

CREATION AS RESISTANCE:

How small-scale farmers and food artisans collaboratively respond to the global food system by recultivating a traditional rye variety in Northeast Germany



*Photo by author
of the
Mecklenburger
Marienroggen*

Degree of Master of Science (Two Years) in Human Ecology: Culture, Power and Sustainability
30 ECTS

CPS: International Master's Programme in Human Ecology
Human Ecology Division
Department of Human Geography
Faculty of Social Sciences
Lund University

Author: Leo Baumgärtner (he/him)
Supervisor: Eric Clark
Term: Spring Term 2023

Department:	Human Ecology
Address:	Geocentrum 1, Sölvegatan 10, Lund
Telephone:	+46 46 222 00 00
Supervisor:	Eric Clark
Title and Subtitle:	Creation as Resistance: How small-scale farmers and food artisans collaboratively respond to the global food system by recultivating a traditional rye variety in Northeast Germany
Author:	Leo Baumgärtner
Examination:	Master's thesis (two year)
Term:	Spring Term 2023

Abstract:

This thesis examines how small-scale farmers and food artisans in Germany are impacted by and respond to the pressures of the global food system. It is based on the in-depth analysis of a case study of a recultivation effort of the traditional rye variety ‘Mecklenburger Marienroggen’ in Mecklenburg Vorpommern, Northeast Germany. I employ a thematic analysis of semi-structured interview data and secondary literature informed by critical theories on political ecologies of food, biocultural diversity, and peasant resistances. With this case I highlight that the involved small-scale farmers and food artisans experience the pressures of the global food system through the mechanization of agriculture, profit prioritization, the spread of cheap food, and the process of homogenization. However, the recultivation effort provides the involved actors an opportunity to collaboratively create something unique within their local food system that preserves its local biocultural heritage and offers a financial benefit, effectively resisting the global food system by working it to their least detriment. A challenge not only in this project but for the general survival of the actor’s livelihoods is the perceived distance to the consumers. This distance, particularly between the rural and urban, must be overcome to establish meaningful solidarity and to solidify local food systems against their vanishing trend.

Acknowledgments

This thesis would not exist without those whose stories I am sharing here. My gratitude goes to all that welcomed me in their homes and places of practices and shared their valuable time with me. Your openness to my questions and your trust to share your experiences with me made for an incredibly enriching experience. I have been humbled and moved by our exchanges and these learnings will continue to inspire my practice.

I also want to thank both the representatives of Germany's Slowfood Ark of Taste as well as the representative of the VERN e.V. that truly opened the door to this case study.

Lastly, I am tremendously grateful to my supervisor Eric Clark for his continued assistance, critique and always helpful feedback. Your interest in this topic made our review calls always an interesting point of exchange and made this process a whole lot more joyous.

Table of contents

Acknowledgments	ii
List of Maps	iv
Map 1: The study region – the federal state of Mecklenburg-Vorpommern in Germany3	iv
1. Introduction	1
2. Contextualizing the case study	3
<i>a. Agriculture in East Germany</i>	<i>4</i>
<i>b. The case of the recultivation of the Mecklenburger Marienroggen</i>	<i>6</i>
3. Theoretical Framework and Literature Review	7
<i>a. A political ecology of food</i>	<i>7</i>
<i>b. The case for (biocultural) diversity</i>	<i>9</i>
<i>c. The Weapons of the Weak</i>	<i>12</i>
4. Methods	14
<i>a. Research Design</i>	<i>14</i>
<i>b. Philosophy of science</i>	<i>16</i>
<i>c. Positionality</i>	<i>17</i>
<i>d. Methodological Limitations and Reflections</i>	<i>18</i>
5. Analysis	19
<i>a. Introducing the recultivators</i>	<i>19</i>
<i>b. Pressures from the global food system</i>	<i>23</i>
i. A common history.....	<i>23</i>
ii. The mechanization of agriculture.....	<i>24</i>
iii. Profit prioritization and the spread of cheap food.....	<i>26</i>
iv. The process of homogenization	<i>28</i>
<i>c. Preserving local biocultural diversity and heritage</i>	<i>29</i>
i. Local crop diversity	<i>29</i>
ii. The issue of organic farming.....	<i>31</i>
iii. Local Heritage and Tradition	<i>34</i>
iv. Reintroducing a local taste	<i>37</i>
<i>d. Resistance through collaborative creation and reconnection</i>	<i>37</i>
i. Collaborative creation	<i>37</i>
ii. The Way Forward – Reconnecting with the consumer.....	<i>40</i>
6. Conclusion	45
7. Bibliography	47
8. Appendix	54
<i>a. Interview Guide</i>	<i>54</i>

List of Maps

Map 1: The study region – the federal state of Mecklenburg-Vorpommern in Germany.....3

1. Introduction

Diversity in all its forms, biological and cultural, is the “preeminent fact of existence, the basic condition of life on earth” (Harmon, 2002, xiii). Its globally vanishing trend as exemplified by declines of an average of 69% for wildlife between 1970 and 2018 (Greenfield, 2022) and almost half of all 7000 documented languages being considered endangered (Bromham *et al.*, 2021) is what we currently experience as the sixth mass extinction (Cowie, Bouchet and Fontaine, 2022) – fundamentally threatening the existence of our human and non-human lives. While we in the minority world have been teaching and been taught for too long a philosophy that severs the ties between culture and nature, the entangled effect of biological and cultural diversity loss, as well as the observation of their geographically overlapping richness (hence termed as biocultural diversity; Harmon, 1996; Maffi, 2005), stand in blatant opposition. The modern/colonial logic that sees human existence as disentangled from and dominate over nature, is a logic that has gotten us into this mess of ever less diversity and more standardization and homogenization: a violent logic that facilitated colonial conquests. Yet the past of the Plantationocene (Ferdinand, 2022), the colonial exploitation of Indigenous peoples and lands and their conversion into plantations for cheap food resources, haunts the present as the same logic promoting homogeneity continues in food production today. A perceived power in uniformity, showcased by the ‘ease’ of which crop monocultures feed a world of billions, justifies the dominance of agro-industrial businesses. This thesis does not deny the feats of the Green Revolution such as ever-increasing yield per hectare outputs, but asks, at what cost?

Today the global food system with its capital intensive, fossil fueled agriculture is a major contributor to biodiversity loss, driving almost 90 percent of global deforestation (UN, 2023). Its monocultures however do not just span over crops but manifest themselves also in the minds (Shiva, 1993). As local environments and communities are subsumed by the global market, cultural and biological pluralism must make way for the factory (*ibid*). However, there are clear holes in this logic – with more food than ever produced, 2.3 billion people globally still face food insecurity due to inequalities in distribution and accessibility (Global Alliance for the Future of Food, 2021; UN, 2022) while “small peasant-style farmers still “nourish at least 70% of the world’s people with less than one third of the agricultural land and resources” AFSA *et al.* (2022). Not only does small peasant-style farming support their local communities’ livelihoods with less resources, but, as has been shown, also cultivates a greater diversity of crop varieties for resilience (Jarvis *et al.*, 2008) – a diversity that is

derived from diverse ecological systems within which humans generate their locally adaptive knowledges, expressed and encoded through language and culture such as through locally distinct recipes and dishes (Jacques and Jacques, 2012). Faced by the homogenizing pressures of the global food system, the importance of preserving local biodiversity, linguistic expressions, and cultural practices, or summed together as local biocultural diversity and heritage, cannot be overstated.

I am writing these words sitting in the city of Berlin – a global city in which the urban dweller’s removal from the local small farmers outside of town could not be crasser. And yet, this thesis is to be an attempt at bridging this distance, sharing the stories of a local recultivation effort of the traditional rye variety, Mecklenburger Marienroggen: a local collaborative effort between small farmers, artisans and an NGO against the homogenizing rationale situated in the geographical and socio-political context of Northeast Germany. This is a post-socialist setting which, 33 years after reunification still lags behind its western counterpart while increasingly falling for reactionary political forces on the right. It is within this setting and with this case at hand that I ask: **How do small-scale farmers and food artisans in Northeast Germany (Mecklenburg-Vorpommern) experience the impacts of the global food system on their capabilities to preserve their local biocultural heritage? How do they resist those impacts and what changes do they deem necessary for their activities to thrive?**

In section 1 I present and contextualize the case of the Mecklenburger Marienroggen, by giving a historical synthesis of agriculture in East Germany. In section 2 I present the theoretical framework of my analysis, delving into how the global food system pressures the local, signifying an assault on the interrelated and co-created biological and cultural diversities of this world which are primarily situated within the local, and lastly, how a rich history of the many ways of resistance, particularly those in the everyday, can serve as inspiration for how to respond within one’s local community. With this in mind, I argue in section 3 that the participating actors of the recultivation effort of the Mecklenburger Marienroggen engage in a collaborative effort that is a form of resistance through creation, against the global food, system motivated by the opportunities to work the system to their least detriment as well as actively contribute to a preservation of their local biocultural heritage. Finally, I conclude that what is needed for their activities to continue to thrive lies primarily within the ability to cooperate locally, a reconnection to take place via the developing of local supportive structures and renewed relationships between producer and consumer.

2. Contextualizing the case study

This thesis concerns itself with a case study on the recultivation efforts of the traditional rye variety ‘Mecklenburger Marienroggen’ by a group of collaborating small-scale farmers, food artisans and academics under the umbrella of the NGO ‘VERN’ (Verein zur Erhaltung und Rekultivierung von Nutzpflanzen; eng.: Association for the preservation and recultivation of crops). Situated within different localities in the German federal state of Mecklenburg Vorpommern in North-Eastern Germany (Map 1), the case tells a story of preserving a traditional rye variety for greater biocultural diversity against the pressures of the global food system.



Map 1: The study region – the federal state of Mecklenburg-Vorpommern highlighted within Germany (TUBS, 2009).

a. Agriculture in East Germany

Of particular importance to this thesis' case study is the post-WWII period and subsequent division of Germany into East and West. Being situated in the former German Democratic Republic (GDR), this special socio-political context still impacts the agricultural realities of East Germany and thus the case study today. The literature on local peasantry and agriculture in East Germany points to two policies of the former socialist government: the Land Reform (1945-49) and the Enforced Collectivization (1953-60) (see Beckmann and Hagedorn, 1995; Siebert and Laschewski, 2010; Klüter, 2017). The Land Reform provided the basis for the expropriation of land belonging to large estates (3.3 million hectares) and subsequent distribution and re-privatization of most of the land (2.2 million hectares) among the peasantry including the thousands of refugees from former German territories (Beckmann and Hagedorn, 1995; Siebert and Laschewski, 2010). The remaining 1.1 million hectares stayed in state ownership, as state-owned farms, and collective farms (Landwirtschaftliche Produktionsgenossenschaften, LPGs) (ibid). This decreased the average eastern German farm size to 12.8 hectare in 1949 and included 5.502 peasant family farms up until 1960 in the region of Mecklenburg-Vorpommern (Klüter, 2017). With the latter policy of Enforced Collectivization, particularly successful peasant family farms and fisheries were expropriated and collectivized in favor of LPGs. This fundamentally restructured the rural society with those affected either being forced to join the LPGs or chose resistance by trying to flee or being imprisoned, setting their farms on fire and in some cases committing suicide (Siebert and Laschewski, 2010; Klüter, 2017). Dr. Ursula Karlowski describes this period in the preface to Klüter (2017, 1) as one that has “inflicted painful wounds to this day: on the farmers and their families affected by forced collectivization, on the landscape, on biodiversity, but also on the social fabric and cultural identity of the people of this land.” Consequently, rural society was now dominated by large-scale, industry-like collectivized farms with average sizes above 260 ha.

After the fall of the Berlin Wall and subsequent reunification of Germany in 1990, East Germany went through yet another major restructuring. This period is characterized by radical declines in production and employment and demographic changes with state-enforced and supported collectives collapsing, many deciding to move West¹, while western German

¹ A process continuing until today, particularly in the younger generation, with a decline of the population of about 18% since 1989 and subsequent ageing (Siebert and Laschewski, 2010).

and European business moved into the cheap land setting up new large-scale farm businesses (Siebert and Laschewski, 2010). Highly mechanized and favoring the cultivation of mass crops², these continue to dominate the rural landscape of Mecklenburg-Vorpommern until today with average farm sizes of 287 ha (2015) and a decline of peasant family farms to 3000 (2013) (Klüter, 2017). This is in stark contrast to western Germany where farms with family labor dominate the agricultural landscape. Combining the lack of added value from processing and keeping labor costs low, these agrobusinesses fail to positively impact the local economy (Siebert and Laschewski, 2010). Siebert and Laschewski (2010, 64) summarize these developments with a scathing verdict, calling the area “a ‘worst case’ example for economically depressed countryside in Germany”.

Much of Mecklenburg-Vorpommern’s agricultural context today is thus interwoven with a history of rapid societal change and restructuring. This can also be seen in the difficulties of implementing the agricultural reform plans of the new German government to raise the share of organic farming to 30% by 2030 (FarmEurope, 2021). These plans face a complicated history in the East where organic farming “was almost an unknown cultural concept” (Siebert and Laschewski 2010, 64). After reunification, support for organic farming in the East increased, yet on the one side it was pre-dominantly implemented by Western German actors and on the other hand continues to be exported mostly towards the metropolitan western German centers (including Berlin). A market for organic food consumption in eastern Germany remains rather low which speaks to the general disconnect between producers and consumers in the East, lacking a long continuous history of local, organic agriculture (Siebert and Laschewski, 2010).

