constructive exchange and to first sow and further to sharpen awareness of the existing interdependencies within nature and the food system. The responsible citizen ("der MÜNDIGE BÜRGER", §66) who is able to make free and well-founded decisions is the declared aim of her educational work (§66).

WEIL das eben auch ganz wichtig für (.) für STÄDTE oder
gemeinden=ORTschaften ist dass (.) dass da noch ein (.) ein (.) !SCHÖNER! (.)
!EIN!LADENDER (.) bauernhof zu finden ist [mhm] (.) weil das einfach auch GANZ
viel ähm (1) mit den MENSCHEN MACHT [mhm] wenn sie wissen wo ihre
LEBENSmittel herkommen (.) zu unsern (.) HÜHNERN im mobilstall wird quasi
hing (.) PILGERT (.) [mhm] und=äh=ich glaube des !BRAUCHT! es einfach dass
menschen UNBEDINGT mit der produktion ihrer nahrungsmittel (.) konfrontIERT
(.) WERDEN dass die sich dafür intereSSIEREN und <<Telefon fängt an zu
klingeln>> dass man MIT ihnen da (.) ähm (1) KONSTRUKTIV diskutieren kann
auch. (Transcript Farmer D, paragraph 33)

ich wollte vom FLYER erzählen ne [mhm genau] (.) der MÜNDIGE BÜRGER (.) in
meiner ausbildung damals ähm (.) am frankfurter diakonissen haus (.) war damals
das OBERSTE erziehungsziel (.) der mündige bürger (.) der [mhm] FREI (.) und
(.) SICHER aus bildung heraus (.) entscheiden kann (1) und auf unserem flyer
steht wie kann ein mensch ein MÜNDIGER BÜRGER [mhm] (.) WERDEN (.) wenn
er nicht um die entstehung seiner lebensgrundLAGEN seiner lebensmittel=und
darunter gehört für uns auch sauberes wasser [mhm] und saubere LUFT (.) [mhm]
beSCHEID weiss [mhm] und das ist son ganz (.) STARKER antrieb für uns (.) quasi
[mhm] auch AUFZUKLÄREN (.) [mhm] ähm VORurteile (.) !ODER! (.) aber auch
(.) dinge die uns (.) die eine (.) AGRARLOBBY (1) hier beWIRBT (.) ähm (.)
vielleicht dann DOCH en bisschen auch GRADE zu rücken weil ich glaube dass
(1) dass manchmal nicht immer so den TATSachen ENTSPRICHT (.) [mhm] ähm
(.) das=das is son ANTRIEB für mich. (Transcript Farmer D, paragraph 66)

4.4.2.3. Being at Mercy: Nature as an Unequal Partner

Another striking feature in Farmer D's conception of nature that manifests itself in several parts of the interview is her portrayal of nature as a (divine) partner.

In this partnership, nature has its very own agency and qualities, some of which appear almost godlike. Farmer D therefore does not perceive this partnership as an equal relationship in which one meets at eye level but is aware of her (and humanity's) dependence and subordination. She is subject to nature. Farmer D is conscious of conditions and processes in nature over which she, as a human being, has no control. This being at the mercy of nature evokes various emotions in her. One of them is admiration and reverence for the beauty and perfection of nature. She thankfully enjoys the beauty of nature as an external observer ("wo man das alles dann (.) nochmal in ruhe auch betrachten [mhm] und geNIESSEN kann", §58)

yet describes this experience and the accompanying feeling at times as so intense that it overwhelms her (“kaum AUSZUHALTEN”, §39; “kommen mir dabei fast die TRÄ:NEN”, §41).

ABER natur is für mich auch (.) hier der sonnenaufgang und der sonnenuntergang [mhm] die hier oben so SCHÖN sind dass es manchmal kaum AUSZUHALTEN ist. (Transcript Farmer D, paragraph 39)

This dependence and inability to exert influence has another side besides admiration and fascination, namely that of respect and even fear, which she tries to belittle with an accompanying laugh (“<<lachend> ANGST>”, §41; §58). At the same time, the idea of this merciless dependency also seems to relieve Farmer D, as it exposes her own insignificance in relation to the greater whole in a fatalistic manner. It reminds her not to take herself too seriously within nature and lets her own agency seem rather ineffective and passive (“so ein klitzekleiner teil eines großen ganzen zu sein ähm (.) finde ich (1) äh SEHR (.) GUT zu wissen (.) dass man (.) sich in (.) der natur auch selber nicht zu ERNST nimmt”, §41).

mhh (3) also NATUR kann schon auch echt GRAUSAM (.) !SEIN! (.) [mhm] äh wenn man jetzt das dürrejahr zweitausendachtzehn auch beTRACHTET (.) von daher hab ich (.) ALLER ALLER größten RESPEKT (.) bisweilen auch <<lachend> ANGST> vor unsrer (.) ähm (.) NATUR (.) auf der anderen SEITE ähm (.) kann ich mit KINDERN hier die geBURT einer WEIZENÄHRE mit dem seziermesser nachvollziehen und es (.) [mhm] kommen mir dabei fast die TRÄ:NEN [mhm] weil das SO (.) ähm (1) JA dann <<lachend> DOCH einer echten geBURT ganz ähnlich is>> [mhm] w=wenn ähm da der getreide <<lachend> embryo durch die blatt (.) sch=SCHEIDE (.) stösst> [mhm] und (.) ähm (.) und so ein klitzekleiner teil eines großen ganzen zu sein ähm (.) finde ich (1) äh SEHR (.) GUT zu wissen (.) dass man (.) sich in (.) der natur auch selber nicht zu ERNST nimmt. (Transcript Farmer D, paragraph 41)

also (.) wie gesagt das is so ne ganz große achtung bis <<lachend>ANGST> (.) [mhm] ABER auch ne sehr große dankbarkeit [mhm] wenn es dann HERBST ist [mhm] (.) meine liebste jahreszeit is (.) ähm (.) november (1) bis FEBRUAR (.) [mhm] so die vier ruhigen monate (.) [ja] wo man das alles dann (.) nochmal in ruhe auch betrachten [mhm] und geNIESSEN kann (.) ich liebe es wenn der BODEN gefroren ist (.) [ja] wenn (.) ähm (.) wenn der raureif glitzert <<telefon klingelt>>. (Transcript Farmer D, paragraph 58)

4.4.2.4. Being the Bad Ones and Striving for Perfection

Deriving from her awareness of systemic interconnectedness and complex interdependencies within nature – which she influences massively as a human being and in particular as a farmer – her understanding of her partnership with nature contains a far more active component in addition to the more passive contemplative or even fearful one described above. For her, this knowledge and awareness is inevitably accompanied by a sense of responsibility and duty to exert this influence as positively as possible or rather as harmlessly as possible.

She expresses her desire to integrate actively and in the most positive way into the circular flows of nature for the first time in paragraph 39. Her aim is to preserve the basis of life for future generations by keeping the soil fertile and promoting biodiversity (for example by planting hedges). Again, she tends to lessen and to belittle her efforts and achievements in this respect with accompanying laughter (“ja (.) und es geht <<lachend> langsam”, §39).

mhm (.) natur ist eigentlich so das KREISLAUFGESCHEHEN was wir haben (.) wir sind hier nicht an (1) ähm (1) an die kanalisation (.) !ANGESCHLOSSEN! (.) und meine schwiegermutter hat immer gesagt (.) ich hab NIEMALS die pille genommen damit hier <<lachend> keine hormone (.) in die gülle kommen> und ähm (2) ja (.) also (.) auch DAS (.) w=wir diesen BODEN fruchtbar halten müssen [mhm] dass=äh (.) is mir ganz WICHTIG (.) natur is für mich auch (.) DASS wir ähm sehr nachhaltig DENKEN [mhm] (.) MÜSSEN und ähm (.) und w=weit über unser eigenes leben HINAUS (.) [mhm] ähm (.) ABER natur is für mich auch (.) hier der sonnenaufgang und der sonnenuntergang [mhm] die hier oben so SCHÖN sind dass es manchmal kaum AUSZUHALTEN ist [mhm] ähm (.) wir haben (.) letztes jahr hier ne allee mit zehn BUCHE:N (.) den weg hochgepflanzt [mhm] und haben uns mit unserm betrieb auch am dritten OKTOBER an dem projekt EINHEITSbuddeln beTEILIGT [mhm] und eine ähm (.) eine hecke entlang eines feldwegs auf unserer fläche gepflanzt (.) ähm (.) ja (.) und es geht <<lachend> langsam>. (Transcript Farmer D, paragraph 39)

In paragraph 56, she further specifically addresses the synergies and benefits of systemic organic farming and thereby clearly distinguishes herself from her conventional colleagues, who regularly disregard these synergies and favorable cycles as they operate in a linear rather than a circular fashion, passing on the (ecological and monetary) consequences to society. Spreading this knowledge and raising awareness of the manifold synergies and complex correlations is important to her as she seeks to promote a better treatment of nature (“JA und=und das möchte ich gerne so in die breite tra:gen”, §56) – taking on the role of an ambassador.

<<seufzt> also (.) ökologische landwirtschaft äh ist ja so ne sysTEMISCHE landwirtschaft (.) [mhm] also (.) ähm (2) du hast (.) mit allem was du tust so ganz viele synERGIEEN (.) [mhm] (.) also wenn ich jetzt (.) meinen schweinen dann äh (.) KLEEGRAS (.) FÜTTERE (.) [mhm] DANN (.) bewirke ich DAMIT (.) DASS ähm unsere- unser BODEN s- äh sauber gehalten wird unkraut FREI SEIN wird nach zweijährigem klee gras (.) DASS (.) ähm (.) stickstoff im boden eingelagert wird (.) [mhm] der bei (.) konventionellen kolLEGEN mit stickstoff DÜNGER (.) in die erde kommt (.) [mhm] der ABER wiederum (.) äh mit dem teuren haberBOSCH verfahren erzeugt wurde [mhm] und ganz viele KOSTEN auch hat die (.) [mhm] ähm (.) die der (.) landwirt nicht TRÄGT (.) die der verBRAUCHER nicht trägt [mhm] die die !GESAMTGESELLSCHAFT! TRÄGT [mhm] und (.) JA und=und das möchte ich gerne so in die breite tra:gen. (Transcript Farmer D, paragraph 56)

For Farmer D, perceiving herself as a part of nature (“ABSolut <<lacht>>”, §45) and thus as part of the circulatory and interdependent system(s) is also accompanied by a mindful and respectful treatment of her animals – both on a physical and emotional level. Nevertheless, she sees herself (and humanity) as more of a pest than a beneficial (“wir sind die ganz BÖSEN”, §27), but as one who tries hard to minimize the inevitable negative influence and to turn it into a (more) positive one whenever possible (“JA da gibts noch viel zu TUN (.) wir sind ABSOLUT NICHT perfekt (.) aber wir geben alles (.) um (.) um (.) <<lachend> dem nahe zu kommen”, §27). Here she again falls into the paralinguistic pattern of a softening accompanying laughter, which could be an indication of her inherent bad conscience or her ambiguity regarding her view on the role of humans. Thus, her conception of humankind ranges from a negative, christianized perspective of sinful human beings to the option of striving for perfection through a more respectful treatment of her animals.

naja gestern beim SCHWEINE wiegen (.) [mhm] hab ich unsre FÖJlerin geLOBT [mhm] wie FREUNDLICH sie mit den SCHWEINEN UMGEHT (.) ähm (.) und DAS ist uns eben auch ganz WICHTIG dass wir HIER (.) obwohl wir tiere MÄSTEN und ich sage wir sind die ganz BÖSEN weil wenn die hier vom hof gehen dann STERBEN DIE [mhm] <<lachend>deFINITIV> [mhm] ähm dass wir ihnen aber trotzdem mit großer ACHTUNG begegnen (.) [mhm] und ähm (.) und ihnen hier das bestmöglichste LEBEN ge=w=!WÄHREN! (.) was wir ihnen bieten KÖNNEN [mhm] (.) ja (.) das beDEUTET für mich auch immer HINTER!FRAGEN! wir haben noch keinen (.) AUSLAUF (.) äh für unsere RINDER (.) [mhm] das müssen wir bis zweitausend (.) ACHTtundzwanzig glaube ich (.) bin mir nicht ganz sicher (.) geWÄHRLEISTEN [mhm] dafür ham wir auch schon ANgefangen HECKEN zu pflanzen !ABER! (.) JA da gibts noch viel zu TUN (.) wir sind ABSOLUT NICHT perfekt (.) aber wir geben alles (.) um (.) um (.) <<lachend> dem nahe zu kommen>.
(Transcript Farmer D, paragraph 27)