On the supranational level, agriculture in Germany is also impacted by the EU’s Common Agricultural Policy (CAP). Over the period of 2014-2020 the income support via direct aids to farmers from the EU mounted to €58 billion annually, or 37% of the total European budget (Chatellier and Guyomard, 2023). Those payments contributed on average of 36% of German farmers’ income between 2010-11 to 2015-16 (Michels, Möllmann and Musshoff, 2020). The importance of those payments for German farmers’ income has been confirmed in various surveys (see BMEL, 2017; Michels, Möllmann and Musshoff, 2020) and an absence is projected to lead to an agricultural intensification with larger farms prioritizing most profitable crops (Vrolijk *et al.*, 2010; Uthes *et al.*, 2011). Yet, this stands against

² Mecklenburg-Vorpommern is the biggest rape seed cultivation area in Germany (Klüter, 2017).

substantial critique of the inequality of direct payments (Pe'er and Lakner, 2020; Chatellier and Guyomard, 2023). Implemented as hectare-based payments, direct payments increase with the economic dimension of the farm, i.e., size and output. As of 2018, 2.2% of farms – large farms with a standard gross production of more than €500,000 – had received 28.2% of all payments (Pe'er and Lakner, 2020; Chatellier and Guyomard, 2023). This clear bias towards large farms manifests itself in Germany for example in the explosion and subsequent distortion of the prices of agricultural land due to land speculation by agribusinesses (Engelhard, 2022). This has resulted in the marginalization of small farms unable to buy land or pay their lease.

Today, German farmers find themselves increasingly blamed for the adverse impacts of their agricultural practices, while at the same time being faced by new restrictions and struggling to survive against dumping prices by agrobusiness. A context which reactionary forces on the right, such as the German far-right Alternative für Deutschland (AfD), aim to exploit especially in the East (Balsler and Bauchmüller, 2020). This is a trend observable all over Europe, most prominently by the right-wing Farmers Citizen Movement achieving a landslide victory in Dutch provincial elections in March this year (ibid).

b. The case of the recultivation of the Mecklenburger Marienroggen

The VERN e.V.³ was established in 1996 by farmers, gardeners and interested private individuals who joined forces with the aim of preserving the diversity of cultivated plants (VERN, 2023). Working together with various public institutions, such as the gene bank in Gatersleben (IPK), it maintains their own collection of useful and ornamental plants with more than 2,000 provenances. The aim is to establish value chains for old varieties by bringing together suitable partners for all processing steps from harvesting, cleaning, milling or malting to the product such as bread, baked goods, spirits or beer, and to do this as regionally as possible.

The Mecklenburger Marienroggen (Mecklenburger Lady Rye), is one example where the VERN and its members have been working together to establish a value chain. Once cultivated on the Baltic coast near Rostock (called 'Brandts Marienroggen' until 1945), it descends originally from southern Swedish landraces (VERN, 2023). Its characteristics are a

³ E.V. = eingetragener Verein, meaning registered organization

tall and sturdy rye variety, that remains stable in wind and weather, and regulates weeds and wild grasses without suppressing them. It does not necessitate herbicides and its slightly lower yield encourages habitat for other endangered flora and fauna. Approved by state agricultural authorities in 1920 and cultivated in the GDR until 1961, it disappeared from the fields and laid dormant in the gene bank in Gatersleben.

Its recent recultivation by VERN and associated farmers and food artisans will serve as the basis for this thesis on local small-scale farmers and food artisans' resistance to the pressures of a global food system.

3. Theoretical Framework and Literature Review

a. A political ecology of food

Focussing on the underlying power relations in social-ecological systems, and more specifically investigating the factors that impact local food systems, this thesis follows Jacobi, Villavicencio Valdez and Benabderrazik's (2021) call for political ecologies of food. Drawing on theories and methods from political ecology, sociology, and geography, political ecologies of food focus on the ways in which food systems are shaped by socio-political and environmental factors, including class, race, gender, and environmental degradation.

Food systems refer to the interconnected networks and processes that are involved in the production, distribution, consumption, and disposal of food (Ericksen, 2008; Tendall *et al.*, 2015). This includes the actors involved in the food supply chain, from farmers and artisanal producers, to processors, distributors, retailers, and consumers and their activities within the geophysical and human environments. These shape the way food is grown, harvested, transported, processed, marketed, and consumed through a diversity of infrastructures, policies, regulations, and cultural practices (*ibid*). Hence, food systems vary in scope – from local to regional, national, and global, exemplified by the evolution from local traditional peasant farming to the emergence of industrial agriculture and the global food market (Friedmann, 1993; Fonte and Papadopoulos, 2010; Clapp and Scott, 2018).

Friedmann (1993) argues that the rise of a globalized food system originates in the European colonization of the Americas, characterized by the exploitation of slave labour, the extraction of natural resources through imposed monocultures, and food imports through the establishment of colonial trade networks. Today, the global food system is characterized by powerful states, international institutions, and agribusiness harbouring a disproportionate

amount of power setting impactful food regulations and standards strictly guiding food producers (ibid). With increased trade liberalization, regulations are favouring the profit maximization interests of multinational corporations rather than catering to the needs of small-scale farmers and rural communities, resulting in food being treated as a commodity, subject to the laws of supply and demand, rather than a basic human right (Friedmann, 1993; Clapp, 2014; Clapp and Scott, 2018). Furthermore, the rise of industrial agriculture has transformed food production into a capital-intensive, mechanized process that runs on fossil fuels and relies heavily on chemical inputs, such as fertilizers and pesticides (Figueroa-Helland, Thomas and Aguilera, 2018). Further, the industrialization of food production rests on the exploitation of workers, who are paid low wages and subjected to unsafe working conditions (Figueroa-Helland, Thomas and Aguilera, 2018). This is especially true for migrant workers, who are often excluded from labour protections and face discrimination (ibid).

With the marketed goal to provide cheap food goods all around the world, but exploiting the land, humans, and non-humans for financial gains, the global food system adheres to the modern/colonial rationality⁴ (Quijano, 2007). Furthering what Gorz (2018, 47) calls the “colonization of the lifeworld”, all what we imagine to and what we grow, produce and eat, is dictated by the profit interests of agribusinesses. This propels what Ferdinand (2022, 35) calls ‘colonial inhabitation’, “the imposition of a singular, violent, and destructive way of inhabiting the Earth”. Felt particularly in rural areas and in the majority world, the common consequence of the global food system’s colonial inhabitation are mass migrations from the rural to the urban and from the majority to the minority world and hence, a vanishing trend of local food cultures (Figueroa-Helland, Thomas and Aguilera, 2018; Ferdinand, 2022).

Now what does ‘local’ mean and why is it significant (for food production)? First, as Siebert and Laschewski (2016) argue, ‘local food production’ is an ambiguous term. The geographical location of a produced food is always the local, hence all food is produced ‘locally’. Thus, when the ‘local’ is mentioned in relation to food production, it is always also about the consumer, i.e., it entails a relation. ‘Localness’ thus speaks most evidently to short

⁴ Here I derive my understanding of modernity as inseparably linked to coloniality from Aníbal Quijano's (2007) analysis on the coloniality of power. He argues that Europe’s dominance of the rest of the world which it describes as modernity could not exist without its colonial exploitation. Hence, modernity cannot be separated from coloniality and is articulated as modernity/coloniality.

distances between producer and consumer, hence relating it to a geographical location, in which both the producer and the consumer are situated in (Fonte and Papadopoulos, 2010). Yet, as Fonte and Papadopoulos (2010, 7) found, the associations span beyond the geographic and include links to “small-scale farms, multifunctional agriculture, quality food, rural livelihoods, sustainable community agriculture.” Beyond the geographical and communal elements of the ‘local’, Fonte and Papadopoulos (2010), also point to the element of knowledge production. Long-standing relations between people and with the place and its non-humans, produce a place-embedded form of knowledge about ways of “growing, producing and preparing food in a specific socio-agro-ecosystem” (ibid, 23). This forms a dynamic knowledge based on both the empirical observations of multiple generations of farmers and of the characteristics of the geographical place itself as humans and non-humans adapt to each other within the respective micro-habitat (ibid). Continuously adapting to and changing with the local conditions of people and place, local knowledge hence embodies ecological knowledge and cultural values and beliefs, making it a highly contextual and relational form of knowledge with a significant utilitarian value for the local food system’s community (Charnley, 2007). The intertwining and interrelated realms of place, community, and knowledge henceforth provide the basis on which the idea of ‘locality’ is grounded and what local food systems and production depend on and are expected to represent. Unique to their context one observes the biological diversity of the locality, a linguistic diversity to communicate within and adequately describe the locality, and a cultural diversity that guides the relation with and practices within the locality. However, the pressures exercised by the global food system pose a serious threat to the diversities found in the locality and today a frontier of three interlinked crises has been observed: the loss of biological, cultural, and linguistic diversity.

b. The case for (biocultural) diversity

While conceptually distinct, these three diversities are deeply interrelated and have been usefully merged in what Maffi (2005,602) calls: “Biocultural diversity: the diversity of life in all its manifestations—biological, cultural, and linguistic—which are interrelated within a complex socio-ecological adaptive system.” Thus, biocultural diversity spans across and connects biodiversity, i.e., the varieties of plants, animal species, habitats, ecosystems with cultural and linguistic diversity, i.e., the varieties of human cultures and languages. Not only are these interrelated but the links between these diversities have developed in a coevolutionary process through the close relation between place and people over time (Maffi

2007). These co-constitutive relations produce a wealth of biocultural assets commonly referred to as biocultural heritage ranging from natural resources to cultural memory, a history of languages and traditional, local knowledges (Bridgewater and Rotherham, 2019; ICOMOS, 2021). Specifically related to local food systems, biocultural heritage includes “traditional seeds, crops, livestock, wild foods and landscapes, and related knowledge, practices, tools, celebrations, values and beliefs for cultivation, harvesting, hunting, processing, storage, preparation and cuisine” (Swiderska et al., 2022, 3).

The theoretical significance of biocultural diversity finds its grounding within musings on the value of diversity in nature and culture for human existence. Harmon (2002, xiii) argues to acknowledge those interwoven diversities as the “preeminent fact of existence”. If we consider our consciousness to be that which defines us humans, then he argues, it is our ability to distinguish sameness from difference, to perceive diversity from uniformity which allows for the functioning of our consciousness and thus, makes us human. Following this line of argument, the loss of biocultural diversity would then quite literally “staunch the historical flow of being itself” (Harmon, 2002). Harmon’s conclusion thus carries with it a moral obligation to preserve diversity in all its forms and vice versa to reject uniformity. Maffi (2018) adds to Harmon’s point by noting the common fallacy of equating unity with uniformity – a fallacy rooted within nominalist Western thought and the modern/colonial quest to colonize and thus, homogenize nature and cultures. This carries with it the propensity to regard diversity as a burden, necessary to be overcome for social cohesion, progress, and development (Maffi, 2018).

This particularly European/Western rationality finds its roots in its history of colonization – its quest to colonize underlies a rationale that “denies otherness and constitutes an enterprise of making everything the same, a reduction to the Same” (Ferdinand, 2022, 28). Importantly, while the responsibility in creating the dominant modern/colonial knowledge system which to this day continues to subjugate humans and non-humans disproportionately in the majority world lies undeniably in the colonial centres of the minority world, the ensuing modern/colonial rationale has not stopped at the border of the colonial centres. It also discriminates within its borders against anyone and anything other than that of the dominating white, male, heterosexual, urban dweller. The same thus lies in the universalizing experience and vision of this colonizing persona and can be seen in the literal creation of monocultures, standardizing the Earth and erasing the other, “the one who is different and who inhabits otherwise” (Ferdinand 2022, 35). Yet, it can equally be observed within the apparent

‘monocultures of the mind’, from the colonizer propelling the idea of a Western European cultural universalism abroad to its denial of otherness within the colonial centres (Shiva, 1993).

The result is an aesthetics of repetition, a uniformity of what is planted, of ways of consuming, of dressing, and of thinking about the world. (Ferdinand, 2022, 46)

As can be seen in the vanishing trends of diversity across the biological, cultural and linguistic realms, the consequence is that of biocultural homogenization (Rozzi, 2018). In the biological realm, researchers find the effects of homogenization in the form of invasive (alien) species and pathogens as a result of land use change (e.g., monocultures), transport impacts, and climate change (Bridgewater and Rotherham, 2019). Cultural and linguistic homogenization on the other hand manifests itself through the loss of language, cultural practices – a “loss of local ways of life” with major drivers being urbanization and the rural exodus as part of the globalizing process of cosmopolitanism (ibid, 300).

Modern/colonial regulatory frameworks pertaining to food are good examples of the underlying homogenizing rationale, established according to neoliberal principles to not interfere too much with the agribusinesses profit maximization efforts. Free trade agreements such as NAFTA are just one example of how standardized food products become heavily subsidized and cash crops are incentivized and thus are prioritized against local commodities, devastating local communities through price increases in local food staples and subsequently, devaluing local currency (Alkon and Agyeman, 2011). On the other hand, advancing the ‘necessity’ of hygiene and security, the food regulatory framework in the EU has led to a vanishing trend of local knowledges and practices pertaining to the skills of self-produced food, including from self-grown or foraged wild ingredients within its member states (Sõukand et al., 2020). As Sõukand (2020) shows, this trend sparks fears among rural artisanal producers within aspiring member states, in this case Ukraine, that their artisanal practices and products will be prohibited due to the EU’s stricter food health and hygiene regulations. A loss of those artisanal skills, important for food security and for the preservation of tradition, also marks a loss of gastronomic biocultural diversity and heritage (ibid).