Farmer D interestingly uses the epitome of negative anthropogenic effects on nature and the world, namely climate change, to illustrate possible positive human roles. Thus, she perceives herself personally as a component of a specific part of nature, which is the incipient (agricultural) turn towards more nature-compatible and beneficial human behavior and a corresponding form of agriculture. In this context her pictorial language and choice of words, which are literally rather related to plant cultivation, point to the proximity of her actual agricultural activities (“WACHSEN”, “!HAARWURZEL!”, “zum großen baum”, §47). She not only grows plants and vegetables and raises animals, she also wants to sow consciousness and plant the seeds for change in the existing human-nature relationship. Her modesty regarding her own involvement in this undertaking is again expressed in accompanying laughter, as well as the belittling characterization of the “!HAARWURZEL!” (§47). In doing so, she portrays herself and people in general, again, not only as something harmful to nature but also opens up the possibility of initiating a transition of destructive human behavior and thus, exerting a positive influence.

wie ich mich als teil der natur seh (2) oh das is das is schwierig jetzt (.) wie seh ich mich als teil der natur (2) naja also mit- (1) I=ICH SAGE IMMER ähm SOZIALE LANDWIRTSchaft=lernort bauernho:f aber AUCH vielleicht jetzt hier ähm (1) die AGRARwende (.) MUSS langsam WACHSEN [mhm] und (.) vielleicht bin ich so ähm (.) in diesen TEIL der natur die <<lachend> !HAARWURZEL!> (.) [mhm] die sich gerade gebildet hat von etwas [mhm] viel größerem was vielleicht [mhm] später mal zum großen baum werden könnte. (Transcript Farmer D, paragraph 47)

In paragraph 60, she again addresses climate change and the fear or even hysteria that accompanies it. However, Farmer D evaluates these seemingly negative feelings as something positive and thereby makes a remarkable choice of words: by calling climate change a motor, she uses a term that is strongly associated with human (as opposed to natural) achievements, such as machines. A motor is typically defined as a man-made machine that generates power to drive another machine (e.g. a vehicle). These machines and their emissions of greenhouse gases are known to be one of the main causes of this climate change. By describing climate change as a motor, she thus alienates the term from its actual connotation and associative field and uses it in the sense of a human-initiated driving force to counteract the consequences of the motor in the former sense and to “wieder mehr mit der natur ins reine zu [mhm] KOMMEN” (§60). The partly unintentional damage caused by human beings, which yet has been widely accepted, must also be ironed out by human beings – a challenge she takes active agency in by assuming responsibility.

In rather passive agency, she expresses hope that other people (like Greta Thunberg and young people with their families) will ultimately bring about this change. In this context, she again uses strong pictorial language, which, however, can be assigned to the semantic field of the forces of nature (“ich glaube dass da momentan was ins rollen kommt (.) dass da [mhm] aus einem schneeball (.) eine (.) lawine werden KÖNNTE”, §60). In doing so, she contrasts not only with the previous semantic field of the man-operated machine, but also with the image of the “!HAARWURZEL!” used in paragraph 47. As long as she includes herself in the picture, she uses terminology that plays down her own role. As soon as she talks about the effect of other people, she uses very powerful terms, like the avalanche. She thus remains in her very modest self-representation and corresponds to a certain form of self-praise taboo.

hm (.) ich glaube dass der klimaWANDEL ähm (.) viele menschen auch ÄNGSTIGT (.) [mhm] u:nd man spricht ja auch von klimaHYSTERIE (.) auf der anderen seite denke ich es ist (.) VIELLEICHT auch dank GRETA thunberg (.) ähm ein MOTOR (.) wieder mehr mit der natur ins reine zu [mhm] KOMMEN (.) ähm (.) ganz viele junge menschen beschäftigen sich damit und (.) und ZIEHEN ihre FAMILIEN mit (.) [mhm] und ich glaube dass da momentan was ins rollen kommt (.) dass da [mhm] aus einem schneeball (.) eine (.) lawine werden KÖNNTE. (Transcript Farmer D, paragraph 60)

Paragraph 62 emphasizes once again that Farmer D considers climate change and, above all, its thematization as an opportunity to create awareness in broader society of the need to reconnect with nature and thus treat it more respectfully. Through her work as a farmer and her social commitment, she creates spaces for such reconnection by providing opportunities to get in contact with the regional food production (e.g. by offering seasonal gardens), and thus trying to counteract alienated human-nature relationships.

ähm (.) die ergebnisse waren eigentlich das INTERESSE [mhm] der schülerinnen und schüler [mhm] am THEMA (.) der umgang (.) damit (.) WIE äh (2)= WAS sind regionale LEBENSMITTEL [mhm] überhaupt (.) wie kann ich dazu ne beziehung knüpfen (.) als wir hier angefangen ham (.) da wusste im saisonGARTEN kaum jemand (.) vor welchem GEMÜSE man da STEHT (.) als wir aufgehört ham (.) da ham die jungen da=damen mit ihren langen manikürten fingernägeln TROTZDEM voll inbrunst (.) mit uns überm feuer suppe geKOCHT (.) [mhm] ähm (.) ja also das (.) das glaube ich <<lachend> ham wir auch dem klimawandel> und der beNENNUNG des klimawandels zu verdanken. (Transcript Farmer D, paragraph 62)

Farmer D describes herself as nature’s protector by being a campaigner for nature-compatible agriculture and food production in harmony with nature, both on a global and local level.

ich fühle mich da als beSCHÜTZERIN und kämpferin (.) [mhm] für eine naturverträgliche (.) LANDwirtschaft für (.) NATUR (.) verträglich oder einher- mit der natur einHERgehende lebensmittelproduktion. (Transcript Farmer D, paragraph 49)

4.4.2.5. AgriCULTURE and the Cultivated Landscape

Another decisive aspect in Farmer D's worldview and her conception of nature is the connection and compatibility of nature conservation and the use of nature through the concept of the *cultivated landscape* (§76). She defines the *cultivated landscape* as nature that has developed through the settlement of humans. In doing so, she clearly dissolves the dualistic view of the incompatibility of nature conservation and use by granting humans their place in nature or in the landscape, which then becomes a *cultivated landscape* (*Kulturlandschaft*). It is precisely this *cultivated landscape* that Farmer D feels is worthy of protection, and which includes the use of nature by humans from the very beginning and evaluates it as something positive. For Farmer D conservation requires use and vice versa. In this concept she also takes into account global-local contexts by refraining from imports and by advocating regional or local food production, which in turn forms part of the local culture. Thus, it is not only about the protection of the *cultivated landscape* but also about the protection and preservation of the associated culture.

ja das hat eben wieder ganz viel so mit KULTURLANDSCHAFT zu tun [mhm] es ist die FRAGE (.) wollen wir hier jetzt ähm (.) ANfangen EINFACH hier ALLES wieder beWALDEN (.) [mhm] zu LASSEN und (.) UNSRE nahrungsmittel aus (.) anderen ländern HER!BEIHOLEN! (.) [mhm] was=was is naturschutz (.) [mhm] WELCHE natur wollen wir schützen [mhm (.) ja] ähm (.) DIE (.) die sich über jahrtausende (.) durch (.) äh (.) MENSCH (.) äh=durch die ansässichkeit von <<lachend> menschen> entwickelt hat (.) [mhm] JA und (.) ähm (.) und ich BIN eben dafür unsre KULTURLANDSCHAFT (.) äh zu SCHÜTZEN (.) [mhm] und (.) und so glaube ich dass eins das andere !BEDARF! (.) [mhm] NUTZUNG (.) ALS auch (.) SCHUTZ [mhm (.) mhm] ja (Transcript Farmer D, paragraph 76)

Farmer D addresses this culture, which is deeply connected with farming activities, in paragraph 70 by using the English term “AGRICULTURE”, which already encompasses the two aspects in a literal sense. For her there is a close link between culture, the becoming of the human being (“MENSCH (.) WERDUNG”, §70) and agriculture, which she tries to draw attention to through her projects such as the art inspired corn labyrinths. Thus, she attempts to connect with her social environment through this shared understanding (of nature) or its (co-)creation.

In order to gain and deepen these insights, she also supports scientific archaeological research, which seeks to uncover and retrace the connections up to the pre- and early history of humanity. These findings focus on the constitution of the soil as the basis for the development of humankind and its culture. In addition to examining temporal horizons, a local-global cross-connection is created by comparing on-site soil profiles with those of other continents (such as Asia and the Yangtze Kiang). From such comparative investigations Farmer D draws an appreciation and gratitude for the local conditions (“wir leben HIER im speckgürtel der WELT (.) [mhm] am rande der goldenen WETTERAU”, §70), she considers worthy of protection (“und das gilt es so sehr (.) zu SCHÜTZEN und zu beWAHREN auch”, §70). She thus demonstrates a far-reaching and comprehensive awareness of systemic interrelationships and a sense of connectedness at local, global, past and future scales.

ähm ja (.) AGRICULTURE is für uns [mhm] ein SEHR sehr großes thema [mhm] hier oben AUCH (.) hab ich ja schon erzählt mit (.) unserm verEIN und (.) und dem KUNSTMAIS (.) [mhm] und ähm (1) und (.) wir wollen hier oben auch immer wieder DEUTLICH machen wie (.) !ENG! (.) ähm (2) KULTUR (.) MENSCH (.) WERDUNG (.) und landwirtschaft miteinander ZUSAMMEN hängen (.) [mhm] einer unserer

freundinnen (.) und ZWEITE vorsitzende des vereins ist promovierte archäoloGIN (.) [mhm] (.) und GRÄBT hier auch im (.) niddaTAL (.) zu den ersten siedlungen (.) also sie (.) arbeitet zur vor und FRÜHgeschichte (.) [mhm] und (.) und DA sieht man auch wieder wie ENG das mit GUTEN BÖDEN (.) [mhm] (.) ähm (1) ALLES hier ZUSAMMENHÄNGT (.) ähm (1) JA und (.) und so HAM wir (.) eben auch (.) immer mal wieder WISSENSCHAFTLER hier (.) [mhm] eine doktorantin hat in einem BODENprofil was wir hier ham was DAUERHAFT begehbar ist (.) einen lösskegel AUSgeschnitten um ihn (.) mit dem löss aus dem jangtsekiang zu vergleichen [mhm] da ham wir wieder dieses GLOBAL denken [mhm] WEIL wir hier all den gruppen die (.) hierher kommen auch immer wieder regelrecht PREDIGEN (.) wir leben HIER im speckgürtel der WELT (.) [mhm] am rande der goldenen WETTERAU [mhm] und ähm (.) und das gilt es so sehr (.) zu SCHÜTZEN und zu beWAHREN auch. (Transcript Farmer D, paragraph 70)

4.4.3. Concluding Interpretation: Sowing Crops and Awareness

Based on the concepts and motifs identified above, a condensed and summarized interpretation will follow, attempting to capture the main features of Farmer D's worldview and the central motifs of her conception of nature.

Farmer D's understanding of nature and her worldview is characterized by a deep sense of systems thinking and her awareness for interdependencies on a local as well as on a global level. This sensitivity is accompanied by an intense feeling of connectedness with her natural and social environment. Within these contexts, she tries to exert as positive and as harmless an influence as possible, both through her farming activities as well as through her social engagement. Based on her awareness of a momentary harmful influence of human existence on nature, her aim is to integrate her agricultural activity into natural cycles in a most compatible way. Within this endeavor, she not only wants to sow plants and trees, give animals a habitat and promote biodiversity, but also seeks to sow societal awareness for the existing imbalance and appeal to each individual to take responsibility for their actions and consumer behavior. Farmer D pursues this goal by offering community projects, such as maize labyrinths or the farm kindergarten, in which she enables people from a very young age to encounter nature and food production and thus tries to counteract the existing alienation in the human-nature relationship. Thereby, she assumes the role of an ambassador or even a preacher in the name of nature.