Hence the question remains how biocultural diversity and particularly food-related biocultural heritage can effectively be preserved against the pressures of a global food system? As a means to achieve the latter, Bavikatte and Bennett (2015) propose the idea of

biocultural rights, with the core principles of: “non-discrimination, protection of cultural integrity, self-government, title to lands and natural resources, together with social welfare for economic well-being.” Instrumental to achieve those rights is the assertion of one’s right to self-determination which includes the right to the expression of cultural heritage and own stewardship of the land (ibid). Self-determination in light of a dominating global food system, means resisting the latter and its encroaching modern/colonial rationality, to grow, produce and prepare food according to local conditions and culture. The act of resistance within and against the global food system, is however no act to be taken lightly as it involves defiance against both public and private institutions enabling the global food system. While the fulfilment of absolute self-determination might still appear far, history nonetheless shows us a rich story of how the perceived ‘weak’ find ways to resist the dominance of the powerful.

c. The Weapons of the Weak

The most seminal work on peasant resistance is arguably that of James C. Scott titled ‘Weapons of the Weak: Everyday forms of peasant resistance’ from 1985. Grounded in his ethnographic studies in Malaysia, he put forward a theory of ordinary, everyday forms of resistance which differ ostensibly from the more theorized and discussed forms of overt political acts, such as revolts and strikes, as they do not engage in outright collective defiance. Rather, they occur in the context of daily life where peasants interact with the state, dominant private actors, or other ruling elites (Scott, 1985; Colburn, 1989). What those techniques, e.g., feigned ignorance, pilfering, sabotage, etc., have in common is their quiet, disguised, and anonymous character when challenging the dominant ideology (Scott, 1985). Yet, it isn’t the dominant ideology’s hegemony that impedes outright revolt, but rather the generally precarious position of those resisting which would make a public challenge imprudent, considering the possible consequences (Scott, 1985). Hence, concealed techniques represent a wise choice that can secure material gains vital for the peasants’ welfare. Moreover, theorizing everyday forms of peasant resistance advances the complexity and depth of local class relations without centring the state, raising the peasantry out of its declared role as a political nullity (Scott, 1985). The choice of more concealed tactics is thus also a reflection on the class position of the resister who can gain material benefits without having to risk even greater precarity from the state’s retaliation to open, public protest (ibid).

More than one peasantry has been reduced brutally from open, organized, radical activity at one moment to sporadic acts of petty resistance at the next. What has

changed in such cases is typically not the aims of the peasantry but the effectiveness of domination. (Scott in Colburn, 1989, 22)

Thus, everyday forms of peasant resistance publicly leave the ruler(s) in command (Scott, 1985). However, it lies within their everyday nature that these weapons of the weak continuously exercise pressure against the antagonists, working the system to their least detriment, ever so testing and changing the possibilities of resistance. Taken cumulatively, they can be the precursor for a government to be pushed beyond critical thresholds into crises (ibid).

Within their everyday struggles but also in more overt acts of resistance, peasants have historically found support among urban workers, i.e., artisans and day labourers (Federici, 2004). In Europe of the Middle Ages, many still had their roots in the countryside, and returned during harvest time to work the land. Politically, both groups were also subjected to the same power structure, a combined effort by the landed nobility and the urban patrician merchants, which generated a sense of solidarity among peasants and urban workers considering their mutual concerns. Federici (2004, 42) argues that what brought both peasants and artisans together in their various forms of resistance up to outright revolt, was the common aspiration to break with the uneven society, expressed in “the exaltation of poverty and the communism of goods”.

Today, efforts of resistance have changed and adapted to the different political and economic climate. Most notably, on the open, political stage one finds organizations such as La Via Campesina, the largest international indigenous and peasant organization, or the Movimento dos Trabalhadores Rurais Sem Terra (MST, ‘Landless Workers’ Movement) in Brazil, one of the largest social movements in Latin America aiming to give land back to landless families (Holt-Giménez, 2011). Here, I want to present two smaller examples from Romania and Italy which combine both overt and concealed tactics. Velicu and OGREZEANU (2022) raise the example of an emerging peasant association in Romania, EcoRuralis, which has become the culmination of a prehistory of everyday resistance acts such as self-reproducing and sharing seeds as well as sharing food among and within their respective communities – acts that had been actively invalidated and even criminalized by state authorities. Hiddenly continuing those practices out of fear from repression, those peasant communities were pushed into an ‘apolitical’ corner. Forming EcoRuralis as a response has formed greater solidarity and a sense of security among peasants to actively re-politicize their

quiet practices. From openly discussing the notion of being a ‘peasant’ and reclaiming the once derogatory categorization with pride, to being involved in public debates on local food production (ibid). In a similar vein, da Vià (2015) documents the story of resistance against EU restrictions on farm-saved seeds in Italy. Seed sharing and saving, a local, collaborative practice among peasants started as a form of everyday resistance against large seed companies to preserve their biocultural heritage in the form of locally adapted varieties (e.g., varieties of wheat, legumes, tubers) and local (seed) knowledge. With the introduction of EU restrictions, collaborators started organizing in the open, to the extent of conducting a public seed swap action with more than two hundred peasant producers in front of the EU parliament in January 2014 (ibid). While these are just two examples among many more, most often undocumented acts of defiance, they speak nonetheless to a greater aim that the varied forms of everyday resistances connect – that of autonomy. Autonomy is here to be understood as ‘collective’ autonomy, defined by Stock *et al.* (2014, 414) as “representing the freedom to organize one's own work and work together to realize collective interests; and the freedom from the dependencies imposed by the structures of neoliberal accumulation and the prescriptions of neoliberal ideology.” This clearly stands contrary to neoliberal conceptions of autonomy which are premised on individualism and dependency on capital (Stock *et al.*, 2014).

Concludingly, at the core, everyday forms of peasant resistance aim at protecting and improving the peasant’s and their community’s livelihood. In their singularity perhaps of little significance, yet cumulatively, those acts have the potential of toppling entire regimes. Still, it is at the local level, within the everyday-ness of those acts, where the resistance against the global food system lies and local ways of knowing, producing and growing, in short biocultural diversity and heritage, are preserved against a homogenizing coloniality of knowledge.

4. Methods

a. Research Design

In this thesis I employ a single case study methodology. As this thesis concerns itself with the experiences and perspectives of a small group of actors in a particular geographical area, this methodology is adequate as it allows for an in-depth examination of the actor’s complex contexts which shape their experiences and perspectives in a clearly defined bounded setting. Furthermore, the detailed knowledge generated through interaction with

each actor can then be of particular value for those involved in the case as opposed to a generalizing study of a broader population.

The case itself emerged through my interest in supporting a local food system initiative close to my current place of residence, Berlin. Through preliminary contact with Germany's Slow Food organization and their project "The Ark of Taste"⁵, the case of the Mecklenburger Marienroggen was presented to me as a potential candidate for admission into the "Ark of Taste". The setting of this study, the German federal state of Mecklenburg-Vorpommern, in the Northeast of Germany, is primarily a product of my intention to situate this thesis within a context that I am close to geographically. Nevertheless, this setting also provides valuable insights into the continuing disparities between East and West in a now unified Germany, especially in terms of its rural landscape.

In total, seven out of the eight involved actors were interviewed including a representative of the NGO VERN, four small-scale farmers, and two food artisans (one baker and one brewer), all men, between 50 and 70 years old. The missing participant, the scientific advisor, was not available for an interview. The first actor contacted was VR through his relationship with the Slow Food organization. In a preliminary meeting, we agreed that I would write the application for the Mecklenburger Marienroggen "Ark of Taste", and he would provide me with the contacts of the involved actors of the Marienroggen recultivation project. He provided me with email addresses and telephone contacts through which I contacted each one of them and presented my intentions. After initial contact, it was decided, based on the availability and time capacities of the actors, whether I would visit them or if we would have a phone interview. I visited four and called three.

Between the beginning of June 2023, and mid-July 2023, I conducted seven conversational, semi-structured interviews. For those I developed an interview guide with open-ended questions (see Appendix). Interviews lasted between thirty minutes to one hour. During the four personal visits, I added participant and non-participant observations to also account for non-verbal communications, as well as observations pertaining to what, how, and where participants would show me on their land. Data was collected in all cases, either through field notes and/or audio recordings. Particularly regarding recordings, I opted to ask

⁵ A project by the Slow Food organization which aims to build a repository of the world's "small-scale quality productions that belong to the cultures, history and traditions of the entire planet: an extraordinary heritage of fruits, vegetables, animal breeds, cheeses, breads, sweets and cured meats, etc.". This repository is intended to act against the forgetting and potential disappearance of these local foodculture elements. (for more see: <https://www.fondazione Slow Food.com/en/what-we-do/the-ark-of-taste/>)

to record only in cases where I felt it would not interfere too greatly with the interview itself. The act of recording is known to affect the recorded person, particularly in situations where interviews are uncommon or the content of conversations are sensitive (Loubere, 2017). Prioritizing note taking also allowed to support my recordings with non-verbal expressions and own observations. Further, when I only took field notes, I would revisit them immediately after the interview to tidy up my notes and add additional observations, particularly after I had visited an interlocutor. In total I recorded four interviews.

Due to the small sample size, it is difficult to ensure absolute anonymity considering it is the actors' particular contexts and stories that form the body of this study. Nevertheless, my approach was to anonymize the actors by default, by removing names and exact locality. I offered my respondents to opt out actively, i.e., to be named if they wanted to. This did not occur.

After data collection, I transcribed my field notes and my recordings digitally. Subsequently, I performed a hybrid coding approach, both deductive and inductive, starting with a priori codes based on my reading of secondary literature and my theoretical frame and then adding new codes emerging from the data. From these codes I derived themes and conducted a thematic analysis. This type of quantitative analysis is suitable for the objectives of this thesis as it helps to identify and interpret the key features of the participants lived experiences and perspectives and to derive meaning from them (Clarke and Braun, 2015). Importantly, a thematic analysis key feature is its exploratory flexibility which for example allows to adjust the research questions and how to derive meaning from the data along the way in constant correspondence with new data insights (ibid). This was particularly important to this thesis because of the unique contexts of each actor. My main intention in the analysis of the data was to allow my respondents' words to stand for themselves. However, to contextualize each story and add additional meaning to their statements, I triangulated those via secondary literature, particularly on the historical and political contexts.

b. Philosophy of science

My ontology and epistemology are inspired and shaped by the field of critical theory. As evidenced in my choice of theories to analyze the data, I am interested in the underlying structures that shape the reality of those affected by them as well the emancipatory potential of highlighting those structures and stories of possible resistance against them. In line with a

decolonial ecology, as primarily discussed by Ferdinand (2022), I see the transformation of our lifeworld and the dominance of a global capitalist food system over our local food systems as rooted in the historical event of colonialism. History takes front and center in my analysis as the shaping agent of the present and allows to situate this case. Moreover, choosing interviews as the central method of inquiry allows for an interactive knowledge generation in line with critical theoretical methodology (Guba and Lincoln, 1994).

By applying a decolonial ecology lens to a case within the minority world, I argue that the effects of colonialism as a historical event, but particularly coloniality as the continued force of colonialism, seeped through the borders and manifested itself within the colonial centers. In this case and close to my practice as a cook, as evidenced in the loss of local food cultures and an ever more dominating mass taste. On the contrary, I aim to show an example of the many (food) cultures existing with a clear relation between the human and non-human, as opposed to the one European culture removed from nature supposed to be the universal cultural model for the world.

At the frontlines stand small-scale farmers and food artisans that produce our food locally, the remnants of a German peasant past. In this, I view food as a potent tool for bridging the modern/colonial nature – culture, and human – non-human divide; a connecting force that visualizes our more-than-human world through a reciprocal care in the act of sowing, cultivating, harvesting, processing, devouring, and digesting.

c. Positionality

I am a white, middle-class, German, with a university education and with an academic family background. I am not an artisan or farmer myself. While I have lived in Northeast Germany (Berlin) for several years now, I am not from there originally. Therefore, my primary positionality is as an outsider to those I engage with. The knowledge produced through this thesis will be situated within the context of the regions of Mecklenburg-Vorpommern and Brandenburg and thus within the Minority World context. Due to its place-based nature, this knowledge is not supposed to be generalized nor translated and thus, I aim to employ methodologies that center the perceptions of those I learn from and with. While I will write as a scholar, I am aware that sharing the stories of farmers and artisans' struggles and responses to the global food system, I present a normative position which sides with my

interlocutors. I empathize with those growing and producing food in an artisanal and small-scale manner and stand in solidarity with their struggles to preserve their livelihoods.

My work as a cook is an important aspect influencing and creating the interest in and motivation for this research focus of small-scale food cultivation and artisanal food production. Also, it is important for me to dedicate my work to the place I am in which allows to share and contribute to a form of place-based knowledge and continuous relation with those I learn and work with. It is important to me to reciprocate the knowledge I derive from my interlocutors. I have done so by offering my manual labor, by buying their products, and eventually, to write an application for the Mecklenburger Marienroggen to be taken into Slowfood Germany's Ark of Taste.

d. Methodological Limitations and Reflections

With the choice of research methods and data analysis come limitations inherent to these choices. Firstly, because the interviews had to be translated from German into English, some meanings, particularly in the form of idioms or metaphors, are lost in the process of translation.

Characteristic of a case study, this study investigates a small sample in a specific region making any findings highly contextual and thus, lack generalizability to a broader population. However, case studies can still offer analytic generalizations, particularly when comparing the findings of case studies with a similar topic, yet different places and times, and observing the working of similar processes (Priya, 2021).

On the other hand, working closely on a case study with the participants can lead to exposure bias on part of the researcher. It is important to acknowledge this factor considering the relations one builds through meeting and sharing their stories. Those relations also necessitate extra care and sensitivity towards participants and the resulting data. I consider myself a scholar-activist within this study, seeking to align my academic work with the aspirations of the group of people I am working with. Hence, I don't assume myself to be able to entirely remove my exposure bias but strive to provide transparency of my own positionality – here, in this section, but also reflecting on it within the analysis and conclusion to highlight the multiple positionalities I embody, such as academic, outsider, and collaborator (Routledge and Derickson, 2015), that affect the interactions with the participants and my reading of the data. It cannot be ignored that an academic background and the university as an

institution holds considerable power in the process of knowledge creation. This power, enmeshed in a colonial past and present continuities, must not only be acknowledged but used to work against those violent imperialist legacies by actively asking how a study might be of use to the many instead for a privileged few. Lastly, working on this case has moved me, and being moved is, as per Routledge and Derickson (2015), an essential element of scholar-activist research as it breaks with the attempt to soberly interact and analyse from a distance and to acknowledge the genuine emotional responses, we have based on our core values. I allowed those responses to shape the writing of this thesis in a way that, while not shying away from critical analysis, aims to tell the story of the participants driven by the principles of solidarity.

5. Analysis

a. Introducing the recultivators

Within the case of the recultivation efforts of the Mecklenburger Marienroggen, there are four distinct groups – the *VERN* representative (VR), the *farmers*, divided into *Seed preservation farmers* (SPF1 and SPF2) and *Crop recultivation farmers* (CRF1 and CRF2), and the *food artisans* (FA1 and FA2). The VR takes the role of the overseer of the project – both giving the initial push for the development of the project and coordinating the implementation. On the one hand, this means that any recultivation effort firstly goes through preliminary experiments at their teaching and research station located on an organic farm close to their headquarter. This teaching and research station provides a five-hectare area on which regionally typical crop varieties are tested and researched. The seeds of the traditional varieties are provided by the Genebank in Gatersleben and are then tested on their potential for recultivation. This allows for a direct comparison between modern and traditional varieties. This work is additionally supported scientifically by the Julius-Kühn-Institut (JKI), a Federal Research Centre for Cultivated Plants, which also gives impulses based on their research, as for example currently on the climate change adaptability of traditional crop varieties (as per VR).

The VR takes up the role of finding suitable partners, i.e., farmers and food artisans, with which to collaborate. As he described, it is often by “coincidence” potential candidates are found – mostly through having mutual contacts or having met at one of the *VERN*’s

public events. Who eventually becomes part of a recultivation effort is contingent on several soft and hard criteria. While there are some clear no-gos:

We don't want to have anything to do with agribusiness conglomerates. (VR)

VR also stresses that:

We are fundamentally open-minded, so I always attach importance to the fact that we do not differentiate between organic and conventional, rather simply an essentially thematic receptiveness. (VR)

Initially, emphasis is put on a clear interest in the recultivation of traditional crop varieties and an open-mindedness to collaborate. Later, harder technical aspects are added, where advantages can be pre-existing knowledge or practices of recultivation, suitable features and facilities, particularly pertaining to separate cultivation and storage areas to avoid cross-contamination. While VR indicated that they are open to discuss where the *VERN* can support in the implementation of the recultivation efforts and potentially compensate for any missing pre-requisites, in praxis, there is a clear division of labor. This means, it is expected that the farmer or food artisan manages the cultivation, harvest, production, and sale themselves – this requires a general idea what they want to do with the crop and that time is set aside from their general practice to do so. Eventually, those deemed suitable will then become members of *VERN*.

In the case of the Marienroggen, there are two *seed preservation farmers*, which received a base seed sample from the VR, and then continue to preserve the seed by cultivating the crop for seed preservation. Interestingly, neither SPF 1, nor SPF 2 are strictly crop cultivating farmers. SPF1 runs a mixed cultivation farm with a focus on animal husbandry whereas SPF2 is a locksmith by profession. Both repeatedly express this to me during our conversations, indicating a limited crop-specific knowledge in the case I should have specific crop-related questions. Still, both have had experience with cultivating rye beforehand. SPF1 recounts how this area of East Germany has a long history of rye cultivation, describing it as the variety of “light soils” with reference to the poor, light, sandy soils of Northeast Germany (for reference see the following [Map](#); BGR, 2013), resulting from

its old and young moraine landscape. This fact he raises several times to explain their constant struggle with low yields and why they do not cultivate Germany's most common crop, wheat (BMEL, 2023b).

On the bad soils, you do not need to start with wheat. There is no point! That's why our area here has always been rye! Always, always! We are a rye area. Rye has always been grown here. It used to be common, that half of the arable land was planted with rye here, sometimes even more. No sugar beet grows here, no wheat, the corn works ok but only with fertilizer of course, triticale is borderline, pea sometimes, lupine works ok, buckwheat works ok, but intensive crops such as field bean don't work, that's down to the soil conditions. (SPF1)

Because of the small plot SPF2 works with (one hectare), he switched entirely to Marienroggen cultivation at the start of the project. In contrast, SPF1 opted to create islands in his plot where the Marienroggen can grow undisturbed from his other varieties. Those islands amount to a total area of ten hectares which is the maximum permitted area the VERN allows members to cultivate a traditional variety. Thus, both provide the necessary conditions to limit cross-contamination essential for seed preservation. Additionally, SPF2 is also an avid traditional land machine enthusiast which he makes use of in the harvesting of the plot of land he has. The plot he cultivates on has been passed down to him by his mother, who already leased it during the GDR times. Considering that both cultivate the Marienroggen primarily for seed preservation, the question remains what to do with the crop itself after seed extraction. SPF1 sells it with his other crops simply because he doesn't have any interested person that would just want the Marienroggen – after all he says, it would be too much of a hassle with that little quantity. SPF2 uses the Marienroggen in restoration projects, particularly for roofing. As he describes, because of harvesting the rye with his traditional machines and binding them by hand, the yield of grain is small, but the yield of straw is valuable for roofing. Technically an inconvenient characteristic making it more unstable against bad weather, Marienroggen is particularly suitable for roofing as it is longer than modern rye varieties which have become shorter as result of breeding towards grain yield and easier mechanical harvest (Wieland, 2006; Miedaner, 2014).

Eventually, their preserved seeds will then go to the next group of actors, the *crop recultivators*, for subsequent commercial cultivation. Importantly, VR notes that this is only permissible because “it represents a division of labor” within the association of the *VERN*:

Otherwise, if we did not have the *VERN* umbrella over it, that would be a very clear violation of the applicable seed trade law. (VR)

This law prohibits the introduction of seeds into the market unless authorized by the Federal Plant Variety Office (Bundessortenamt) (BMEL, 2019). Thus, any transfer of seeds only happens in consultation with the *VERN* and only to member farmers. In the case of the Marienroggen, there are two *crop recultivation farmers*. Both farm organically and have previously cultivated rye. CRF1 moved to his current farm in 2020, owned by a Hanoverian industrialist, who employs him as a (landless) farmer to restore the land organically. On the other hand, CRF2 works a family farm which had been left behind by his father fleeing the GDR in 1965. CRF2 returned to their farm whose land he now leases from private individuals and continues to operate as a peasant style family farm. He currently awaits the first yield of the Marienroggen whereas CRF1 has been working with the *VERN* since 2020 and will provide the third yield⁶ this summer to FA1. Both managed to find separate islands of up to ten hectares to cultivate their Marienroggen. In the case of CRF2, his special location was an important feature known by the collaborating JKI for its tolerance against cross-contamination:

Since we are on a peninsula here and I am the only farmer within 10 km who also does arable farming, I was able to secure this area. (CRF2)

Lastly, the particular suitability for collaborating on the recultivation efforts is because of the close distance to the respective *food artisan* – approximately 60 km between CRF1 and FA1 and 100km between CRF2 and FA2.

⁶ It takes one year from sowing to harvest.

The two *food artisans* – one bakery and one brewery – both have worked with traditional varieties making them an easy choice for collaboration based on expertise and interest. FA1 has a long history with the VERN, having worked together on baking experiments with the Champagner Roggen, another traditional variety, prior to his current position as head baker at a regional family bakery company that owns 50 stores in Mecklenburg-Vorpommern. Through his contact to the VERN, he introduced the idea to his new employers and developed the ‘Mecklenburger Marienbrot’, a mixed rye bread based on the Marienroggen. FA2 worked with traditional barley varieties and was contacted by the VERN for collaboration due to the close location to CRF2. Awaiting the first yield, they are planning to produce a special whiskey variety.

Spelling out all the different roles and responsibilities of the involved actors allows for an insight into their unique local contexts. Yet, I argue, that despite their uniqueness a common history can be traced which allows for the realization of this collaborative effort: a history of finding ways to *respond* to the encroaching *global food system* to preserve their local food system’s *biocultural heritage*.

b. Pressures from the global food system

i. A common history

What all actors within this case have in common, is a shared regionality, one with a particular history – that of the GDR. During our conversations this history was referenced in various ways but most consistently along the lines of an experienced disadvantage to their counterparts in the West, especially concerning the loss and lack of small local structures.

I believe, however, that with you in your home region [South-West Germany] it is easier than here, because the structures are simply still in place. Here, many structures have already been destroyed from the time of the GDR into large structures. Not only agricultural, but also the whole area in terms of marketing. In your region it looks certainly much better, I know for sure that there still are many small mills and many small structures that could be maintained. Small structures, which have effectively been destroyed here since 50 years. (CRF2)

Furthermore, SPF1 remembers the advantages of the GDR's County structures which organized the food supply locally. Those disappeared with the introduction of global capitalism as the East moved into a new socio-political and economic system that was to be reunified Germany. An opening to the global market which brings with it supply chains that now span across the country and beyond.

Until 1990, we had county structures, which were not the large counties we have today, but rather a county probably had three districts or so. And in this county structure, the food supply was organized. The dairy, the mill, the slaughterhouse, the butchery, bakeries, ... That's all gone. That means, today our grain is driven from Brandenburg to the Erzgebirge [*over 300 km*] to make it into flour in the organic mill there and then to cart it back here. (*takes a deep breath and exclaims*) Absolute nonsense!!! Especially when you consider CO2 emissions. (SPF1)

Supply chains are tied up in the capitalist quest to produce ever more cheap food goods at high quantities for profit maximization of large food corporations. With an underlying modern/colonial rationality, the spread of cheap food works to the detriment of local structures, the climate, and our non-human world, requiring large-scale agro-industrial complexes which are justified by arguing for their necessity to feed a 'human' world with now eight and soon to be ten billion people.

Why does a cow have to produce 10, 11, 12, 13, 14 thousand liters of milk a year? It goes from being 5 years old to 4, 3, 2 years old. That is not good. Everything over the back of the livestock. Why do I have to produce 10 tons, 8-10 tons of grain per hectare, with poison, fertilizer without end, made from gas, to have stuff that no one needs. This is just about money, isn't it? (SPF1)

ii. The mechanization of agriculture

Mechanization and technologization of agriculture were the main feature of the Green Revolution. Global chemical corporations producing chemical products, such as pesticides and fertilizers, and modified seeds adapted to the chemicals have risen to dominate the agro-

industrial complex. One of the largest pesticide companies, Bayer, is headquartered in Germany and became the largest seed distributor in 2018 when it overtook Monsanto (Heinrich-Böll-Stiftung, 2023). While it is estimated that approximately 80% of all global seeds are still reproduced and exchanged among farmers, the share of genetically modified continues to rise and so does the dominance of seed companies like Monsanto-Bayer (ibid). This dominance manifests in financial burdens on farmers who, once they have sown GMO seeds, now rely increasingly on the same company's pesticides necessary for the GMO seeds to prosper as well as the annual purchase of those nonrenewable seeds. A vicious cycle is established that has led to farmer suicides, particularly in India (Shiva, 2013; Gutierrez et al., 2020).

And then when there are only the few seed producers left, the Indian farmer kills himself. (SPF1)

While Germany does not allow the cultivation of GMO seeds/crops, fears of their introduction are nevertheless apparent.

Imagine if they now start to say, "Look, my pollen is in your corn," I heard that about Mexico with corn. They really were throwing out their patented varieties on the roadsides and pollinating all the corn fields next to them, and then they said, "There's our genetics in it." That is really dangerous! (*becomes increasingly upset*). Many people underestimate that. When it comes to food, that's really dangerous. (SPF1)

SPF1 references the Mexican maize scandal of the early 2000s, where Mexican local maize varieties were contaminated by heavily subsidized and imported GMO US corn (GRAIN, 2003). This provided the legal ground for Monsanto pressing charges against farmers citing intellectual property rights as it has done in other cases of cross-pollination for example in the US (Harris, 2013). Similar events have occurred within Germany. Be it in 2019, where traces of GMOs were found in rapeseed seeds sold by Bayer, as well as in 2020 in a case of contaminated maize corn seeds. In both cases, seeds had already been sown which led to fields being subsequently dug up, reploughed and crops destroyed (de La Hamaide, 2019; VLOG, 2020). Furthermore, VR reports that he has already been contacted by German seed

distributors, or as he calls them “sales crooks”, with an interest in either obtaining traditional seeds to distribute to potentially interested farmers or offering their own seed varieties to the VERN and its members. The fears and antagonism against large seed breeders and distributors and subsequently finding ways to obtain traditional seed varieties from a regional initiative is thus also a motivating factor to join the recultivation efforts of the Marienroggen.

I just want to say, we are always in favor of not letting the dependence on the big breeders increase even more immeasurably, and that's one reason why we said, why don't we get old varieties out and why don't we give it a try? (SPF1)

iii. Profit prioritization and the spread of cheap food

The interest in traditional seeds as a niche market appears to be increasing. VR attributes this in part to the ongoing trend of price decay of agricultural commodities which is felt most strongly among farmers.

In 1970, wheat still cost 50 German Mark or 25€ [per 100kg]. And what does it cost now, not 20€⁷. Only in agriculture we have calculated less and less for our products in the last 30 to 40 years, and that is the fatal thing. There is no industry where this is so. (CRF1)

On the one hand, a reason for this price decay is the globalized commodification of food goods and their trade and pricing at the stock market, such as in Chicago and Paris, hence a farmer's revenues are subject to the world market (Cramer, 1994). On the other hand, this price decay is also linked to the spread of cheap goods and subsequent profit maximization of a few multinational agrobusinesses. While ‘good’ for consumers, such as in Germany who have continuously been paying less for food commodities as a share of their total expenses (the exception being the combined effects of COVID-19 and the war in Ukraine over the years 2021-23), this price decay again is felt strongest by those producing the goods (Ahrens,

⁷ Currently it is at around 30€ per 100kg, an unusual high owed to the uncertainty within the wheat market due to the war in Ukraine.