In her personal relationship with nature, she shows aspects of godlike worship that entails an awe-inspiring and fearful component. Accordingly, she attributes own qualities and agency to nature as a superior partner, to which she is at the mercy as a human being. At the same time, she also benefits from nature and uses nature, both in monetary terms as a resource through her commercial activity as a farmer and also contemplatively by enjoying its beauty. She assigns great importance to spiritual aspects on a personal level, however for the professional field she clearly rejects an official status and thus corresponds to the classical Western values of a serious profit-oriented business. Religious aspects, on the other hand, are emphasized more strongly and presented with greater self-confidence, since they are more firmly anchored in Western Christian culture and could therefore be assumed to lead to less irritation with a Western socialized audience.

In addition to her powerful local impact within her village community, she shows a potent global agency with a mission to save the world. She displays solidarity with less privileged parts of the world and a classic enactment of "think globally, act locally". However,

she supports countries of the Global South not only by considering the global effects of her local actions but also by coaching young people which she sends there on the site. Thus, she acts locally and globally. Although her agency as a global citizen can be considered as very powerful und she is trying to initiate a transition ultimately on the level of the whole society, she uses mechanisms of belittlement, such as accompanying insecure laughter und modest wording regarding her own actions and achievements, throughout the interview.

Her strong systems thinking and her sense for the interconnectedness of all things is also evident in her concepts of (agri)culture and the *cultivated landscape*. She thus creates a connecting bridge between the dichotomy of humanity and nature. Thereby, she not only grants humans a right to exist within the natural environment, but she also reconciles the dualism within the common Western perceptions of nature (untouched, wild, pristine vs. over-exploited)

4.5. Cross Analysis: Results

Subsequent to the individual case excerpts, the material is compared in the following cross-analysis with regard to consistent central motifs and *thematization rules*. Since a condensation into typologies can only be considered meaningful from a larger number of cases (Kruse, 2015: 620), the thesis centers upon the detailed individual case analysis and the elaboration of the exact case structures (Chapters 4.1.-4.4.). Although generalizing statements can be made more easily via case-typological abstractions and thus also serve as a basis for further, e.g. quantitative studies, these generalizations must also be approached critically, since they can, in turn, acquire strong efficacy for the construction of the social (Kruse, 2015: 620). In the following, the focus is therefore on striking similarities and interesting differences across cases – without claim to generalizability. Thereby, the first six subchapters (Chapters 4.5.1-4.5.6) are rather to be construed as elements of the interviewed farmers' cosmovision, while the last concluding point (Chapter 4.5.7.) tries to outline their resulting role in (Western) society. The findings will be illustrated with exemplifying anchor quotations.

4.5.1. *Modi Operandi: Gestaltung and Co-creation*

A first cross-case striking feature is the concept of *Gestaltung*. The term is borrowed from the German language for in the history of ideas *Gestalt* denotes something that is formed during the transition from the world of perceptions to the world of ideas (Metzger 1974 as quoted in Jahn et al., 2020: 94). Thus, *Gestaltung* involves linking inner worlds of imagination with externally perceptible realities and is to be understood as a conscious intervention in existing contexts (Jahn et al., 2020: 94). It links matter and meaning, relates the respective farmer to nature and describes this very relationship between farmer and nature or non-human agents in more detail. Thereby, *Gestaltung* of nature is not only the self-designation of the farmers' own activities and profession, but further provides information about the power relations perceived in this relationship. On the one hand, the concept grants the farmers significant options for action and is accompanied by what is perceived as a very strong power to act (agency). On the other hand, it acknowledges their limitations in this regard. Therefore, it must be clearly and decisively distinguished from a striving for mastery over nature common in classical Western culture. The perceived power relations are clear in the respective narratives: one's own agency is great – as is the responsibility that goes with it. Yet, nature is granted an agency of its own, which is ultimately perceived as superior and for that reason connected to a certain degree of humility, respect and even fear.

Moreover, the concept of *Gestaltung*, which in all cases strives for a more harmonious egalitarian coexistence of humans and nature, seems to be able to overcome the two opposite poles of the Western forms of environmentalism (untouched nature vs. mastery/exploitation) and to pose an alternative. This includes human beings in the conception of nature and assigns them a legitimate position in the ecosystem even with the possibility of making a positive contribution, while still requiring them to perceive the limits of their power to act. The disclosure and concomitant deconstruction of such claims to power and disposition thereby seem to facilitate the establishment of the desired harmonious cohabitation and thus touches upon the concepts of food sovereignty and *environmentalism of livelihoods/the poor*.

For Farmer A (see Chapter 4.1. for a detailed analysis), who uses the expression *Gestaltung/gestalten* quite frequently in his narrative, this kind of interaction in the sense of a simple influence results from the mere existence of humans in nature – almost as an inevitable evil. Therefore, he is determined to shape his influence on nature as positively as possible with

the aim of producing food and preserving the basis of life for himself, his fellow creatures (human and non-human) and, above all, future generations, both locally and globally.

Paragraph 12 summarizes Farmer A's philosophy and introduces the concept of *Gestaltung* as a metaphor for his proclaimed relationship with nature. He takes a particularly critical view of his own role, since as a farmer he intervenes strongly and directly in nature – and is fully aware of his concomitant responsibility. Therefore, one of his primary goals is to keep the interventions as considerate and minimal as possible (§49; §53)

also das ist nicht äh die PURE naTUR was hier hier beTREIBen [mhm] sondern des is äh=es is eine=eine geSTALTUNG der natur [mhm] UM ein LEBENSmittel zu erzeugen. (Transcript Farmer A, paragraph 12)

die=die=die NA!TUR! (.) wenn ma davon ausgeht dass sie vom MENSCHEN gestaltet is und dass (1) wir LEBEN nun im=mim ANTHROPOZÄN [mhm] [...] ähm (1) naturNAH oder (.) SO gestaltet werden dass sie FÜR die (.) NATUR oder FÜR die=für die ÜBrige umwelt (.) eine GRUNDlage bildet. (Transcript Farmer A, paragraph 49)

JA man muss- (.) ich=ich bin jemand der=der=der en MASSIVEN !EINGRIFF! in die naTUR VORnimmt (.) [mhm] des muss ma so sagen (1) ich versuch das auf ne ART zu TUN (3) JA die möglichst SCHONend ist [mhm] die=die aber (.) aber die=die=die naTUR (.) nicht so LÄSST wie se Elgentlich WACHSEN würde so gern ma des im idealfall gern tun wölte (1) aber (1) JA unsere lebensGRUNDlage is äh sch- <<Telefon klingelt>> IS hier der EINGRIFF in die naTUR des muss mer [mhm] so sagen. (Transcript Farmer A, paragraph 53)

While in his earlier remarks (§12, §49, §53) the impression can be conveyed that he evaluates the existence of humans in relation to the effects on the natural environment as mostly negative, this connotation changes somewhat later in the interview. Thus, paragraph 51 positions him as being a part of nature as opposed to being an unpleasant intruder from the outside only. Further, in paragraph 57, he even finds highly praising attributes for this interaction and perceives something 'WUNDERBARES' within diversly designed, complex ecosystems.

DA sind wir schon natürlich hm (.) naJA wir sind en erHEBLICHER TEIL also wir geSTALTEN die natur ja. (Transcript Farmer A, paragraph 51)

aber einen (.) VIELFÄLTIGES äh: wunderBARES: geSTALTETES (.) zusammenWACHSEN von GANZ verschiedenen ARTEN und ein im prinzip äh in dem fall dann en (.) en=en=en komplex ÖKOSYSTEM sehe dann (.) JA dann ist das für MICH was WUNDERBARES ja. (Transcript Farmer A, paragraph 57)

Even though Farmer B generally grants humans a more positive role within the system, she also urges a responsible and restrained interaction (*Gestaltung*) with nature (§3, §39)

wie ähm (.) TOLL die natur viele dinge auch schon REGELN kann und der mensch eigentlich GAR nicht so weit (.) eingreifen (.) !MUSS!. (Transcript Farmer B, paragraph 3)

perfekTION (2) [mhm] die natur ist eigentlich IN SICH schon perFEKT [...] man muss eigentlich grad die VIELFALT der natur ähm SEHEN aufgreifen und sich

dadran orientieren (.) [...] ich denk ÜBERall wo der mensch ÜBERmässig in die natur eingreift ist es (4) ist es zu VIEL. (Transcript Farmer B, paragraph 39)

She consistently includes humans in her conception of nature and creates an ideal of reverential designers, responsible creators of symbiosis and balance keepers, i.e. tightrope walkers. This active and positive role of humans as *Gestalter*innen* can be interpreted as a peasant form of environmentalism, thus assigning farmers a legitimate place within the natural system. Thereby, she repeatedly emphasizes the importance of awareness and perception in the process of *Gestaltung*, insofar as those represent prerequisites for entering a relationship of *Gestaltung* in the first place (Jahn et al., 2020: 95).

und ähm (.) ja ansonsten schlüsselerlebnis in auSTRALIEN hab ich ne PERMAKULTUR kurs geMACHT [mhm] ähm (.) ne permakultur AUSbildung (1) und=äh (.) DA gabs auch ähm (1) !EINIGE! schlüsselerLEBNISSE WIE einfach die land (.) SCHAFT sich auch ähm (1) ja NÄHRT einfach durch anlage von TEICHEN und bewässerungssystemen die man dann in der landschaft integriert (.) [mhm] (1) dass doch auch (.) JEDE ecke quasi JEDER=jede fläche seine GANZ spezielle EIGENSchaft hat die es äh zu SEHEN und zu nutzen gilt. (Transcript Farmer B, paragraph 9)

Gestaltung as the interaction of humans with nature further continues to hold potential for the expression of human creativity (accompanied by a powerful agency) and even human-nature innovations, which is especially prominent in the narratives of Farmer B and Farmer C. At the same time, they also assign nature and non-human actors a gradually growing agency of their own. Thus, the farmers enter a relationship of *co-creation* with nature.

man hat ne wahnsinnich große (.) !BAND!breite an möglichkeite:n (.) wie man äh die landschaft ja VIELseitich gestalten kann. (Transcript Farmer B, paragraph 9)

ich (2) produziere ein LEINöl (.) und DIESES leinöl (1) versuch ich SO zu (.) gestalten dass es auch SEHR schmackhaft ist. (Transcript Farmer C, paragraph 11)

also hab ich meine gesamte kuhherde (.) durch langjährige zuchtarbeit (1) und seleKTION (.) auf ne reine A ZWEI herde umgestellt. (ibid.)

Conclusively, the concept of *Gestaltung* also encompasses a certain tension, which in turn can be attributed to an ambiguity and shift regarding the role of humans in nature. Farmer A and D's narratives initially portray humans as a disturbance in nature, which would be better off without them. Thus, the human-nature divide is strongly reflected in their conception at first. As the interviews progress, new and more positive roles develop, as shown above. The interviews of Farmer Farmer B and Farmer C focus on this more positive role and portray humans from the beginning rather as collaborative partners, creative designers and ambassadors or even saviors of nature who counteract the destruction by others (Farmer B & D). Thereby the human-nature divide is increasingly transcended, and a conception emerges that recognizes the interconnections within the environment, particularly between human and non-human actors/natures and is thus inclusive of the human being.