2023). In Germany, the spread of cheap food is well connected with the dominance of six large supermarket chains – the Edeka group (mainly Edeka and Netto supermarkets), the REWE group (mainly REWE and Penny supermarkets), the Schwarz group (LIDL and Kaufland supermarkets), ALDI Nord and ALDI Süd (both legally independent companies), and the METRO group (with Real and Metro supermarkets) making 76% of total revenue of all supermarkets in Germany (Lebensmittel Praxis, 2019). This signifies a significant power asymmetry towards the largest food companies which govern access to the market and consumers, and thus harbor disproportionate power over those that supply. This power is exercised primarily according to the profit interests of the supermarkets, determining what is sellable and for how much, and dictating the purchase prices to the producers.

Yes, the Schwarz Group, Aldi North and South, Edeka, Rewe, etc., they say what is done. And nobody else. They calculate what you are allowed to earn or not and that's it. The politics has failed to do something about the fact that six entities have the say what the Germans eat. (CRF1)

Politics has not really failed to do something about this process but has rather been influential in shaping it. Examples are multifold in Germany, but one particularly significant one is the involvement of the then Minister of Economics and head of the Social Democratic Party (SPD), Sigmar Gabriel, in the merge and acquisition intention of Edeka of 450 stores of a competing chain in 2016. In his advocating efforts, he even granted a ministerial permission over a previous court ruling against the merge citing a risk of monopoly (Kaiser, 2016). In a similar vein, the EU commission ruled in favor of the overtake of Monsanto by Bayer, making it the largest seed provider in the world in 2018 owning one-third of the global seed market. This came despite heavy protests such as from EU farmer's organizations problematizing its monopolistic position and subsequent leverage to raise input costs as well as from NGOs citing the threat of an ever-decreasing diversity of seeds (Heinrich-Böll-Stiftung, 2023).

We both know that politics and large corporations go together, don't we? (SPF1)

iv. The process of homogenization

With the reduction of seed diversity comes the creeping process of homogenization, characterized in Germany especially by the dominance of wheat, barley, rapeseed and maize monocultures. This was partly a consequence of the shortage of food in the aftermath of World War II, which was to be finally overcome (Kaufmann, 2020).

One had to go other ways [in reference to political pressure of hunger pushing for high yield after WWII in Germany]. Rapeseed, barley, wheat was then always highly interesting, but in principle this amounted to virtually a monoculture. Now we have to rethink or now some are rethinking. (FA1]

Less diversity on the field does not only mean detrimental impacts for biodiversity and climate, but also manifests itself on the plate and particularly in the taste – a factor particularly important to the *food artisans*, as a concern but also as motivation to join the recultivation efforts.

This standardization takes place in all markets sooner or later. One mass taste prevails. Particularly, breeding barley and wheat for food that is very strongly aimed at bringing more yield. What is almost inevitably lost in the process is taste. FA2

Finding its roots in the history of colonialism and its accompanied ‘colonial inhabitation’ (Ferdinand, 2022) characterized by the introduction of monoculture plantations, homogenization not only affects the fields but also the minds, as per Shiva’s (1993) thesis of the ‘monocultures of the mind’. The respondents’ experiences accord with this thesis, referencing in various ways an “estranged world” (SPF1) as a result of the loss of local knowledges and cultural practices. Recultivating a traditional crop variety such as the Marienroggen provides a chance for reconnection to a locality that once was or recreating one that never was (Siebert and Laschewski, 2010), and equally so can provide the basis for consumer interest also seeking for a revival of local food cultures, in the land and on the plate.

I could imagine that this is also somewhat due to the fact that we live in a time of cultural homogenization. You find the same grain [everywhere] which is also very different from what it was a long time ago, and I think it's becoming a need to build an identity around one's homeland or region again, to relate to something. (FA2)

c. Preserving local biocultural diversity and heritage

Recultivation of a traditional variety then becomes a clear response to the processes of homogenization by means of fostering and preserving local biocultural diversity.

This has nothing to do with money at all. This is simply the fun bit with us, to preserve the diversity of varieties, the genetic variability, and not to be blackmailed. (SPF1)

i. Local crop diversity

Starting with preserving the local biological diversity, in all instances there was a high awareness across the actors that in working with this particular crop variety, an effort was made towards enriching biodiversity. When meeting the farmers, the first thing to do was to drive out to the field and in all cases I was shown the field of Mecklenburger Marienroggen with a sense of pride. Yes, the plot was small and thus would make more work than having one uniform field with the same variety, but what was highlighted passionately were the specific characteristics of the Marienroggen, especially its height, its color, and its beauty compared to the other more modern rye varieties:

Well, this one looks great in my opinion. He has a beautiful ear [of grain] that only gets fuller. Look, see the comparison to the other one over there! (*showing me the two fields in comparison*) (CRF1)

Having a special, local variety on their plot of land that is distinguishable from other varieties was also a motivating factor to participate in the project. As SPF2 describes his story of cultivating rye and being asked by neighbors about what kind of rye he was cultivating. He wouldn't really know the name because for one, as he repeatedly states – he is a locksmith –

but also considering the quite technical names of common varieties, such as ‘KWS Tayo’⁸. Now having a name for it that is memorized easily but moreover, speaks to the locality offers rich conversation about its history and its particularity with those who visit him. The joy of working with something biologically special was also a repeated notion in the conversations with the food artisans.

Working on it is certainly more fun than working with ordinary ingredients. (FA2)

This joy and awareness of it being something more special than any more common ingredients and that only a few, including oneself, are working with it, would also be a reason to spend more work hours on it, to “spend an extra Euro” (FA2), to figure out how to produce a great product with it. On the other hand, FA1 sharing this sense of pride, would raise it towards the point of working with something that might have a particular importance for the world’s future under climate change considering the genetic diversity of traditional varieties.

You also have to think about the future, in terms of biodiversity for example. The JKI is already doing something about climate-resistant varieties. Here I see bakeries as a test site to see if it is suitable for further processing. (FA1)

This genetic diversity of traditional varieties is an important differing characteristic from common varieties which lack genetic heterogeneity due to their widespread monocultural cultivation and crossbreeding. In turn, a greater pool of genetic traits offers the possibility to find climate change adaptive traits such as heat or drought tolerance (Swiderska *et al.*, 2011; Padulosi, Bergamini and Lawrence, 2012). In that sense, a food artisan becomes an important part of this scientific effort to test the crop’s technical properties, such as water absorption capacity, important for its usability as a flour in baking and later as a tasty product for consumers (FA2). After all, what most commonly is reported among all is that recultivating historical varieties such as the Mecklenburger Marienroggen just makes logical sense: it is from here and it should thus be here.

⁸ One of the most commonly used hybrid rye varieties. KWS is the world’s fourth largest seed producer for agricultural crops.

These historical crop seeds had not been native to this place for nothing. (FA2)

Awareness of the importance of recultivation and of local biodiversity instils a sense of responsibility in those who engage with it. The VERN embodies this in initiating the process and, importantly, assuming a regulatory role, in particular to manage the recultivation efforts in a manner that prevents potential overcultivation. Overcultivation presents a real threat that is still in the memories of VR and FA1 who worked on the recultivation of the Champagnerroggen, a case in which recultivation efforts slipped out of the hands of the VERN, culminating in widespread cultivation and food processing as a ‘hype’ crop only to fall into oblivion and treated as any other rye variety (VR and FA1).

Unfortunately, this has been lost in the Champagner Roggen. And the grain doesn't really deserve that. It's no longer on everyone's minds up here, even though it doesn't really deserve it (FA1).

Hence, in conversation about biological diversity the VERN's role as a regulatory body is raised as an important factor to limit the cultivation of Marienroggen to ten hectares per involved farmer and thereby its spread in order to appreciate the plants inherent diversity and its contribution to the local biodiversity.

ii. The issue of organic farming

Related to the issue of biodiversity preservation on the national level is the plan of the recent German government to increase the share of organic farming to 30% of all agricultural land by 2030 (BMEL, 2023a). The issue of implementation was a topic that mentioned by the involved farmers when talking about biodiversity and was connected with strong emotional sentiments to their struggle of existing as an organic farmer. The consistent thread connecting the different contexts was that of deep frustration of being a part of something implemented badly by top-down politics with little relation to and experience of the reality on the field. CRF2 describes this kind of politics with a common German figure of speech, “Schreibtischpolitik”, translated literally to “desk politics”, meaning a way of doing politics

from inside the office, at the desk, without setting foot out into the real world. The main frustration about this “Schreibtischpolitik” is its demand to increase the share of organic farming but without building the necessary consumer base and local structures that are needed not just to achieve but to successfully uphold it. Currently only about 5% of Germans indicate that they strictly buy organic products (BMEL, 2022). Weak consumer base in the regional areas of former East Germany is largely due to the entrenched wage gap of almost 900 euros per month in eastern Germany compared to its western counterpart (dpa, 2022). Exacerbating the wage gap in the last two years, COVID-19, the war in Ukraine and accompanied inflation saw the market for organic goods shrink for the first time (AMI, 2023). Weak consumer base and hence a smaller market to supply to, manifests itself particularly in the relation between producer and the middlemen represented by supermarket chains. Both CRF1 and CRF2 speak of experiences where their organic products are pressured to be sold as conventional products for conventional prices.

If I just take my remaining rye as an example, the offer has been made to me: "I should like to market it, nevertheless, at the same price as conventional rye." And why? Because the organic market for rye is lacking. (CRF2)

Our organic potato has now been sold in the spring as a conventional potato, almost for wasted money, because the problem is that if I sell my organic potatoes conventionally, I am rewarded according to conventional guidelines (CRF1).

CRF1 continues that going down that path however puts one in an ever more precarious position of dependence on the goodwill of the supermarkets. When he sells his product as conventional ones, he doesn't just get paid only conventional prices, but has to additionally adhere to conventional product expectations. Those expectations have the least to do with any form of biodiversity, as it is about standardized sizes, and the absence of any discoloring or stains. Does the product not adhere to those expectations, prices are even more dumped and as

CRF1 recounts from this year's spring, his pay can swindle by up to 70%, despite his higher input costs and smaller yield of farming organically⁹ (DPA, 2014).

If you have black pustules and a bit of silver scab on it, then no one would give a shit in the organic sector. I cannot slap any chemistry on it, that's what they do not want to understand, but then when I bring my truck [with potatoes] to the stores, I am given 70% deductions because of silver scab. 70% I do not get paid! (CRF1)

Furthermore, CRF2 points to the lack of local structures that are needed to support organic farming, particularly those that process his produce organically. Currently, he faces a situation where he cannot sell his organic rapeseed used to make organic rapeseed oil because of the absence of organic oil mills nearby that would process it. The absence of such a local structure, historically conditioned in the East as Siebert and Laschewski (2010) argue, results in him depending on middlemen that buy organic rapeseed in large quantities. If he were to try and get in touch with the mills himself, he would need to provide a completely cleaned produce, something he describes as very difficult to provide, and further, because of his small yield, he falls below the minimum processed quantities. Similarly, CRF1 produced organic sugar beets last year and due to the small quantity and the lack of a local organic processor, transported it by train to Switzerland to an organic sugar processor. However, now he is struggling to sell that sugar as some local lemonade producers rejected it on the basis that it is not regional. A story so emotionally frustrating that he had to stop the car for a moment while we were driving to visit his field of Marienroggen.

The whole organic sector is a lot up in the head. We are in capitalism, that's how it is. Today, it's the business of the big players. We don't have to fool ourselves. (SPF1)

With the absence of local structures supporting organic farming – a local consumer base and a local cooperative base – organic farming under capitalism makes it a business for the big and

⁹ On average organic farming brings about 20% less yield than conventional farming, varying between as low as 8% for legumes, but as high as 50% for crops (DPA, 2014; Zinke, 2022).

often foreign farms from which supermarkets import organic produce because of their price advantage over the local produce.

Why does Edeka buy potatoes, organic potatoes in Egypt in the spring? I can store until June. I just took out the last crate yesterday, so I don't have to have organic potatoes from Egypt delivered as early as the end of April. We talk about CO2 and sustainability and over there they pour out the water in the desert. There you do not understand the world anymore! (CRF1)

Evidently, organic farming in Germany is a highly frustrating endeavor for the farmers in this case – at best. At worst, as with the case of CRF2, changing to organic farming on a low yield site can contribute to such precarity pushing one into a dependency on social welfare payments.

As it is at the moment on my low-yield site that I have here, I have become a modern social aid recipient with the conversion to organic. It also gives a, socially speaking, very bad gut feeling. Well, you also want to live somehow from what you do. (CRF2)

Despite contributing to society at large with organic farming and its smaller environmental impact, a lack of valorization for one's work to the extent of not being able to subsist on one's livelihood is a highly disillusioning experience and furthers a general lack of trust in a politics that, as per the respondents, demands from above, but doesn't contribute enough to constructing from below.

iii. Local Heritage and Tradition

Besides its contribution to biodiversity, the recultivation efforts of the Marienroggen also play an important role for local cultural diversity and heritage. This is most obvious in two realms – that of preserving and rekindling with a notion of tradition and cultural heritage, and, of discovering a food-related heritage: a local taste.

The notion of tradition manifests itself through a way of approaching and practicing agriculture. Particularly VR expresses it as his personal motivation to devote himself to preservation efforts not just because of the opportunity to contribute to biodiversity, but precisely because it allows for meeting those people that:

...understand agriculture not exclusively out of business, but out of passion, and still reflect a certain cultural tradition behind it today, and behave accordingly and respect that. (VR)

SPF2 typifies such a person, who combines recultivation of Marienroggen with his main practice as a locksmith with a particular passion for traditional machinery. Working with the Marienroggen inspired him to sow the seeds shallowly by hand, emphasizing that “Rye must hear the church bells”¹⁰, and to harvest them with traditional machinery and later bound it by hand. The preservation of such a practice, and particularly his traditional machinery, he repeatedly raised as important.