4.5.2. The *Cultivated Landscape*

Closely related to the concept of *Gestaltung* is the concept of the *cultivated landscape*, which also occurs (explicitly or implicitly) across cases and presupposes a rationality that does not conceive of nature and culture as external to one another. Accordingly, nature is considered as a whole, which is inclusive of humans. The concept of the *cultivated landscape*, thus, serves to overcome both, the dualism of nature conservation and excessive use, as well as the binary of nature and society/culture/human beings. It grants humans a legitimate position within the ecosystem while even acknowledging their capability to improve its state. Thus, the awareness and perception of humans as part of nature and the landscape inherent in this concept is a constitutive part of the farmers' cosmovision.

ja das hat eben wieder ganz viel so mit KULTURLANDSCHAFT zu tun [mhm] es ist die FRAGE (.) wollen wir hier jetzt ähm (.) ANfangen EINFACH hier ALLES wieder beWALDEN (.) [mhm] zu LASSEN und (.) UNSRE nahrungsmittel aus (.) anderen ländern HER!BEIHOLEN! (.) [mhm] was=was is naturschutz (.) [mhm] WELCHE natur wollen wir schützen [mhm (.) ja] ähm (.) DIE (.) die sich über jahrtausende (.) durch (.) äh (.) MENSCH (.) äh=durch die ansässigkeit von <<lachend> menschen> entwickelt hat (.) [mhm] JA und (.) ähm (.) und ich BIN eben dafür unsre KULTURLANDSCHAFT (.) äh zu SCHÜTZEN (.) [mhm] und (.) und so glaube ich dass eins das andere !BEDARF! (.) [mhm] NUTZUNG (.) ALS auch (.) SCHUTZ [mhm (.) mhm] ja. (Transcript Farmer D, paragraph 76)

4.5.3. The *Life-Basis*

The concept of the *life-basis* occurs in varying ways across the interviews and shall therefore be viewed in a differentiated manner.

First, the concept of the *life-basis* is used to describe the farming activity in the sense of an intervention with nature, which initially reflects a Western/colonial conception of the world as it departs from an ideal of untouched nature. In this context, these interventions with nature serve as the *basis* for human *life* within the capitalist system, as the sale of animal and plant products generates income for the farmers.

In a further meaning, the farming activity produces a *life-basis* by providing food and nourishment for humans, animals (and plants). Notably, this existential meaning is already encapsulated in the German term *Lebensmittel*. Without food, no human or animal life is possible in the long run.

JA man muss- (.) ich=ich bin jemand der=der=der en MASSIVEN !EINGRIFF! in die naTUR VORnimmt (.) [mhm] des muss ma so sagen (1) ich versuch das auf ne ART zu TUN (3) JA die möglichst SCHONend ist [mhm] die=die aber (.) aber die=die=die naTUR (.) nicht so LÄSST wie se Eigentlich WACHSEN würde so gern ma des im idealfall gern tun wöllte (1) aber (1) JA unsere lebensGRUNDlage is äh sch- <<Telefon klingelt>> IS hier der EINGRIFF in die naTUR des muss mer [mhm] so sagen. (Transcript Farmer A, paragraph 53)

Similar to Farmer A, Farmer C conceives the interaction between humans and the natural environment as the *basis for his living*, interestingly using the metaphor of “des tägliche BROT” (§25) to illustrate his point. The production of food through the interaction of humans and nature, i.e. farming is both as existential and ordinary as eating bread to him. Yet, he shows no sign of the existence of the classical Western ideal of pristine nature but includes human

use and creative innovations by humans cooperating with nature (i.e. *co-creations*) in his conception.

also von DAHER ist die interAKTION zwischen (2) naTUR zwischen innovatiON
(.) und zwischen (.) MENSCHen (.) zwischen TIERen (1) des tägliche BROt.
(Transcript Farmer C, paragraph 25)

Aside from these two stronger benefit-oriented interpretations, another dimension of the *life-basis* concept emerges, that is, the intervention in nature (through farming) to keep the *life-basis* intact. Soil, water, biodiversity and air require mindful treatment to maintain the possibility for life and food production – also for future generations. The preservation of the environmental system's reproductive capacity thereby appears as the central goal of the farming activity. The pursuit of profit and the production of food gives way to the effort to contribute to the sustainable existence of the living environment. Thus, the protection and preservation of the *life-basis* gains not only existential but also ethical relevance.

auf der ANnern SEITE denk ich natürlich an <<Telefon klingelt>> unsere (.) natürlichen (.) LEBENSGRUNDLAGEN (.) die WIR versuchen zu (2) erHALTEN und äh JA und überhaupt die die !GRUND!LAGE sind für unser (.) für unser DASEIN und (.) äh (.) die wir auch !BRAUCHEN! (.) [mhm] !UM! (1) SO zu LEBEN (.) äh wir MÜSSEN (.) mit diesen naTÜRLICHEN GRUNDlagen das HEISST (.) unsern BODEN (.) unser WASSER unsere (.) <<Telefon klingelt>> Artenvielfalt die LUFT (1) äh=äh die sind für !UNS! WICHTig und die müssen=müssen !WIR! in einer (.) möglichst REINEN oder was=möglichst in!TAKTEN! form erHALTEN (.) um existIEREN zu können (.) [mhm] also ich denke mal SO RUM muss man die SACHE schon !DENKEN! (.) [mhm] und=äh WIR sind GRAde daBEI diese LEBENSgrundlagen (1) massiv zu zerSTÖRN (.) und DAMit auch (1) UNSERE geWACHsene geSELLSCHAFT äh:m (2) naja die lebensGRUNDlagen zu ent!ZIEHEN!. (Transcript Farmer A, paragraph 49)

dass mer=dass mer unsere lebensgrundLAGEN erHALTEN [mhm] und auch die lebensgrundlagen von (1) ANDEREN mitgeSCHÖPFEN. (Transcript Farmer A, paragraph 55)

des is ja so WICHTIG dass wir genAU das tun was wirs- was wir TUN weils würde ja SONST keiner machen [mhm] das wird ja sonst (.) AUCH die=äh FLÄCHEN nur (.) wieder so ARM bewirtschaftet we:rden (1) eh (.) ja auch einfach nur weiter (1) RAUBbau unsrer LEBENSgrundlage be-äh (.) also (.) beTRIEBEN werden und=ähm (.) einer !MUSS! ja (.) die REGENwürmer füttern und äh blumen für die BIENEN SÄHEN (.) und des is einfach (.) des wo ich dann auch immer denke (.) poah (.) ne (.) ich KANN eigentlich nich mehr aber eigentlich is die verANTWORTUNG die wir ham mit unserem beRUF viel zu gross umse einfach abzulegen. (Transcript Farmer B, paragraph 17)

auch DAS (.) w=wir diesen BODEN fruchtbar halten müssen [mhm] dass=äh (.) is mir ganz WICHTIG (.) natur is für mich auch (.) DASS wir ähm sehr nachhaltig DENKEN [mhm] (.) MÜSSEN und ähm (.) und w=weit über unser eigenes leben HINAUS. (Transcript Farmer D, paragraph 39)

To some extent, the concept of the *life-basis* thus manages to dissolve the dichotomy between the productive and the reproductive by making visible the interconnections and interdependencies between both spheres and by reinforcing the value of the reproductive functions that often remain invisible as they are taken for granted. Production and reproduction somewhat converge under the concept of *life-basis*, which further is conceptually inclusive of

the human being. Thereby it is also able to reconcile the views on nature as either pristine, wild and preserved vs. used, tamed and exploited and thus presents a cornerstone of the agroecological farmers' cosmovision.

4.5.4. An Anti-Apocalyptic Attitude

Closely linked to the attempt to preserve the *life-basis* or at least to counteract its destruction is the anti-apocalyptic element in the farmers' cosmovision. Instead of abandoning their costly and labor-intensive efforts (for example Farmer A's purchase of the double-blade mower) in the face of increasing and overwhelming environmental degradation, the farmers continue their work and try to cope with a supposedly pessimistic outlook. Rather than adopting a fatalistic attitude, they utilize as many opportunities for transformation as possible, signaling that there are still possibilities for action and that it is worth fighting for a transformation of the human-nature relationship. In doing so, they break out of the classical narrative of the Cartesian story, which typically forecasts the apocalypse or catastrophe as a consequence of the exploitation of nature by humans in the context of the Anthropocene discourse (Moore, 2015: 5).

Yet, in contrast to the common human technocratic fantasies of omnipotence, the farmers do not place themselves above nature and present themselves as superior with innovative solutions. Rather, a decentering of the human role seems to take place insofar as farmers increasingly perceive themselves as embedded in and dependend on nature. This anti-apocalyptic and post-heroic attitude therefore focuses on the relations(hips) between humans and nature, respectively on their new design and alignment in order to be able to keep living (i.e. preserving the reproduction capacity as the *life-basis*), which includes innovative ideas for execution and opportunities of *co-creation*. In this decentering, the farmers' perceived agency remains active and powerful yet there is a dynamic towards an equalization of power as the agency of nature and non-human actors is gradually perceived and respected, which will be addressed again in the following Chapter (4.5.5).

w=WAS ich produziere (1) versuche ich (.) !SEHR! gut zu machen (.) [mhm] und AUCH letztendlich für die MENSCHheit (.) GUT zu machen (.) u=!UND! für die natur gut zu machen (.) [mhm] und des gibt einem en gutes GEFÜHL. (Transcript Farmer C, paragraph 11)

wenn ma diese KREISE weiter AUSbauen würde (1) das wäre in meinen augen [mhm] SEHR sehr WERTvoll und HILFREICH (.) [mhm] auch für unser künftiges zusammenleben. (Transcript Farmer C, paragraph 37)

ich DENKE des is (1) DER ANSATZ ähm (.) <<lachend> die welt zu retten> [mhm] so schlimm sichs- das jetzt anhört. (Transcript Farmer D, paragraph 15)

auch DAS (.) w=wir diesen BODEN fruchtbar halten müssen [mhm] dass=äh (.) is mir ganz WICHTIG (.) natur is für mich auch (.) DASS wir ähm sehr nachhaltig DENKEN [mhm] (.) MÜSSEN und ähm (.) und w=weit über unser eigenes leben HINAUS. (Transcript Farmer D, paragraph 39)

!ABER! (.) JA da gibts noch viel zu TUN (.) wir sind ABSOLUT NICHT perfekt (.) aber wir geben alles (.) um (.) um (.) <<lachend> dem nahe zu kommen. (Transcript Farmer D, paragraph 27)

die AGRARwende (.) MUSS langsam WACHSEN [mhm] und (.) vielleicht bin ich so ähm (.) in diesen TEIL der natur die <<lachend> !HAARWURZEL!> (.) [mhm]

die sich gerade gebildet hat von etwas [mhm] viel größerem was vielleicht [mhm] später mal zum großen baum werden könnte. (Transcript Farmer D, paragraph 47)

ich glaube dass der klimaWANDEL ähm (.) viele menschen auch ÄNGSTIGT (.) [mhm] u:nd man spricht ja auch von klimaHYSTERIE (.) auf der anderen seite denke ich es ist (.) VIELLEICHT auch dank GRETA thunberg (.) ähm ein MOTOR (.) wieder mehr mit der natur ins reine zu [mhm] KOMMEN (.) ähm (.) ganz viele junge menschen beschäftigen sich damit und (.) und ZIEHEN ihre FAMILIEN mit (.) [mhm] und ich glaube dass da momentan was ins rollen kommt (.) dass da [mhm] aus einem schneeball (.) eine (.) lawine werden KÖNNTE. (Transcript Farmer D, paragraph 60)

For more illustrating quotations see Chapter 4.5.3., Appendix 6.2. Transcript Farmer A, §49, §55; Appendix 6.3. Transcript Farmer B, §17.

4.5.5. Striving for (More) Egalitarian (Power) Relations

In all narratives, the farmers strive to create more equal relationships by mitigating existing power asymmetries: with (their) animals, their natural as well as social, local and global environment.

The animals that are kept on the farms should first of all be granted a life as comfortable as possible within the circumstances of an animal husbandry. Therefore, hardly any expense or effort seems to be spared in order to avoid as much stress and suffering as possible. Surely, all farmers are aware of the obvious and unavoidable power imbalance that is implied in livestock farming (“wir sind die ganz BÖSEN weil wenn die hier vom hof gehen dann STERBEN DIE”, Transcript Farmer D, §27).

Furthermore, the interviewed farmers want to protect wildlife and insects through and in their work and for this reason leave flower strips or purchase expensive double blade mowers to contribute to biodiversity conservation. The trade-off between protection and use is characteristically described as a balancing act (“tightrope walk”, Farmer B §15). Fully equal relations between humans and animals thus cannot be created within this scenario as animals ultimately continue to be exploited. Yet, all farmers are making an attempt to establish a more mindful approach and strive towards a more egalitarian relationship.

naja gestern beim SCHWEINE wiegen (.) [mhm] hab ich unsre FÖJlerin geLOBT [mhm] wie FREUNDLICH sie mit den SCHWEINEN UMGEHT (.) ähm (.) und DAS ist uns eben auch ganz WICHTIG dass wir HIER (.) obwohl wir tiere MÄSTEN und ich sage wir sind die ganz BÖSEN weil wenn die hier vom hof gehen dann STERBEN DIE [mhm] <<lachend>defINITIV> [mhm] ähm dass wir ihnen aber trotzdem mit großer ACHTUNG begegnen (.) [mhm] und ähm (.) und ihnen hier das bestmögliche LEBEN ge=w=!WÄHREN! (.) was wir ihnen bieten KÖNNEN [mhm] (.) ja (.) das beDEUTET für mich auch immer HINTER!FRAGEN! wir haben noch keinen (.) AUSLAUF (.) äh für unsere RINDER (.) [mhm] das müssen wir bis zweitausend (.) ACHTtundzwanzig glaube ich (.) bin mir nicht ganz sicher (.) geWÄHRLEISTEN [mhm] dafür ham wir auch schon ANgefangen HECKEN zu pflanzen !ABER! (.) JA da gibts noch viel zu TUN (.) wir sind ABSOLUT NICHT perfekt (.) aber wir geben alles (.) um (.) um (.) <<lachend> dem nahe zu kommen. (Transcript Farmer D, paragraph 27)

Although Farmer C's animals are kept in the same setting as described above, he differs from the other farmers in one point worth emphasizing, namely regarding his expressed stance

towards his animals. Here, for the first time, the animals are ascribed their own agency and are perceived as having been empowered. He reports that signals are actively sent (back) to him by the animals. Thus, the human-animal relationship is given a new dynamic and goes a crucial step further towards equality.

ich hab ja EINgangs schon gesagt wie ICH mit den kühlen umgehe (.) ja dass ich auf die WEIDE gehe dass ich den körperlichen KONTAKT suche dass ich die STREICHEle dass die (.) KÜHE wenn se mich dann SEHEN AUCH letztendlich dieses signAL zurückgeben ja [mhm] also die KOMMEN und (.) und wollen dann äh schon so RICHTICH STREICHELeinheiten PROVO!ZIEREN!. (Transcript Farmer C, paragraph 25)

Farmer C even considers the possibility to build an emotional bond with plants and to receive signals in the form of certain waves not only from animals but also from trees. Thereby, he strives for more egalitarian relationships with his natural environment by once again assigning non-human agency. This constitutes a crucial precondition for a realignment of supposedly set power relations between humans, animals and plants. Due to the Western socialization of the interviewer and the interviewee, such allegedly spiritual and irrational statements are obviously difficult as they touch a boundary of thematization. Therefore, Farmer C provides the interpretation of his statement as a sign of madness as a precautionary measure in order to not discredit himself within the Western cultural context.

wenn dann en SCHÜLER tatsächlich auch (.) den KONTAKT zu nem BAUM sucht und den baum umARMT (2) is für mich (.) nix anderes als wenn ich zu meinen tieren geh und streichel die und bekomme DANN letztendlich AUCH (.) ne geWISSE WELLE zurückgeSENDeT [mhm] ja: (.) selbstverständlich [mhm] und ich hab auch im FELD (.) BÄUME die mag ich ganz beSONDERS und dann [mhm] (1) äh (.) FREU ich mich jedes mal wenn ich dann in seiner nähe bin also [mhm] des (2) OBS nun ne spinnerEI is oder nich WEISS ich nich aber (.) MIR persönlich tuts GUT und [ja] okay. (Transcript Farmer C, paragraph 35)

From the perspective of social relations both at the local and global scale, a striving for equality, justice as well as connection was also detected in all narratives. Farmer D places a lot of emphasis on an open culture of their farm and further establishes an egalitarian payment system where employees receive the same salary regardless of their alleged rank and the work they do.

also (.) bei uns bekommt jeder mitarbeiter ähm (1) AUSSER (.) unserem festangestellten LANDWIRT zehn EURO die stunde [mhm] von der putzfrau bis ähm zur büroKRAFT (.) [mhm] dann also weil=weil ich denke alle arbeiten sind WICHTIG [mhm] und keine ist der anderen überLEGEN (.) [...] ähm (1) also (.) wir sind (.) ein SEHR OFFENES HAUS (.) [mhm] ähm wo eben MENSCHEN die hier oben (.) HEIMAT FINDEN wollen die auch finden [mhm] !KÖNNEN! (2) wir machen ganz viele GEMEINSCHAFTSPROJEKTE: (.) wie: ähm SAISONGÄRTEN wie (.) die EIERABOS [mhm] die wir ANBIETEN. (Transcript Farmer D, paragraph 21)

des is ganz WICHTIG [ja] dass wir hier nicht ALLEINE wirtschaften (.) sondern innerHALB (.) unserer ORTschaft unserer gesellschaft [mhm] ja. (Transcript Farmer D, paragraph 9)

None of the farmers retreat and strive for self-sufficiency in isolation. Rather, they all seek to connect and exchange with their peers (for example through the farmer's union "AbL") and society (children and adults) both locally and globally, which naturally coincides with their transformation efforts. They are concerned not only with their own (generation's) well-being but with establishing inter- and intragenerational equity.

meine motivaTION sind eigentlich meine KINDER (.) [mhm] und die zukünftigen generatiONEN. (Transcript Farmer B, paragraph 15)

nun bin ich en MENSCH der sagen wer mal (1) TEIL also=äh NEBEN dem landwirtschaftlichen (.) äh:m (1) eine SEHR (1) JA! (.) INTERNATIONALE SICHTWEISE [mhm] auf die dinge in die wiege geLEGT bekommen hat (1) und=ähm durch meine POLITISCHE arbeit (1) werd ich in die LAGE versetzt mit sehr VIELEN BAUERN äh und mit einer äh=äh gloBALEN BEWEGUNG WELTWEIT in berührung zu kommen [mhm] was mich !PERSÖNLICH! (1) mich persönlich jetzt schon (.) SEHR STARK ähm (.) AUFbaut wo ich meinen SPASS demit hab (.) äh zu SEHEN mit- äh oder zu erLEBEN äh mit vielen anderen LEUTen in einer beWEGUNG zusammen zu ar-arbeiten (.) was naTÜRLICH !NUR! GEHT !MIT! diesem (.) LANDwirtschaftlichen BACKground (.) [mhm] weil man dann auf einer EBENE (.) mit den leuten KOMMuniziert (.) [mhm] um zusammen zu versuchen (1) für eine (.) ZUKunftsFÄHIGE gesellschaft was aufzubauen ja. (Transcript Farmer A, paragraph 34)

natürlich muss ich auch damit GELD verdienen (.) [mhm] und ich muss auch was ERNTEN aber ich ähm (.) möchte imme:r (.) dass auch äh ja (.) der !REST! der (.) !WELT! davon profitiert DASS ich das mache (.) [mhm ja] also ich will da en guten fussABDRUCK hinterLASSEN [mhm] und NICH nur entnehmen. (Transcript Farmer B, paragraph 15)

As a result of their systemic thinking and their awareness of interconnectedness, they also adopt an international and to some extent intersectional perspective, the latter of which was rather implicitly expressed. Due to their awareness of telecoupling effects of their (agricultural) activities, they try to follow the motto "think globally, act locally". Furthermore, as farmers of the Global North, they seem to be aware of their privileges and thus, show solidarity with farmers as well as with the general less privileged population of the Global South. Owing to the deeply ingrained structural (colonial) origin, a dissolution of power inequalities and an establishment of equal relations is not achievable through individual efforts. However, an awareness and a striving for gradual equalization of existing power gaps can be noted among all respondents.

ich denk mer mal wir LEBEN hier immernoch inner reGION (1) wo eine geWISSE (1) flexibiliTÄT also äh=äh ne gewisse !SPANNBREITE! DA is das heisst wir KÖNNEN (.) wenns bei uns jetzt ZWEI grad wärmer wird dann=naJA es=es=es wirkt sich !AUS! es wirkt sich auf die (.) ARTENVIELFALT aus es wirkt sich auf die PRODUKTIONSarten aus=aber (.) viel SCHLIMMER betroffen sind natürlich LÄNDER die sowieSO am RANDE (1) äh sach mer ma an=an=am=an der GRENZE zu (.) zur beWIRTSCHAFTBARKEIT wo die lebensGRUNDLAGEN äh viel exTREMER sind wenn DA en bisschen was ändert da (.) [mhm] die sind natürlich viel STÄRKER betroffen (.) [mhm] durch die (.) durch den klimawandel ja. (Transcript Farmer A, paragraph 63)

ähm (.) also wir FÜTTERN hier zum beispiel nur hundert prozent eigenes FUTTER (.) [mhm] (1) WEIL ähm dieser (.) äh (.) NÄHRstoff (.) TRANSPORT aus (.) von

anderen KONTinenten oder so entspricht ja immer einem wasserraub=man sacht ja auch virtueller (.) WASSER und LANDRAUB [mhm] und ähm DAS möchten wir hier absolut verMEIDEN (1) [mhm] ähm (3) ja globaler ASPEKT. (Transcript Farmer D, paragraph 19)

wir leben HIER im speckgürtel der WELT (.) [mhm] am rande der goldenen WETTERAU [mhm] und ähm (.) und das gilt es so sehr (.) zu SCHÜTZEN und zu beWAHREN auch. (Transcript Farmer D, paragraph 70)

4.5.6. Spirituality, Ambiguity and Struggle

Frontal questions about the significance of spirituality, which naturally provoked rather spontaneous and thus less reflected answers, were revealing of the cultural patterns of meaning and Western topoi existing in the farmers' cosmovisions. Hence, the farmers at first either deny being a spiritual person or are at least hesitant and uncomfortable to make the topic a subject of discussion, clearly indicating boundaries of thematization. If they then ascribe a certain meaning to spiritual aspects (in the sense of an acknowledgment of emotional relationships with their environment) during their flow of speech, however, they usually quickly try to put it into (Western) perspective again by mitigating the spiritually assnant expressiveness of the used terms or by devaluing what they said as sentimentalism or even madness (Farmer A §24, Farmer Farmer C §35).

da müsst ich jetzt LÄNGER drüber NACHDENKEN (1) also (2) ich glaub NICHT dass ich jetzt ein sehr spirituELLER MENSCH bin (.) [mhm] natürlich hat man seine momENTE in der !NATUR! (.) [mhm] (1) die einen be!WEGEN! (2) aber (2) also ich=äh ich kann- NEE das kann ich ned Sagen dass ich jetzt- ich bin glaub zu <<lachend>rationAL> (.) [mhm] äh: (1) aber natÜRLICH gibts momENTE wo ma=wo ma sacht JA da is was. (Transcript Farmer A, paragraph 43)

OBS nun ne spinnerEI is oder nich WEISS ich nich aber (.) MIR persönlich tuts GUT und [ja] okay. (Transcript Farmer C, paragraph 35)

spirituelle effekte <<seufzt>> (2) häng ich nicht an die große glocke (.) [...] also von DAHER schon mit (1) mit gewissen ANDERN ANsätzen aber (.) des mach mer nich zum (1) zum !DOGMA! (.) [ja] des mach mer nicht zum (.) zum=zum äh=!ALLHEILMITTEL!. (Transcript Farmer C, paragraph 15)

Given the Western socialization of the interviewer and the interviewees, the communicated self-images are rather intended to correspond with being rational, holding high classical Western values such as productivity, growth, and science-based knowledge in order to gain recognition in society (and from me as the interviewer) and to be taken seriously with their profession and agricultural approach.

es gibt produktionsweisen=!HOCH!PRODUKTIVE produktionsweisen also auf denen ich auch INTENSIV und (.) äh=äh=öh richtig ähm (.) also (.) !VIEL! NAHRungsmittel erzeugen kann. (Transcript Farmer A, paragraph 49)

und fangen se mer BLOSS nicht an mit esoTHERIK (.) sacht ich es liegt mer SEHR FERN (.) ICH werde das wissenschaftlich beLEGEN. (Transcript Farmer C, paragraph 11)

und des ganze haben wir mit VIER (.) wiederHOLungen gefahren also WISSENSchaftlich gut abgeSICHERT (.) [...] und solche sachen ANgeschubst zu haben und die dann RAUSgefunden zu haben durch (.) WISSENSchaftliche versuche die ABgesichert sind. (Transcript Farmer C, paragraph 11)

The boundary of thematization and this discourse of justification convey a tension of the interviewees that seems indicative of an ambiguity and resulting inner strife regarding different and partly diverging elements of worldviews and conceptions of nature. On the one hand, the farmers seek and need to conform to the Western and capitalist system in which they are embedded – in order to survive in it and also to gain a sense of belonging and recognition, which is a basic human need. On the other hand, a view of nature and their environment becomes visible that perceives and values the (emotional) relationships and interconnections with this very nature – thus illustrating once again that alienation, i.e. the capitalist disentanglement of entities from their life-worlds, cannot fully succeed (Lowenhaupt Tsing 2015: 133 et seq.). Hence, the inner turmoil of the farmers might stem from the attempt as well as the need to correspond to the Western worldview outwardly as far as possible, while inwardly, however, they possess a deviating view and feeling. This hints impressively at what Mignolo and Walsh (2018) refer to as the “[d]ecolonial [c]racks and the [p]raxis of [f]issure” within the Western socio-cultural system (p. 82).