I mean, something must also be preserved! Just as with all the machinery here, it's not junk, is it? (SPF2)

The efforts of recultivating a traditional variety thus also speak to a lived history, a passion for and relation with one's place in which each of the actors are situated in. This can also be observed with the *food artisans* that are closest of all actors to the consumer and for whom the recultivation effort provides an opportunity for interesting exchange and connection around the topic of a shared cultural history and the revival of that shared cultural heritage.

It's just a beautiful story that you can tell people, but you can also live together with people. (FA2.)

¹⁰ A common German peasant wisdom as rye prefers a shallow seeding.

On the other hand, working with traditional varieties is also an opportunity to reincorporate traditional methods which one might have neglected in an ever more modernized workplace. Both *food artisans* would reference particularly the element of time, slowing down the process (e.g., through cultivating a particular sourdough), adjusting it to the needs of the crop and also taking more care in processing it considering the small and thus valuable amount they receive from the farmers. Particularly the adjusting to the needs of the crop brought with it a revival of traditional processing methods as both describe how a traditional variety such as the Marienroggen hasn't been bred for processing in industrial scale.

Because these varieties have not been bred for processability with today's methods, you have to revise the processes you have in place. (FA2)

For example, with the Marienroggen, it's only possible with sourdough and a lot of manual work. (FA1)

This juxtaposition of working with traditional varieties and their need for traditional methods in modern times brought the general precarity of preserving one's cultural traditions and heritage to the forefront during our conversations. Particularly CRF2 encapsulated this precarity by making reference of his involvement in the local traditions club of his village. A club with significant importance for its locality as it provides an organized space in which local cultural traditions can be practiced, documented and preserved. But even such a club does not exist outside of capitalism.

Actually, our whole world, which we have right now, more or less revolves around money and if a club wants to live, then it also needs money to live. (CRF2)

On my question what happens if it doesn't make money, CRF2 answers soberly, that it will have to vanish, and with it slowly will the memories of the village's cultural heritage.

iv. Reintroducing a local taste

In the case of traditional crop varieties, a potential remedy to make ends meet is the opening of a niche through the diversity of tastes they provide. In the case of the Mecklenburger Marienroggen a further aspect speaking to the creation of a local taste is its name, evidently representing the region. It is precisely here where biological and cultural diversity merge into the biocultural and offer access to a food-related biocultural heritage, an amalgamation of the non-human properties of the plant derived from its local soils and accessed via the human traditional, cultural practices – best represented through its taste.

The variety of tastes is becoming different, and that is of course a beautiful thing. That we get a different taste through it. Positive for us without actually having to do anything.

It tastes different, I think it tastes better.

You just have a different taste in there. I see this as one of the most important points.
(all FA1)

But we thought to ourselves, maybe these old varieties simply have a different taste profile, aroma, aroma profile, via these secondary plant substances. (FA2)

The particular taste of the Marienroggen is clearly a point of excitement especially for the *food artisans* – creating something with a new taste in a field where taste is the knockout feature for success, and hence also a potential financial success. Such success not only supports the *food artisans* but passes throughout the chain of involved actors and thus, can determine the success of the entire recultivation effort.

d. *Resistance through collaborative creation and reconnection*

i. Collaborative creation

Recultivating the Marienroggen is clearly only possible through a collaborative effort, an effort that involves a range of actors with both shared and unique contexts. Those contexts have shaped each actor's positionalities and thus, the way they view and identify themselves.

It is particularly evident among the farming actors that what once defined the peasantry in the past remains a self-identifying notion today – a clear awareness of one’s class position in the social order. This is a product of the actor’s shared past in the GDR and its political repression, and the shared present of agriculture under capitalism.

We have experienced two different social orders [first socialist GDR and then unified capitalist Germany] here. Who has such an experience? You do not forget the GDR so quickly. (SPF1 in reference to not being politically active)

You have no chance. If you open your mouth, you will be stuck with your potatoes. (CRF1 pointing to the difficulty of challenging the dominating supermarkets)

What should you do when you are merely an insignificant part of society? (SPF2’s response on how to challenge the status quo)

This shared sense of precarity influences the ability to do something about their position, partly because of their limited resources and partly because doing something could threaten those limited resources. Hence, acting overtly by themselves is not a real option. Aware of this positionality, none of the farming actors participate in this effort just for fun. The project provides them the opportunity to fight against the disappearance of one’s local biocultural heritage and/or to simply benefit materially, under the safeguard of banding together within. Therefore, the common opportunity that is provided under the umbrella of recultivating the Marienroggen, is that of resistance through creation.

The opportunity always lies in creating something different. And then I can live from that and also the farmer a bit better (FA2).

The products made of the Marienroggen would not exist if the logics of the global food system (which almost successfully contributed to the extinction of the Marienroggen) prevailed. It is the creation of a collaborative effort in itself that signifies resistance against the globalizing forces of homogenization, standardization and rural fragmentation; against the

loss of biocultural diversity and heritage, peasant family style farming, and local artisanal goods; and for a shared local food culture. The resistance notably involves collaboration between farmers and artisans, the importance of which acknowledged by most actors:

Yes, such a collaboration is necessary also just because of the distance to everyone else nowadays. (SPF1)

Yes well, yes. It's a lot of work, but it's good. (CRF1)

For example, if you talk to the FA2, they're not far away from here, then that's actually also you can say the brewery is in the neighborhood. It actually only works that way. (CRF2)

Well now I'm a baker, but I belong somewhere in this chain, from producer to miller, baker, I am a part of it. (FA1)

While, FA2 clearly expressed that the responsibility of the total success of recultivation should not rely solely on the *food artisans*, it only makes sense to them that they do see themselves as part of this collaborative chain and hence with a clear motivation to produce the best product they can. This collaborative chain, also described as the ‘farmer-breeder-chef’ approach, “seeks to leverage the agronomic skills and knowledge of the farmer, the culinary perspective of the chef and the logistical skills of the breeder [in the case of the Marienroggen, both the VERN and the SPFs] to develop varieties with local adaptation and end-use potential” (Jones and Econopouly, 2018). All actors do depend on one another, which FA2 expresses quite clearly in their dependence on an organization such as the VERN to provide adequate seeds as well as the interested farmers that preserve and cultivate the traditional crop safely to produce a good product out of it.

This consultation in advance, knowledge of seed varieties, or also of test quantities, possible capacities in pre-processing, test trials, analytics, all that. That's just what the last processor can't do, he's just dependent on having a certain bouquet of possibilities simply handed to him that he can then work with. (FA2)

Clearly, none of the actors could possibly recultivate the Marienroggen themselves and hence reap any of the recultivation's benefits. This corresponds with the cases of da Vià (2015) and Velicu and OGREZEANU (2022), of resistance through a collaborative seed sovereignty project in Italy and forming the peasant association Eco Ruralis for the survival of small-scale family farming in Romania, respectively. While the recultivation efforts of the Marienroggen are arguably a more low-key form of resistance against the global food system, as compared to some of the more open political acts shared by da Vià (2015), such as open seed sharing in front of the EU parliament, both share a collaborative nature that makes the preservation of biocultural heritage possible. Furthermore, Velicu and OGREZEANU (2022) describe how the primary motivations of their participants to join Eco Ruralis were twofold: practical, in the form of needing seeds, and social, looking for a community with shared interests. Likewise, in the recultivation efforts of the Marienroggen, participants find such a likeminded community as they become members of the VERN and contribute to the effort together, and practically benefit from it financially.

ii. The Way Forward – Reconnecting with the consumer

As the collaborative effort between the *farmers*, *food artisans* and the *VERN* does not exist within a vacuum but in the world of neoliberalism, the success of the project cannot solely be measured by the resurrection of the Marienroggen but must also be measured against its financial profitability. This notion was conveyed to me strongly during our conversations particularly by the two *food artisans*.

Yes, this link [of the product to the region] is great to hear for the people, but it is always subject to the condition that the product must also be cool. You have to find a way to get paid for it in return. (FA2)

You have to sell it, if it can't be sold, then it [the project] has to be abandoned. It's quite clear that we can't just recultivate something that doesn't really work out. (FA1)

In the global food system which is predicated on profit orientation and consumption, the consumer is given a new centrality. The pressure created through this centrality is

explained through a simple logic: If the consumer does not consume product X, there is no profit to be made, and if there is no profit to be made, there is no interest in producing product X. Hence, it will not be produced. Despite the ideological motivations supporting the recultivation effort, not only the *food artisans* but all actors point to this logic and that if the products resulting from the Marienroggen do not find a sustainable consumer base that will financially compensate the efforts adequately, then the project would not survive.

The next question is whether the customer is willing to spend the money that the finished product costs. But if the customer is not willing to spend more money for what this product is actually worth. Then all this is futile. (CRF2)

Concerning the recultivation efforts, the pressure from this consumer centrality translates directly to a sense of responsibility the *food artisans* address. Surely it is the characteristics that the Marienroggen brings with it that affect marketable factors such as processability and most importantly taste. Yet, it is also the *food artisans* own skillset how to best process and extract the best taste out of their ingredient and eventually best market it to their consumers. After all, if they are selling it well, not only does this mean greater chances for the recultivation of the Marienroggen, but the success translates to material benefits for all actors involved.

If you find the golden grain and it tastes amazing no matter what you do to it, then of course the crop variety and the farmer should profit from that success. (FA2)

More generally, the centrality of the consumer today is something that particularly the farmers identify as a pressure point for their practice and livelihood. In the conversations with CRF1 and CRF2 it became evident how both experience this pressure also as result of an ever-increasing distance to the consumer. While agriculture employed about thirty-eight percent of the German work force at the beginning of the 20th century, today it is only about two percent (BMEL, 2020). This structural change also means that fewer people are associated with agriculture, such as through their family or relatives, and with a continued rural exodus, the majority of urban consumers lack an experiential connection to the realities on the farm. Whereas once the producing farmer and the consuming local would interact

directly, nowadays their relation is bridged via the supermarket in between. Supermarkets that already dominate the producers in terms of prices, are now able to justify this dominance acting as the representative of the consumer. After all, aren't they just translating the consumers' preferences? Here, CRF1 tells the story of a neighboring organic chicken farmer which he cooperates with for chicken manure. In spring, this farmer's organic eggs were rejected by the supermarkets due to too little demand. CRF1 recommended him to just sell them as conventional free-range eggs, 'only' a price mark down of 0.05€, instead of being stuck with them. Yet his neighbor tells him, while he would love to do that, he cannot because nowadays eggs in Germany are judged by the color of their yolk on a scale from 1 (pale yellow) to 15 (dark orange) and organic eggs don't reach the same rich orange coloring as their conventional counterparts. This is because organic farmers are strictly prohibited from adding any coloring additives such as Beta Carotin to the food of their chickens. The supermarkets can check the colors via high-tech color sensors (see Astech, 2022) and thus reject those that do not reach the correct range of color as per their classification. This practice is justified by consumer surveys that proclaim that the German prefers a richer egg yolk coloring (scinexx.de, 2017). As CRF1 recounts, this left his neighbor with no choice but to sell his organic egg as a broken, runny egg for 0.02€ instead of 0.17€ per organic egg. A story of many similar ones he tells me this day that he tells with an increasingly raised voice to make room for the disbelief and frustration that has built up while I scramble in my position as 'sober' researcher to ask smart questions. We subside in silence and once again throughout this research I am ever more aware of my position as an urban consumer – embarrassingly removed and unknowledgeable of these power games playing out between producer and supermarket; a consumer unaware of what their preferences mean for the realities at the farm.

Increasingly, CRF1 and CRF2 experience these consumer preferences as value laden yet stricken with hypocrisy. Emblematic for both is the push towards organic farming. A push fueled by the awareness of the detrimental environmental impacts of conventional farming and the accompanied negative attitudes towards conventional farming. Especially CRF2 was made to feel those negative attitudes, having only converted to organic farming five years ago. A major reason: his lessors who also rent out holiday apartments close to his farm were approached by guests from the city who complained about his use of a plant protection sprayer. Pressured to keep his plot, he made the move towards organic farming despite being located on a low-yield site – a move as he describes that has now made him a social welfare recipient. In theory, a positive development with one less conventional farmer, yet in practice he is not rewarded by this conversion. Still, in a heated value-laden climate with ecological

crises mounting and with farmers blamed for their practices, such pressures might be perceived righteously. However, this pushes aside the structural issues of the economic and political climate of agriculture in which big producers are still disproportionately supported and favored by state subsidies today, as evidenced by the direct payments of the EU CAP (Pe'er and Lakner, 2020; Chatellier and Guyomard, 2023). While organic farming does receive greater subsidies on average than conventional farming, the playing field is nevertheless tilted towards big producers that can more easily reduce their selling prices. In this system, small organic farmers thus do depend on a consumer base that is willing to pay more for their extra work – a consumer base that farmers should be allowed to expect considering the value laden climate and push for organic farming. And yet, the hypocrisy that both CRF1 and CRF2 point to is exactly found in the lack thereof. Being made to feel both the problem contributing to the ecological crises and the ones who must solve it, while observing how supermarkets prioritize cheaper organic products from other countries to provide consumers with low-cost products, is a disillusioning experience.

I just saw it the other day with the asparagus from the region, 7€ the kilo. The people stand around it, and discuss: “No, that is too expensive.” And what do they do after? They go into the supermarket and buy some Spanish asparagus and I am wondering, as soon as it's about the climate and what not, you proclaim all that you do. Here, regionally, that would be the start for you to do something. It would be no hassle. But don't expect me now to stand on some parking lot trying to sell my potatoes and watch how they'll go for the cheaper ones from the Netherlands in the supermarket. They should all just continue to shop at Aldi and Lidl, and where the product comes from does not matter at all. But this pseudo hypocrisy, I loathe it. (CRF1)

Society has reached a point, where people say, no this cow cannot ruminate because it emits methane but in the same moment, you pack your luggage, board the plane and make holidays. That is sickening. The thought process is simply sickening because you search for the salvation of this world in your neighbor and that just cannot work. I mean I am part of the problem; I have no problem to say that and look for ways how I can make the world better. But I find it scary when people tell me that I have to better the world, all the while they continue with their life. (CRF2)

As I am about to leave, CRF1 holds me back for a moment and searches his phone – what he is looking for and recommends me is the newest book ‘Satt und Unzufrieden’ (loosely translated as ‘Full and Dissatisfied’) by Dr. Willi Kremer-Schillings. An author who is more widely known in the agricultural landscape as Bauer Willi, the most frequently blogging farmer in Germany. Even though he “is a conventional one”, i.e., a conventional farmer, as CRF1 mentions to me, he still finds him to speak truth to the matter at hand. In the book, he makes the case that farmers can do anything as long as they are supported for what they are doing. The problem he identifies is the climate of accusations and expectations by a consumer base ever more distant from the realities of its producers who lack the consumers and the political support to satisfy everyone’s demands while trying to make their own ends meet (Kremer-Schillings, 2023). There is a dilemma between what is feasible and what is desirable in the system we live in.