While this does not seem to be a conscious process or active attempt at concealment by any of the interviewees, there are, however, differences to be noted in the degree of inner conflict and discomfort when emotional or even spiritual aspects are broached. Whereas Farmer A is at least initially strongly in denial about the existence of such, Farmer C seems more comfortable naming emotional and spiritual connections to both animals and plants. As a scientist holding a PhD, he seems to be able to immunize himself to some extent against (an anticipated) discrediting by repeatedly referring to the scientific validation of his approaches. Thus, he can provide himself a certain safe space for the thematization of supposedly scientifically inexplicable or spiritual matters without running the risk of putting his credibility as well as his reputation on the line. However, even he does not want to raise the issue to the big bell and is not free of a certain bias (“spirituelle effekte <<seufzt>> (2) häng ich nicht an die große glocke”, Transcript Farmer C, paragraph 15).

Farmer D also seems to be more comfortable when addressing the spiritual aspects of her worldview. In her case, this could stem from the fact that she mostly frames them as part of her Christian existence, which also protects her to a certain point against possible devaluations and attributions of craziness in Western culture. Hence, she assigns a great value of spirituality on a personal level in a religious context while she rather refrains from an official attribution as far as her work environment is concerned – corresponding to the classical Western values of a profit-oriented business.

The described dynamic, which was found in all narratives in partly different manifestations, shows an ambiguity within the worldview(s) of the farmers and further reveals the intellectual as well as social struggle that might accompany a deviation from Western topoi and the development of a dissenting inner attitude and view of nature within the Western cultural sphere and its socio-cultural matrix. The ambiguity of vistas that seems to accompany the ‘decoloniality in the cracks and fissures’ and the effort to somehow correspond to ‘both’ worldviews leads to a certain position in society, which will be delineated briefly in the following.

4.5.7. Farmers and Beyond: Transformers, Connectors, Fighters, Outsiders and Ambassadors

Whereas the preceding six concepts are rather to be interpreted as shared characteristics of the farmers' cosmovisions, in this closing paragraph the role(s) and tasks of the farmers for and in society shall be outlined, which are derived from and interact with the cross-case concepts described above.

All the farmers interviewed have a strong desire to initiate an agricultural as well as a societal transformation. They are trying to make a difference at the level of society as a whole by raising awareness and disseminating their knowledge and corresponding stance to the public. The provided formats in this regard range from farm kindergartens (Farmer D), maize mazes and cultural events (Farmer D), (scientific) lectures (Farmer C), seasonal gardens (Farmer B, D), to open days via organic farm tours (Farmer A), as well as political educational work (e.g. in the context of the farmers' association *AbL*), regular talks with customers and beyond. They are by no means escapists but seek to generate a knowledge transfer and pass on and spread their values to their customers, colleagues and to mainstream society, both on a local and on a global level (Farmers A and D are particularly noteworthy in this respect).

Within this collective transformative endeavor, they act as connectors who establish relationships, start powerful networks with customers, peers and like-minded people and further try to strengthen these linkages. The educational aspect appears less as a top-down process, but rather consists of conversations at eye level – a conciliatory attempt to generate impulses for a change in the human-nature relationship.

zu erLEBEN äh mit vielen anderen LEUTen in einer beWEGUNG zusammen zu ar-arbeiten (.) was naTÜRLICH !NUR! GEHT !MIT! diesem (.) LANDwirtschaftlichen BACKground (.) [mhm] weil man dann auf einer EBENE (.) mit den leuten KOMMuniziert (.) [mhm] um zusammen zu versuchen (1) für eine (.) ZUKunftsFÄHIGE gesellschaft was aufzubauen ja. (Transcript Farmer A, paragraph 34)

dieses: sich GEGENSEITICH (.) !AN!REGEN (.) dieses gegenseitige beFRUCHTEN diese [mhm] GEGENSEITIGE (4) !VERSTÄNDNISSE! (.) FINDen und s=sagen okay (.) geMEINSAM können wir was anderes !ERREICHEN! (1) [...]wenn ma diese KREISE weiter AUSbauen würde (1) das wäre in meinen augen [mhm] SEHR sehr WERTvoll und HILFREICH (.) [mhm] auch für unser künftiges zusammenleben. (Transcript Farmer C, paragraph 37)

Yet, they also must fight – against parents, neighbors, colleagues, the capitalist Western system, as well as powerful colonial structures in general. As those who think, act and farm differently, the farmers are willing to sacrifice a large part of their feeling of belonging and risk being marked as outsiders. This dynamic, in turn, reinforces the desire to connect with like-minded and allies to counter the threat of exclusion.

als ich geboren wurde sachte (.) MEIN vater DEIN name steht aufm !DACH! (.) (??) [okay] damit wa:r der ZUKünftige lebensweg (.) gepla:nt (2) ALLERdings hat sichs (.) deutlich anners erGEBEN. (Transcript Farmer C, paragraph 3)

das ist BESTIMMT son SCHLÜSSELERlebnis dass ich da !EWIG! mit meiner mutter diskutiert hab [mhm] und des äh (.) tatsächlich heute auch immer noch wieder an so (.) <<leicht lachend>punkten steh> wo ichs dann einfach aber !DOCH! anders machen möchte. (Transcript Farmer B, paragraph 9)

wo sich dann andere vielleicht sagen oh GOTT (.) <<lachend>was macht die da> (.) [ja] das sieht ja unordentlich aus aber ich seh des NICHT so (.) [okay] ich seh des eigentlich äh ja (.) durch die land (.) wirtschaft die ich beTREIBE hab ich die möglichkeit GANZ vielen ARTEN (.) en SCHUTZraum auch zu bieten. (Transcript Farmer B, paragraph 11)

Although they describe the work itself but even more so the struggles as hard and partly tiring, they never seem to give up fighting for their vision of an unconventional agriculture, which might entail and further generate a transformation of the human-nature relationship. The interviewed farmers feel highly responsible for this venture and thus enter the battles as ambassadors of nature, of (endangered) animal and plant species, and ultimately of humans as they seek to preserve livable networks of relationships that include the human being.

ich fühle mich da als beSCHÜTZERIN und kämpferin (.) [mhm] für eine naturverträgliche (.) LANDwirtschaft für (.) NATUR (.) verträglich oder einher- mit der natur einHERgehende lebensmittelproduktion. (Transcript Farmer D, paragraph 49)

das ist SO viel ARBEIT des is SON KAMPF (.) warum tun wir uns des eigentlich AN [...] aber DANN wiederum (.) des is ja so WICHTIG dass wir genAU das tun was wirs- was wir TUN weils würde ja SONST keiner machen [mhm] das wird ja sonst (.) AUCH die=äh FLÄCHEN nur (.) wieder so ARM bewirtschaftet werden (1) eh (.) ja auch einfach nur weiter (1) RAUBbau unsrer LEBENSgrundlage be-äh (.) also (.) beTRIEBEN werden und=ähm (.) einer !MUSS! ja (.) die REGENwürmer füttern und äh blumen für die BIENEN SÄHEN (.) und des is einfach (.) des wo ich dann auch immer denke (.) poah (.) ne (.) ich KANN eigentlich nich mehr aber eigentlich is die verANTWORTUNG die wir ham mit unserem beRUF viel zu gross umse einfach abzulegen. (Transcript Farmer B, paragraph 17)

ich wünsch mir einfach ne LEBENSEinstellung DIE mmmhh (2) die ge- die gePRÄGT is von der MITVERANTWORTUNG gegenüber unserer UMwelt gegen uns über= unsern (.) [mhm] gegen- !JA! gegenüber den (2) gegenüber den !JA! zum einen gut MITgeschÖPFE is jetzt vielleicht en bisschen PATHETISCH aber (.) äh=äh gegenüber der UMwelt und gegenüber unserer geSELLschaft. (Transcript Farmer A, paragraph 24)

Even though the farmers must differentiate themselves from strongly opposing views in order to protect themselves, to establish a clear position and to justify their agricultural approach, they primarily convey a sense of connection and responsibility resulting from their awareness of their embeddedness in nature. This leads to a strong transformative agency as well as the desire to expand and strengthen connections – with like-minded people worldwide (e.g. through *La Via Campesina*), with consumers, the general public as well as with non-human co-species. The opportunity to apply their skills in their practices and to realize their values thereby results in a deep sense of satisfaction despite all the struggles.

5. Discussion

How does the worldview of agroecological farmers in Germany make use of a decolonized perspective in order to reconstruct their relationship with nature?

In light of this first research question, it shall be briefly reflected on what can be understood by such a decolonized perspective in the specific case(s) of the interviewed farmers and hence I start by asking, as Walsh and Mignolo (2018), "What does it mean to decolonize?" (p. 108). For this question can neither be answered abstractly nor universally, the context has to be taken into account as "[d]ecoloniality, without a doubt, is also contextual, relational, practice based, and lived [...] it is intellectually, spiritually, emotionally, and existentially entangled and interwoven" (Mignolo & Walsh, 2018: 19). From here, the question can only be answered by "looking at other W questions: Who is doing it, where, why and how?" (ibid.: 108).

First, attention shall be once more drawn to the methodological dilemma of formulating my thoughts from within a Western tradition of thought. It requires constant reflection on how this stance comes into play, while at the same time acknowledging that I cannot escape it entirely. The assumption that *nothing is self-evident* and the fundamental questioning of the obvious (which poses the third axiom of the qualitative and reconstructive research approach, see Chapter 3.2.) accounts for this at least to some extent. It poses the fundamental precondition to disengage from everything that seems given or even 'natural' with regard to one's own constructions of reality (Kruse, 2015: 146), respectively for an *alienation from one's own culture* (Amann & Hirschauer 1997 as quoted in Kruse, 2015: 146). An important realization during the research process has therefore been to recognize the difficulty, and at times impossibility, of departing from and questioning the identified dichotomies while at the same time not reverting to other dualistic opposites in the attempt of answering the research questions – out of my own socio-cultural formed habitude: there is not *either* the Western, modern, mechanistic worldview *or* the alternative, indigenous, decolonized one to be identified from the farmers' narratives but rather a heterogenous and multi-dimensional variety of concepts and their corresponding elements of a colonial *and/or* decolonial relational ontology.

A decolonial perspective – also regarding my own research approach – aims at breaking from such colonial dualistic logic of contradiction, the Cartesian binary and the concomitant either/or rhetoric of modernity, enabling a co-existence of elements of 'both' worldviews. Questioning one's own ontological assumptions and the ontologies of categories such as human, nature, society, culture and many others can facilitate the dissolution of the boundaries between those concepts and the associated power relations. Thus, the aim was not to assess whether the farmers' worldviews ultimately qualify as colonial or decolonial, thereby constructing decoloniality as a normative target state or an attribute that can be acquired linearly through sufficient decolonization and the elimination of differences (Mignolo & Walsh, 2018: 81). Instead, the perspective aims at a process of healing integration, in the sense of a return or rediscovery of concealed and silenced elements of an original whole, some of which have been forcibly removed over the past five centuries. It is therefore about the gradual disintegration of the exclusive und universal claim of Western patterns of thought, justifying the hierarchical classifications based on ideas of anthropocentrism, heteronormativity, gender, class and race and the rejection of these patterns as the only valid framework with its consequential devaluation of other knowledge systems (ibid.: 25). For the constitutive and central acts of coloniality have been "the invention, the transformation, and the management of colonial and imperial epistemic and ontological differences" (ibid.: 155-156), decolonial thinking and doing seek an "epistemic reconstitution" (ibid.: 166), followed by

re-existence as the collective effort to realign the way of life in a dignified manner (ibid.: 106, emphasis in original).

The pluriversal decolonial perspective (Mignolo & Walsh, 2018; Escobar, 2020) does not simply negate but acknowledges modernity, understands it as integral (Litfin, 2003) and as already “co-produced by human and extra-human natures in the web of life” (Moore, 2015: 14). Its inclusive and integrating quality not only stands in decisive contrast to the excluding and marginalizing logic of coloniality, but further reveals new scopes for action and hope through the recognition of multiple and specific relations of (inter)dependency. According to Jason Moore, these new connections can be disclosed by inverting the point of departure of common environmental thought: assuming an ever-existing unity of humanity and nature “in a flow of flows” (ibid.: 12-13) instead of emanating from a separation of humanity and nature, which needs to be overcome, might be revealing of relations that were “hitherto obscured by the dualism of Nature/Society” (ibid.). Thereby it is crucial not to merely attest to the interconnectedness of ‘everything’ in a generic and abstract way, but to perceive and address the specificity of the complex, and multidimensional interdependencies and relations, which is regularly submerged by an inherently dualistic holism (ibid.: 9). Thus, “[t]o say that humans are part of nature is to highlight the *specificity* of humanity within the web of life – its specific forms of *sociality*, its capacities for collective memory and symbolic production, and much more” (ibid.: 6, emphasis in original).

With this theoretical-philosophical-methodological considerations of humanity-in-nature as a guiding thread, the following section discusses how the worldviews and conceptions of nature, which have been reconstructed and identified from the farmers’ narratives (Chapter 4), show such elements of a decolonial relational ontology and how it might enable them to realign their relationship with nature – offering inspiration for addressing the global ‘environmental’ crisis.

The problem of this very formulation thereby exemplifies one of the biggest challenges in the process of writing this thesis, which consists in the lack of vocabulary and narrative strategies within Western culture and its languages to express the perceived and enacted relationships identified in the interviews. Thus, the connotation of the word ‘environment’ resonates with colonial anthropocentric concepts around the cornerstone of all inequalities, i.e. the dualism of humanity and nature. It constructs humans as standing at the center of a passive nature surrounding them, a metaphor that contrasts sharply with the interconnectedness of the farmers with their land, respectively nature (Redecker & Herzig, 2020: 659). According to Moore (2015), “a new language – one that comprehends the irreducibly dialectical relation between human and extra-human natures in the web of life – has yet to emerge” (p. 5). Without a conceptual language to name the relationships, there is a tendency to keep reverting to the familiar dichotomies that reinforce the separation of humans and nature (ibid.: 7). Moore (2015) suggests naming the relation of life-making that includes humans “the *oikeios*” – both as methodological orientation and ontological claim – which could serve as a reference point for the metamorphosis of “manifold species-environment configurations” and their related terminology (p. 8, emphasis in original). Yet, the establishment of a valid alternative to the dichotomous rationale “requires new methodological procedures, narrative strategies, and conceptual language *all at the same time*” (ibid.: 5, emphasis in original). Hence, for the thesis I had to accept once more that the prison houses of the cartesian binary can hardly be escaped, particularly when it comes to a deep cartesian bias in our language for the time being (ibid.). The lack of truly adequate options of expression posed a challenge for the analysis and interpretation of the farmers’ narratives as well as for the very formulations of my own thoughts and results. At the same time, the particular value and quality of the qualitative reconstructive research approach arises at this exact point for it focuses on the *how* something is said and

conveyed and less on the *what*. Thereby it seeks to shed light on the subjective constructions of reality and patterns of interpretation – the worldviews – that lie behind the linguistic means requiring a self-reflexive sensitization towards one’s own system of relevance (Chapter 3.3.1.). I attempted to access the unconscious of the Western socialized farmers through narratives and, going through and beyond language, let the practice speak for itself by making “evident concrete instances and possibilities of the otherwise [...] of being, feeling, thinking, knowing, doing, and living that craft hope and possibility in these increasingly desperate and violent times of global coloniality/global capitalism taken to the extreme” (Mignolo & Walsh, 2018: 20).

Both in the individual case analyses and in the cross-analysis of the narratives (Chapter 4), it was possible to identify various passages and concepts that point to an *otherwise* and thus to the presence of *decolonial cracks* within Western civilization. The fracturing and fissuring of modernity’s powerful colonial order are mostly accompanied by processes of struggle, irrespective of whether it is a consciously and actively chosen action or not to push towards the CMP’s borders (Mignolo & Walsh, 2018: 82-85). Delinking from modernity’s fictions (Mignolo & Walsh, 2018), questioning the ontologies of colonial categories, mitigating the boundaries between them and the power relations associated, constitute a fundamental part of this struggle. Several concepts elaborated in the empirical part of the thesis are indicative of this process (Chapter 4). They are grounded in and deeply interwoven with the farmers’ specific practices, their agricultural activities and thus ultimately with their animals, their land and the soil, respectively nature. Here, the connection and entanglement between humans and nature emerges exceptionally plastic, illustrating that “[c]onsciousness itself is a ‘state of matter’” (Moore, 2015: 7). In this regard, the results of my thesis show in the most literal sense, that for “most dichotomies, the contrast [...] suffers when it hits the ground” (Lowenhaupt Tsing, 2015: 122). Hence, I argue that the specificity of the farmers’ everyday lives, i.e. their praxis as a radical entanglement with nature does not allow for Cartesian dualisms and concomitant ontologic categories.

As I have shown, fundamental dualisms and dichotomies have been challenged in the conceptions of the farmers: the identified concepts ‘*Gestaltung* and *Co-creation*’ (Chapter 4.5.1.) and ‘*The Cultivated Landscape*’ (Chapter 4.5.2) overcome the two opposite poles of the Western forms of environmentalism, i.e. conservation vs. exploitation and thereby account for the farmers’ perceived embeddedness in nature. Indeed, the findings point toward “a different kind of environmentalism [that] would assemble around the idea of cooperation, *Gestaltung*, interaction, co-creation, transformation, and ultimately inhabitation of a common, shared world” (Muraca, 2016: 36, emphasis in original). *Gestaltung* etymologically denotes the process of linking inner worlds of imagination with externally perceptible realities (Jahn et al., 2020: 94) and thus connects matter and meaning, farmers and nature.

‘*The life-basis*’ (Chapter 4.5.3.) takes the same line in transcending the human-nature divide and additionally mitigates the dichotomy of the productive and the reproductive sphere by making visible the interdependencies between both. A ‘Striving for (More) Egalitarian (Power) Relations’ (Chapter 4.5.5) has been identified with regard to the farmers’ relationships with their animals, their plants and their soil as well as their social connectedness with humans both locally and globally. Through the attribution of non-human agency, ontologies and the hierarchy between existing categories based on anthropocentrism (i.e. human, animal, nature) are contested granting non-human actors a participation in the process of *Gestaltung* or *co-creation*, even if full equality cannot (yet) be achieved. Thereby, “the entangled nature of agency is brought into the foreground, as the independence of the human being from the surrounding world is deconstructed” (Redecker & Herzig, 2020: 665). Redecker and Herzig (2020) therefore refer to a “‘more than human’ radical democracy in its most radical sense, as

[...] [the peasants organized in *La Via Campesina*] are always already ‘in parliament with land’” (p. 657).

Further, showing solidarity and seeking justice between the people living in the Global North and the Global South and emphasizing the equal value of all people throughout all spatial scales combined with a to some extent intersectional perspective opposes colonial concepts such as racism, classism and sexism. However, an intersectional stance emerged rather implicitly in some of the farmers’ generic statements to treat/pay anyone equally, their open and welcoming attitudes (Transcript Farmer D, §21) and the recognition of their privileges mostly related to territory accompanied by an awareness of injustices in other parts of the world. Thus, the described dynamics are to be understood as approaches *towards* an intersectional perspective, which certainly should not deny a simultaneous involvement in the reproduction of intersecting colonial structures based on a firmly entrenched socio-cultural bias. The deep-felt connection with their peers across the globe is thereby based on a shared conviction (Transcript Farmer A, §34), respectively their entanglement with nature – “the unifying power of their relations to their land” (Redecker & Herzig, 2020: 658) and reinforced by their collective struggle and resistance, as diverse as their demands and problems might be (ibid.: 661).

mit vielen anderen LEUTen in einer beWEGUNG zusammen zu ar-arbeiten (.) was naTÜRLICH !NUR! GEHT !MIT! diesem (.) LANDwirtschaftlichen BACKground (.) [mhm] weil man dann auf einer EBENE (.) mit den leuten KOMMuniziert (.) [mhm] um zusammen zu versuchen (1) für eine (.) ZUKunftsFÄHIGE gesellschaft was aufzubauen ja. (Transcript Farmer A, paragraph 34)

Moreover, the ‘Anti-Apocalyptic Attitude’ (Chapter 4.5.4.), which in part coincides with a post-heroic posture, points to a gradual departure from an anthropocentric worldview. The awareness and feeling of being embedded in multidimensional relations of (inter-)dependency expressed in the farmers’ strong systems thinking indicate a rather decentered role of humans within these structures. According to Anna Lowenhaupt Tsing (2015) “[t]his ‘anthropo-’ blocks attention to patchy landscapes, multiple temporalities, and shifting assemblages of humans and non-humans: the very stuff of collaborative survival” (p. 20). The declared goal of preserving the *life-basis* aims at this collective survival, formulating an alternative to the narrative of the human as savior or ultimate destroyer of the world and thus resonates with Donna Haraway’s definition of “ongoingness”: “that is, nurturing, or inventing, or discovering, or somehow cobbling together ways for living and dying well with each other in the tissues of an earth whose very habitability is threatened” (Haraway, 2016: 132). Thereby, the farmers also provide rudiments for a counter-narrative to the “discourse of urgency [that] leads people to seek quick solutions only within existing structures and established ideologies” (Redecker & Herzig, 2020: 660). Instead, they offer inspiration for – indeed urgently needed – “fundamental change in thinking, profound societal changes, experiments and the invention of new practices” (Bauriedl 2015 as quoted in Redecker & Herzig, 2020: 660). Yet, their “revolutionizing ‘otherwise’, i.e. [...] little steps through laborious everyday praxis” (ibid.) offers amenable and tangible points of contact by not letting the transformative tasks seem unfeasible when living amidst the “ruins of capitalism” (Lowenhaupt Tsing, 2015).

Alongside the concepts above, which are expressive of human embeddedness in nature and indicate a departure from colonial ontological categories, several passages in the interviews were also identified that suggest the simultaneous presence of concepts, which perpetuate the human-nature divide as well as power imbalances between human and non-human actors and thus correspond to a Western, anthropocentric worldview. Such colonial

elements can be found, among others, in associations of nature as untouched by humans (e.g. Farmer A), of humans as saviors of the world (e.g. Farmer D), or in boundaries of thematization of spirituality, emotionality and their devaluation (Chapter 4.5.6.).

Such statements illustrate the influence of the farmers' socio-cultural and socio-economic background on their expressed relationship with nature. Surely, it was never expected to reveal 'entirely' indigenous worldviews from farmers socialized in a Western country like Germany. Neither was such worldview or corresponding conceptions of nature like *Mother Earth* to be constructed as a normative goal point, thereby creating another dualism (indigenous vs. Western worldview). Instead, the interest was "with the habits that modernity/coloniality implanted in all of us; with how modernity/coloniality has worked and continues to work to negate, disavow, distort and deny knowledges, subjectivities, world senses and life visions" (Mignolo & Walsh, 2018: 4). Plus, even though the farmers sharply criticize the relations of production and regularly break out of a neoliberal logic of efficiency (e.g. by taking on extra costs and efforts to care for the soil and animals), it has to be acknowledged that they are structurally embedded in a capitalist system and ultimately have to act within its framework in order to survive ("natürlich muss ich auch damit GELD verdienen", Transcript Farmer B, §15).