It is this distance between producers and consumer, that needs to be overcome to establish meaningful solidarity between the urban and the rural. This means for the consumer to truly concern oneself with how one’s food is produced; to seek the connection to those that produce it within one’s locality. This is not easy, particularly in the city, but this is where politics can be pressured such as to end subsidies that favor the big producers and to level the playing field. The binary categorization of producer and consumer, not to deny each unique realities, however, also overshadows the shared and overlapping realities of both through their common locality and arbitrarily keeps them out of reach and out of touch. As this case shows, it is through place-embedded food that such a relation can re-emerge. It is the place-embeddedness, the uniqueness of the relations a local food embodies, that stands against the ‘commodification-of-everything’ within neoliberalism and globalization (Strasser, 2003). Or as Fonte and Papadopoulos (2010, 17) elaborate:

Local food networks may not only represent resistance to the globalised, placeless reorganisation of food chains but may also serve to challenge a continuous trend towards simplification and homogenisation of agricultural techniques and agro-ecosystems, leading to a revaluation of traditional/local forms of knowledge and techniques and their recognition as specific and important resource in the management of agricultural and natural ecosystems.

This argumentation however also meets critical objection, deeming place-embedded food as co-opted by the globalization process it aims to subvert (Burawoy, 2005). It has to be acknowledged that the niche product that comes out of the recultivation effort is eventually subjected to and can be appropriated by global capitalism. Likewise, this project does not achieve the goal of actual autonomy from neoliberalism as the participant's perceived centrality of the consumer speak to the neoliberal approach of solving the food crisis via consumers voting with their fork, i.e., making conscious choices and thus, changing the market. However, I would challenge those claims insofar that firstly through limiting the dissemination and cultivation of the Marienroggen, such a small quantity of products are currently produced that are only interesting to a local market, thus limiting the risk of an appropriation by the global market. Secondly, it is not this project's proclaimed goal to achieve absolute autonomy from neoliberalism. Rather the project is an opportunity for the participants to work the system to their least detriment as in the tradition of everyday forms of peasant resistance (Scott, 1985). Doing so collaboratively in the local and thus reaping together collective interests, from preserving their local biocultural heritage and receiving material benefits, speaks nonetheless to achieving a form of collective autonomy (Stock *et al.*, 2014).

6. Conclusion

In this study, I investigated how small-scale farmers and food artisans in Northeast Germany are impacted by the pressures of the global food system. They experience those pressures particularly through the mechanization of agriculture, profit prioritization, the spread of cheap foods, and the process of biological and cultural homogenization. Those pressures provide the actors the motivation to join the recultivation effort of the Mecklenburg Marienroggen. Not only does this project offer the opportunity to preserve their local biocultural heritage, especially in the form of plant varieties, local tradition, and local tastes, but it also offers financial benefits. It is their collaborative effort that makes this recultivation effort happen in the first place, and only through their collaboration can the offered benefits be reaped.

Essentially, it is the collaborative use of the Mecklenburger Marienroggen and the subsequent creation of a place-embedded niche product that allows this local food system to resist against the global. The way of resisting through creation lies arguably between strictly

concealed and strictly open forms of resistance. Working overtly, and yet without directly challenging the status quo, it manages to offer benefits that could not be accessed in the logic of the global food system. Hence, it works the dominant global food system to its least detriment.

However, a challenge identified above all by the involved farmers, is the perceived distance to the consumers. This pertains not only to their activities in this project, but to the general survival of the farmer's livelihoods. This distance is symbolic for agriculture under capitalism with the dominance of supermarkets as middlemen between the producers and the consumers. The farmers experience this disconnect through an increasingly hostile and accusatory attitude towards their practices and yet are hindered to meet the consumer's expectations in a political and economic environment that still rewards greater size and productivity. This mismatch nurtures a sentiment of frustration and disillusion and a feeling that their realities at the farm are not seen and understood.

Expressing this sentiment took up the majority of time during the interviews with the farmers despite the positive opportunities provided by the collaborative recultivation effort. To me this was an important reflection in this research process, particularly in my position as an urban dweller that cherishes local food cultures. On the one hand, to resist the romanticization of the small-scale, peasant style farm, and share the struggles how they are experienced by the farmers required both a reflexive approach to writing this thesis to not slip into the urge of always providing a silver lining to the experienced struggles. And on the other hand, to make space for the emotions that come with sharing and hearing about those experiences. To be moved by them is a catalyst for overcoming the disconnect between the urban and rural.

How and what we sow, grow, produce, cook, eat is not just political. It is at its core relational: between humans and with non-humans. It is paramount to reconnect within our localities to establish true, meaningful solidarity and to solidify local food systems against their vanishing trend. After all, "the world is the fruit of an acting together" (Ferdinand, 2022, 233).

7. Bibliography

- AFSA *et al.* (2022) *Peasants still feed the world, even if FAO claims otherwise*, *Grain*. Available at: <https://grain.org/en/article/6790-peasants-still-feed-the-world-even-if-fao-claims-otherwise> (Accessed: 29 April 2022).
- Ahrens, S. (2023) *Konsumausgaben: Anteil der Ausgaben für Lebensmittel bis 2022*, *Statista*. Available at: <https://de.statista.com/statistik/daten/studie/75719/umfrage/ausgaben-fuer-nahrungsmittel-in-deutschland-seit-1900/> (Accessed: 12 August 2023).
- Alkon, A.H. and Agyeman, J. (eds) (2011) *Cultivating Food Justice: Race, Class, and Sustainability*, *Cultivating Food Justice*. Cambridge, Massachusetts: MIT Press. Available at: <https://doi.org/10.7551/MITPRESS/8922.001.0001>.
- AMI (2023) *Deutscher Bio-Markt schrumpft erstmals*, *Agrarmarkt Informations-Gesellschaft*. Available at: <https://www.oekolandbau.de/handel/marktinformationen/aktuelle-zahlen-zum-deutschen-bio-markt/> (Accessed: 3 August 2023).
- Astech (2022) *Eidotterfarbklassifikation*, *Astech Angewandte Sensortechnik GmbH*. Available at: <https://www.astech.de/anwendungen.html?displayid=52> (Accessed: 11 August 2023).
- Balser, M. and Bauchmüller, M. (2020) *Wie die AfD um Bauern wirbt*, *Süddeutsche Zeitung*. Available at: <https://www.sueddeutsche.de/politik/afd-bauern-landwirte-1.4764413> (Accessed: 22 July 2023).
- Bavikatte, K.S. and Bennett, T. (2015) ‘Community stewardship: the foundation of biocultural rights’, *Journal of Human Rights and the Environment*, 6(1), pp. 7–29. Available at: <https://doi.org/10.4337/JHRE.2015.01.01>.
- Beckmann, V. and Hagedorn, K. (1995) ‘De-collectivisation policies and structural changes of agriculture in Eastern Germany’, *MOCT-MOST: Economic Policy in Transitional Economies*, 5(4), pp. 133–152. Available at: <https://doi.org/10.1007/BF00996598/METRICS>.
- BGR (2013) *Ackerbauliches Ertragspotential der Böden in Deutschland*, *Bundesanstalt für Geowissenschaften und Rohstoffe*. Available at: https://www.bgr.bund.de/DE/Themen/Boden/Produkte/Karten/Downloads/karte_AckerbaulichesErtragspotential_A0_pdf.html;jsessionid=189557C576019CFF0ADC18DAEF84D691.inter.net942?nn=4571954 (Accessed: 15 August 2023).
- BMEL (2017) *Die wirtschaftliche Lage der landwirtschaftlichen Betriebe: Buchführungsergebnisse der Testbetriebe des Wirtschaftsjahres 2016/2017*. Berlin.
- BMEL (2019) *Saatgut + Biopatente - Überblick über das Saatgutrecht*, *Bundesministerium für Ernährung und Landwirtschaft*. Available at: <https://www.bmel.de/DE/themen/landwirtschaft/pflanzenbau/saatgut-und-biopatente/saatgutrecht.html> (Accessed: 1 August 2023).
- BMEL (2020) *Wie viele Menschen arbeiten in der Landwirtschaft?*, *Bundesministerium für Landwirtschaft und Ernährung, Umweltbundesamt, Statistisches Bundesamt*. Available at: <https://www.umweltbundesamt.de/umweltatlas/umwelt-landwirtschaft/einfuehrung/landwirtschaft-in-deutschland/wie-viele-menschen-arbeiten-in-der-landwirtschaft> (Accessed: 11 August 2023).
- BMEL (2022) *Öko-Barometer 2021 Umfrage zum Konsum von Bio-Lebensmitteln*. Berlin.
- BMEL (2023a) *Öko-Landbau stärken: Prozess zur Weiterentwicklung der Zukunftsstrategie ökologischer Landbau*, *Bundesministerium für Ernährung und Landwirtschaft*. Available at:

- <https://www.bmel.de/DE/themen/landwirtschaft/oekologischer-landbau/zukunftsstrategie-oekologischer-landbau.html> (Accessed: 12 August 2023).
- BMEL (2023b) *Versorgungsbilanz Getreide, Bundesministerium für Ernährung und Landwirtschaft*. Available at: <https://www.bmel-statistik.de/ernaehrung-fischerei/versorgungsbilanzen/getreide> (Accessed: 31 July 2023).
- Bridgewater, P. and Rotherham, I.D. (2019) ‘A critical perspective on the concept of biocultural diversity and its emerging role in nature and heritage conservation’, *People and Nature*, 1(3), pp. 291–304. Available at: <https://doi.org/10.1002/PAN3.10040/SUPPINFO>.
- Bromham, L. *et al.* (2021) ‘Global predictors of language endangerment and the future of linguistic diversity’, *Nature Ecology & Evolution* 2021 6:2, 6(2), pp. 163–173. Available at: <https://doi.org/10.1038/s41559-021-01604-y>.
- Burawoy, M. (2005) ‘Third-Wave Sociology and the End of Pure Science’, *The American Sociologist*, 36, pp. 152–165.
- Chatellier, V. and Guyomard, H. (2023) ‘Supporting European farmers’ incomes through Common Agricultural Policy direct aids: facts and questions’, *Review of Agricultural, Food and Environmental Studies*, 104(1), pp. 87–99. Available at: <https://doi.org/10.1007/S41130-023-00192-8>.
- Clapp, J. (2014) ‘Financialization, distance and global food politics’, *The Journal of Peasant Studies*, 41(5), pp. 797–814. Available at: <https://doi.org/10.1080/03066150.2013.875536>.
- Clapp, J. and Scott, C. (2018) ‘The Global Environmental Politics of Food’, *Global Environmental Politics*, 18(2), pp. 1–11. Available at: https://doi.org/10.1162/GLEP_A_00464.
- Clarke, V. and Braun, V. (2015) ‘Thematic analysis’, *Journal of Positive Psychology*, pp. 1–5.
- Colburn, F.D. (1989) *Everyday forms of peasant resistance, Everyday Forms of Peasant Resistance*. New York: Routledge. Available at: <https://doi.org/10.4324/9781315491455>.
- Cowie, R.H., Bouchet, P. and Fontaine, B. (2022) ‘The Sixth Mass Extinction: fact, fiction or speculation?’, *Biological Reviews*, 97(2), pp. 640–663. Available at: <https://doi.org/10.1111/BRV.12816>.
- Cramer, G.L. (1994) ‘World Grain Trade’, in G.L. Cramer and E.J. Wailes (eds) *Grain Marketing*. Boca Raton, Florida: CRC Press, pp. 303–329. Available at: <https://doi.org/10.1201/9780429037368-10>.
- DPA (2014) *Landwirtschaft: Erträge im Biolandbau werden unterschätzt, DER SPIEGEL*. Available at: <https://www.spiegel.de/wissenschaft/natur/landwirtschaft-ertraege-im-biolandbau-werden-unterschaezt-a-1007533.html> (Accessed: 3 August 2023).
- dpa (2022) *Lohnlücke zwischen Ost und West schwindet nur langsam, ZEIT ONLINE*. Available at: <https://www.zeit.de/wirtschaft/2022-01/arbeit-loehne-westdeutschland-ostdeutschland-lohnluecke> (Accessed: 3 August 2023).
- Engelhard, K. (2022) ‘Kleinbauern: Von der Scholle geschubst’, in E. Gottfried (ed.) *Landwirtschaft - Wege aus der Krise*. Berlin, Heidelberg: Springer, pp. 199–203. Available at: https://doi.org/10.1007/978-3-662-64960-2_28.
- Ericksen, P.J. (2008) ‘Conceptualizing food systems for global environmental change research’, *Global Environmental Change*, 18(1), pp. 234–245. Available at: <https://doi.org/10.1016/J.GLOENVCHA.2007.09.002>.