Moreover, the social dimension of the communicative situation within the interview must be considered for every verbalization of a message has also been formulated with regard to the recipient (Kruse, 2015: 62), which was me – a white, female and Western socialized person connected to a powerful Western institution, i.e. the university. Accordingly, some (extent) of their statements may have been said in order to generate connectivity with me as a non-specialist counterpart, to gain general recognition within the Western system, and not to be devalued as uneconomically acting, 'crazy' outsiders. The somewhat 'unnatural' interview situation, the knowledge of being recorded and their awareness of taking part in an empirical study might have led to insecurities or even nervousness, which is likely to reinforce a tendency to revert to internalized cultural patterns of meaning (e.g. associations with nature as mountains, parks etc.) for these can be accessed quickly and do not require extensive contemplation. Particularly frontal and direct inquiries, which *per se* do not allow for lengthy reflections in the dialogic conversational situation, evoked the expression of Western topoi, respectively the presence of boundaries of thematization within the farmers' cosmovision – especially when touching rather sensitive topics such as the significance of spirituality or emotions in a professional context.

Yet, even during their flow of speech, when there was more time to reflect, the limits of what seemed sayable within the Western framework of the interview situation became quite clear. These boundaries of thematization were most evident regarding the topics of spirituality and the use of alternative medicine (homeopathy) and manifested themselves in different degrees of inner conflict and discomfort of the farmers (Chapter 4.5.6.). Together with their emphasis on the importance of productivity, growth and science-based knowledge in their farming activities, which served as a sort of justification of their *otherwise*, these thematic boundaries indicate the presence of what Arturo Escobar (2008) understands as coloniality, which is the "subalternization of local grammars and knowledge of the environment" (p.9). In their everyday practice of farming, they "continuous[ly] work to plant and grow an otherwise despite and in the borders, margins, and cracks of the modern/colonial/capitalist/heteropatriarchal order" (Mignolo & Walsh, 2018: 101). They *re-exist* as they struggle to emancipate themselves (consciously and unconsciously) from this oppression and the constraints of the colonial matrix of power (CMP). The apparent oscillation between colonial and decolonial elements in the cosmovisions of the farmers interviewed, which at times involved massive inner tension and a wrestling for the right words, thereby

underlines that they are in the midst of such combative process of self-liberation and further illustrates the lack of adequate language to denote their views and feelings.

This struggle for the freedom to decide for a different relationship to nature, to allow for emotions, to “challenge dominant spheres of reason and thought, of being, becoming and of existing itself” (ibid.) is necessarily accompanied by a dismissal of the alleged freedom understood from a classical Western perspective, i.e. human independence and superiority over nature. The recognition of the ever-existing entanglement of humans and nature would further coincide with an undeniable responsibility and obligation to take a humbler and more decentralized role within this system – the *oikeos* – enabling all human and non-human actors to take part in the process of *Gestaltung* or *co-creation*. This touches upon to the second research question: *Which place do farmers perceive for themselves in their environment regarding important societal challenges such as climate change?*

Their place arises from this very awareness of (inter)dependencies and their interconnectedness with what we understand as nature in a Western context and the related resistant existence in the *cracks and fissures* amidst imperious, colonial, and oppressive structures. Knowing, feeling, and recognizing the specific entanglements seems to commit them to take “responsability” (Litfin, 2003: 51, emphasis in original), which again fuels their resistance to the colonial matrix of power with its destructive tendencies. “Responsability” thereby does not describe an externally imposed burdensome duty but rather refers to an inner realization of necessary action(s). Different from most new materialist approaches, Litfin (2003) does not completely reject the anthropocentric stance in this regard but considers humans as ‘first among equals’ due to their further evolved consciousness (p. 47-51). In the interviews, justice and equality between human as well as non-human actors manifest themselves as the regulative leitmotifs behind the farmers’ activities and are reflected, for example, in their solidarity with people from the Global South or in their recognition of animals’ and nature’s rights. In their transformative endeavors, they take on the described role as ‘first among equals’, operating actively and collectively, not only with their own individual farming practice but also beyond that with several awareness-raising, educational and outreach activities, such as public lectures and events, farm kindergartens or protest actions. In doing so, they by no means promise all-encompassing solutions for existing problems, but rather see themselves both as part of the problem (“wir sind ABSOLUT NICHT perfekt”, Transcript Farmer D, §27) and as part of a process of rethinking the human-nature relationship and fighting for alternative developments (“vielleicht bin ich so ähm (.) in diesen TEIL der natur die <<lachend> !HAARWURZEL!> (.) [mhm] die sich gerade gebildet hat von etwas [mhm] viel größerem was vielleicht [mhm] später mal zum großen baum werden könnte”, Transcript Farmer D, §47). Far away from human fantasies of omnipotence, they do recognize the limits of their own capacity to act and their possible influence on nature. Further, they acknowledge natures and all non-human actors’ agency and try to build cooperative relationships that open possibilities for *co-creation* and mutual transformation without denying the potential for conflict.

Surely, the practice of small-scale farming itself is to be considered as a counter-hegemonic form of resistance, for example by performing reproductive care work (e.g. sustaining the *life-basis*), that is regularly kept invisible (Redecker & Herzig, 2020: 665) and by deviating from the capitalist logic of efficiency, economies of scale and ever further growth. However, in their specific (agricultural) activities and their collective efforts to question and further change the Western human-nature relationship and gradually deconstruct relations of power, respectively coloniality, they realize something that goes beyond mere resistance *against* the colonial matrix of power in its multifaceted dimensions, something that Walsh and Mignolo (2018) call the decolonial *for* (p. 9, emphasis in original). According to them, “[i]t is the for that fosters, signals and sketches pro-positions of affirmation and reaffirmation that disrupt

and unsettle coloniality's negations. It is the for that takes us beyond an *anti* stance. Moreover, it is the for that signifies, sows, and grows the otherwise of decoloniality and/as praxis" (ibid.: 18, emphasis in originals).

Even though the farmers differ in their *otherwise*, in their specific agricultural practices as well as in their context-specific local struggles, they fight together for their continued existence connected through a positive commonality that again is based on their practice of farming, respectively the relation to nature and their land (Redecker & Herzig, 2020: 664). In this powerful unity they also take a stand against the "singular and manifold" crises of our time (Moore, 2015: 3-4; Redecker & Herzig, 2020: 664), one of the most globally threatening of which is the climate crisis. Instead of simply opposing and criticizing the current (food and agricultural) system, the farmers create an "option" (Mignolo 2011, p.xxix as quoted in Redecker & Herzig, 2020: 662) through their actual praxis with clear commitments, such as fair and equal payment systems, the protection of biodiversity, the respectful treatment of animals, plants and the soil or the renunciation of feed imports from countries of the Global South (ibid.). With their counter-hegemonic actions and demands they fight less for themselves and their own benefits but advocate directly for their animate and inanimate 'environments' rights by giving them a voice, emphasizing "that a separation of human and nature in the crisis constellations of the present time will ultimately preclude [...] any counter-proposal to the prevailing hegemony of neoliberalism" (ibid.: 666).

In this context, worsening crisis dynamics associated with climate change show most clearly that the needs of these 'environments', shall no longer be neglected. The necessary deconstruction of anthropocentric boundaries and the ending of the othering of nature thus requires a revision of ontological assumptions and inevitably involves conflictual processes of negotiation (ibid.: 666-667). As I have shown, the farmers do not shy away from these conflicts but fight daily – individually in their agricultural practice and collectively by connecting with peers via the *AbL* (*LVC*) – against the colonial oppression, for systemic change and ultimately a different human-nature relationship. In confrontation with societal challenges such as the climate crisis, they appear as transformers, connectors, fighters and ambassadors of nature demonstrating the "effort to be aware of nature and to think with it [...] which, in spite all attempts to solve the socioecological crisis, has not yet been made" (ibid.: 666).

6. Conclusion

Alarming prospects for the future and catastrophic conditions that are already the realities of many people's lives urge researchers worldwide to identify concepts and pathways for sustainability transformations. The question of how to realign human-nature-relationships must thereby be at the core of transformations aiming for structural change at the macro level of society. Ultimately, a fundamental shift in hegemonic values and a questioning of colonial continuities are required to establish less destructive relations between humans and the non-human world. This implies the recognition of an inextricable interconnectedness between humans and nature and an overcoming of a culturally deeply rooted nature-society dualism and its violent dichotomous rationale.

In this context, agroecology not only represents a promising blueprint for a functioning, sustainable and fair global agri-food system, but with its transformative vision of human-nature-relationships at its heart it could inform other emancipatory movements struggling against manifold forms of structural oppression (Anderson et al., 2021: 4). However, "anti-racism, indigenous cosmovision, decolonization and feminism are often found only in the radical margins of the agroecology canon" (ibid.).

In this thesis, I therefore examined the worldview and the conception of nature of agroecological farmers as part of a modern society and Western culture that fosters a reductionist view on nature and a corresponding productivist approach to farming. In particular, the goal of my research was to discern whether the interviewees employ a decolonized perspective in their relationships with nature, and to further identify which roles they assign themselves based on their cosmovision and in the face of societal challenges such as the climate crisis.

The results of the qualitative reconstructive interview study opposed my initially dualistic expectation, attributed to my own Western socialization, to ultimately classify the reconstructed material as *either* Western-colonized *or* alternative-decolonized. The farmers' relationships to nature, however, emerged as complex and multidimensional showing elements of colonial *and* decolonial ontologies and thus qualified for *both* worldviews in interwoven, pluriversal rather than additive ways. Thereby, an ambiguity evident through an antagonistic oscillation between colonial and decolonial elements in the farmers' narratives and their at times conflicting co-existence in their cosmovisions indicated a transformational process. They seek liberation from several imperious logics and hegemonic dogmas, yet they are structurally and culturally restrained as they operate in a capitalist system and are embedded in a Western society. The farmers' societal roles as transformers, connectors, fighters and ambassadors of nature are characterized by an active and powerful agency. In that, they spare neither cost, effort nor conflict in advocating their agroecologically informed agriculture and yet, they show boundaries of thematization (e.g. spiritual aspects) and repeatedly use productivist values and scientific rationalism to legitimize their approach. Even though the study's small case number requires a sensitive use of generalizing statements, my analysis revealed effects of socio-cultural imprints on transformational potentials and, in particular, it brought to light underlying ontological hurdles to an agroecological transition. The investigation of the ontological underpinnings further helps to re-root agroecology to the agri-food systems' deeply localized (agri)cultural practices, countering dynamics that render it an increasingly theoretical and devitalized concept (Pimbert et al., 2021).

Moreover, the identified concepts indicative of a decolonized relationship with nature, such as *Gestaltung*, *co-creation*, the *cultivated landscape* and the *life-basis*, illustrate transformative possibilities that emerge from agroecological practices as a radical

entanglement of humans with nature. The farmers' tangible experiences in their daily activities lead to a deep connection with their land and animals and thus engender relationships that seem to preclude an alienation between humans and the non-human and a mechanistic approach to nature. It is this materiality and experiencing of a reunification of mind and matter and thus of a realignment of social-ecological relationships that pose a decisive difference to many elaborate yet rather abstract scientific concepts and theoretical-philosophical frameworks to develop a decolonial view on nature, such as *radical relationism*, *evolutionary idealism* and *Gaia theory*, which were presented in this thesis.

Based on these findings, continuative research could comparatively address the dialectical relationship of practices and mental concepts of conventionally producing farmers in order to identify possible levers for sustainability transformations of food and agricultural systems. Moreover, it could be fruitful to investigate how transformative experiences, in the sense of undergoing profound feelings of inextricable connectedness with nature, that may result in changed human-nature relationships, can be transferred to broader, non-agricultural contexts for people with fewer exposures and different accesses to the 'natural environment'. Innovative inter- and transdisciplinary approaches in this regard already exist that, for instance, explore the role of art and literature in reimagining human-nonhuman relations (e.g. Palmer & Fam, 2022). Following such lines of research could further advance the overarching goal of the thesis that is to contribute to a change of individual and collective actions and ultimately to transformations towards a more peaceful co-existence and mindful cooperation of all human and non-human inhabitants of a shared planet.

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