- FarmEurope (2021) *The new German government coalition's agricultural plans*, FarmEurope. Available at: <https://www.farm-europe.eu/news/the-new-german-government-coalitions-agricultural-plans/> (Accessed: 21 July 2023).
- Federici, S. (2004) *Caliban and the witch*. New York, NY: Autonomedia.
- Ferdinand, M. (2022) *Decolonial Ecology: Thinking from the Caribbean World*. Cambridge: Polity Press.
- Figueroa-Helland, L., Thomas, C. and Aguilera, A.P. (2018) 'Decolonizing Food Systems: Food Sovereignty, Indigenous Revitalization, and Agroecology as Counter-Hegemonic Movements', *Perspectives on Global Development and Technology*, 17(1–2), pp. 173–201. Available at: <https://doi.org/10.1163/15691497-12341473>.
- Fonte, M. and Papadopoulos, A.G. (eds) (2010) *Naming Food After Places: Food Relocalisation and Knowledge Dynamics in Rural Development*. Surrey: Ashgate.
- Friedmann, H. (1993) 'The Political Economy of Food: A Global Crisis', *New Left Review*, 1/197, pp. 29–57.
- Global Alliance for the Future of Food (2021) *The Politics of Knowledge: Understanding the Evidence for Agroecology, Regenerative Approaches, and Indigenous Foodways*. Available at: www.futureoffood.org (Accessed: 9 August 2023).
- Gorz, A. (2018) *Ecologica*. London: Seagull Books London Ltd.
- GRAIN (2003) *Interview with David Quist - The Mexican Maize scandal*, *Grain Magazine*. Available at: <https://grain.org/fr/article/entries/367-with-david-quist-the-mexican-maize-scandal> (Accessed: 2 August 2023).
- Greenfield, P. (2022) *The biodiversity crisis in numbers - a visual guide*, *The Guardian*. Available at: <https://www.theguardian.com/environment/2022/dec/06/the-biodiversity-crisis-in-numbers-a-visual-guide-aoe> (Accessed: 9 August 2023).
- Guba, E.G. and Lincoln, Y.S. (1994) 'Competing paradigms in qualitative research', in Denzin N. K. and Lincoln Y. S. (eds) *Handbook of qualitative research*. Thousand Oaks, CA: SAGE Publications Ltd., pp. 105–117.
- Gutierrez, A.P. et al. (2020) 'Bio-economics of Indian hybrid Bt cotton and farmer suicides', *Environmental Sciences Europe*, 32(1), pp. 1–15. Available at: <https://doi.org/10.1186/S12302-020-00406-6/FIGURES/7>.
- Harmon, D. (1996) 'Losing species, losing languages: Connections between biological and linguistic diversity', *Southwest Journal of Linguistics*, 15, pp. 89–108. Available at: https://www.researchgate.net/publication/286349769_Losing_species_losing_languages_Connections_between_biological_and_linguistic_diversity (Accessed: 2 March 2023).
- Harmon, D. (2002) *In Light of Our Differences: How Diversity in Nature and Culture Makes Us Human*. Washington, DC: Smithsonian Institution Press.
- Harris, P. (2013) *Monsanto sued small farmers to protect seed patents*, *The Guardian*. Available at: <https://www.theguardian.com/environment/2013/feb/12/monsanto-sues-farmers-seed-patents> (Accessed: 12 August 2023).
- Heinrich-Böll-Stiftung (2023) *Aus Sieben werden Vier: Der Markt für kommerzielles Saatgut*, *Heinrich-Böll-Stiftung*. Available at: <https://www.boell.de/de/aus-sieben-werden-vier-der-markt-fuer-kommerzielles-saatgut> (Accessed: 2 August 2023).
- Holt-Giménez, E. (2011) '14: Food Security, Food Justice, or Food Sovereignty?: Crises, Food Movements, and Regime Change', in A.H. Alkon and J. Agyeman (eds) *Cultivating Food*

- Justice: Race, Class, and Sustainability*. Cambridge, Massachusetts: MIT Press, pp. 309–330. Available at: <https://doi.org/10.7551/MITPRESS/8922.003.0020>.
- ICOMOS (2021) *Connecting Practice: A Commentary on Nature-Culture Keywords international council on monuments and sites*. Charenton-le-Pont. Available at: <http://openarchive.icomos.org/id/eprint/1841/> (Accessed: 10 August 2023).
- Jacobi, J., Villavicencio Valdez, G.V. and Benabderrazik, K. (2021) ‘Towards political ecologies of food’, *Nature Food*, 2(11), pp. 835–837. Available at: <https://doi.org/10.1038/s43016-021-00404-8>.
- Jacques, P.J. and Jacques, J.R. (2012) ‘Monocropping Cultures into Ruin: The Loss of Food Varieties and Cultural Diversity’, *Sustainability*, 4(11), pp. 2970–2997. Available at: <https://doi.org/10.3390/SU4112970>.
- Jarvis, D.I. *et al.* (2008) ‘From the Cover: A global perspective of the richness and evenness of traditional crop-variety diversity maintained by farming communities’, *Proceedings of the National Academy of Sciences of the United States of America*, 105(14), p. 5331. Available at: <https://doi.org/10.1073/PNAS.0800607105>.
- Jones, S.S. and Econopouly, B.F. (2018) ‘Breeding away from all purpose’, *Agroecology and Sustainable Food Systems*, 42(6), pp. 712–721. Available at: <https://doi.org/10.1080/21683565.2018.1426672>.
- Kaiser, S. (2016) *Edeka/Tengelmann: Sigmar Gabriel macht Wirtschaftspolitik nach Gutsherrenart*, *DER SPIEGEL*. Available at: <https://www.spiegel.de/wirtschaft/soziales/edeka-tengelmann-gabriel-macht-wirtschaftspolitik-nach-gutsherrenart-a-1106656.html> (Accessed: 12 August 2023).
- Kaufmann, S. (2020) *Landwirtschaft: Geschichte der Landwirtschaft*, *SWR*. Available at: https://www.planet-wissen.de/gesellschaft/landwirtschaft/geschichte_der_landwirtschaft/index.html#Ost-West (Accessed: 2 August 2023).
- Klüter, H. (2017) ‘Die Landwirtschaft Mecklenburg-Vorpommerns im Vergleich mit anderen Bundesländern’, *Greifswalder Geographische Arbeiten*, 53.
- Kremer-Schillings, Dr.W. (2023) *Satt und Unzufrieden: Bauer Willi und das Dilemma der Essensmacher*. Frankfurt: Westend.
- de La Hamaide, S. (2019) *French, German farmers destroy crops after GMOs found in Bayer seeds*, *Reuters*. Available at: <https://www.reuters.com/article/us-france-gmo-bayer-idUSKCN1PV1RG> (Accessed: 2 August 2023).
- Lebensmittel Praxis (2019) *Deutsche Lebensmittelhändler - Die Top-30-Unternehmen*, *Lebensmittelpraxis.de - LPV GmbH*. Available at: <https://lebensmittelpraxis.de/zentrale-management/26642-deutsche-lebensmittelhaendler-die-top-30-unternehmen.html> (Accessed: 2 August 2023).
- Loubere, N. (2017) ‘Questioning Transcription: The Case for the Systematic and Reflexive Interviewing and Reporting (SRIR) Method’, *Forum: Qualitative Social Research*, 18(2), pp. 1–22. Available at: <https://www.ssoar.info/ssoar/handle/document/57717> (Accessed: 13 February 2023).
- Maffi, L. (2005) ‘LINGUISTIC, CULTURAL, AND BIOLOGICAL DIVERSITY’, *Annual Review of Anthropology*, 34, pp. 599–617. Available at: <https://doi.org/10.1146/ANNUREV.ANTHRO.34.081804.120437>.

- Maffi, L. (2007) 'Biocultural Diversity and Sustainability', in J. Pretty et al. (eds) *The SAGE Handbook of Environment and Society*. Thousand Oaks, CA: SAGE Publications Ltd, pp. 267–278.
- Maffi, L. (2018) 'Biocultural Diversity', in H. Callan (ed.) *The International Encyclopedia of Anthropology*. Hoboken, NJ: John Wiley & Sons, Ltd, pp. 1–14. Available at: <https://doi.org/10.1002/9781118924396.WBIEA1797>.
- Michels, M., Möllmann, J. and Musshoff, O. (2020) 'German Farmers' Perspectives on Direct Payments in the Common Agricultural Policy', *EuroChoices*, 19(1), pp. 48–52. Available at: <https://doi.org/10.1111/1746-692X.12231>.
- Miedaner, T. (2014) 'Roggen - Anspruchslos und hartnäckig', in *Kulturpflanzen*. Berlin Heidelberg: Springer, pp. 61–90.
- Padulosi, S., Bergamini, N. and Lawrence, T. (eds) (2012) 'On farm conservation of neglected and underutilized species: status, trends and novel approaches to cope with climate change.', in *Proceedings of an International Conference, Frankfurt, Germany, 14 16 June 2011*. Rome: Bioversity International, pp. 171–187. Available at: <https://cgspace.cgiar.org/handle/10568/42045> (Accessed: 2 August 2023).
- Pe'er, G. and Lakner, S. (2020) 'The EU's Common Agricultural Policy Could Be Spent Much More Efficiently to Address Challenges for Farmers, Climate, and Biodiversity', *One Earth*, 3(2), pp. 173–175. Available at: <https://doi.org/10.1016/J.ONEEAR.2020.08.004>.
- Priya, A. (2021) 'Case Study Methodology of Qualitative Research: Key Attributes and Navigating the Conundrums in Its Application', *Sociological Bulletin*, 70(1), pp. 94–110. Available at: <https://doi.org/10.1177/0038022920970318/FORMAT/EPUB>.
- Quijano, A. (2007) 'COLONIALITY AND MODERNITY/RATIONALITY', *Cultural Studies*, 21(2–3), pp. 168–178. Available at: <https://doi.org/10.1080/09502380601164353>.
- Routledge, P. and Derickson, K.D. (2015) 'Situated solidarities and the practice of scholar-activism', <http://dx.doi.org/10.1177/0263775815594308>, 33(3), pp. 391–407. Available at: <https://doi.org/10.1177/0263775815594308>.
- Rozzi, R. (2018) 'Biocultural Homogenization: A Wicked Problem in the Anthropocene', in R. Rozzi et al. (eds) *Book cover Book cover From Biocultural Homogenization to Biocultural Conservation*. Cham, Switzerland: Springer, pp. 21–48. Available at: https://doi.org/10.1007/978-3-319-99513-7_2.
- scinexx.de (2017) *Bio oder konventionell? - Das eine Ei besticht durch Qualität, das andere durch Optik, scinexx - das Wissensmagazin*. Available at: <https://www.scinexx.de/news/biowissen/bio-oder-konventionell/> (Accessed: 11 August 2023).
- Scott, J.C. (1985) *Weapons of the Weak: Everyday Forms of Peasant Resistance*. New Haven: Yale University Press.
- Shiva, V. (1993) *Monocultures of the mind: Perspectives on biodiversity and biotechnology*. London and New York: Zed Books.
- Shiva, V. (2013) *Seeds Of Suicide, countercurrents.org*. Available at: <https://countercurrents.org/shiva050413.htm> (Accessed: 12 August 2023).
- Siebert, R. and Laschewski, L. (2010) 'Creating a Tradition That We Never Had: Local Food and Local Knowledge in the Northeast of Germany', in M. Fonte and A.G. Papadopoulos (eds) *Naming Food After Places*. New York: Routledge, pp. 61–75.

- Sõukand, R. *et al.* (2020) ‘The importance of tolerating interstices: Babushka markets in Ukraine and Eastern Europe and their role in maintaining local food knowledge and diversity’, *Heliyon*, 6(1), pp. 1–14. Available at: <https://doi.org/10.1016/J.HELIYON.2020.E03222>.
- Stock, P. V. *et al.* (2014) ‘Neoliberal natures on the farm: Farmer autonomy and cooperation in comparative perspective’, *Journal of Rural Studies*, 36, pp. 411–422. Available at: <https://doi.org/10.1016/J.JRURSTUD.2014.06.001>.
- Strasser, S. (2003) *Commodifying everything: relationships of the market*. Milton Park, Abingdon, Oxfordshire, England, UK: Routledge. Available at: <https://www.routledge.com/Commodifying-Everything-Relationships-of-the-Market/Strasser/p/book/9780415935913> (Accessed: 11 August 2023).
- Swiderska, K. *et al.* (2011) *The Role of Traditional Knowledge and Crop Varieties in Adaptation to Climate Change and Food Security in SW China, Bolivian Andes and coastal Kenya*, UNU-IAS workshop on Indigenous Peoples, Marginalised Populations and Climate Change: Vulnerability, Adaptation and Traditional Knowledge. London.
- Swiderska, K. *et al.* (2022) ‘Indigenous Peoples’ Food Systems and Biocultural Heritage: Addressing Indigenous Priorities Using Decolonial and Interdisciplinary Research Approaches’, *Sustainability* 2022, Vol. 14, Page 11311, 14(18), pp. 1–23. Available at: <https://doi.org/10.3390/SU141811311>.
- Tendall, D.M. *et al.* (2015) ‘Food system resilience: Defining the concept’, *Global Food Security*, 6, pp. 17–23. Available at: <https://doi.org/10.1016/J.GFS.2015.08.001>.
- TUBS (2009) *Locator map: Mecklenburg-Vorpommern in Germany*, Wikivoyage. Available at: https://de.wikivoyage.org/wiki/Datei:Locator_map_Mecklenburg-Vorpommern_in_Germany.svg (Accessed: 15 August 2023).
- UN (2022) *UN Report: Global hunger numbers rose to as many as 828 million in 2021*, World Health Organization. Available at: <https://www.who.int/news/item/06-07-2022-un-report--global-hunger-numbers-rose-to-as-many-as-828-million-in-2021> (Accessed: 10 August 2023).
- UN (2023) *Forests, desertification and biodiversity, United Nations Sustainable Development*. Available at: <https://www.un.org/sustainabledevelopment/biodiversity/> (Accessed: 9 August 2023).
- Uthes, S. *et al.* (2011) ‘Regional impacts of abolishing direct payments: An integrated analysis in four European regions’, *Agricultural Systems*, 104(2), pp. 110–121. Available at: <https://doi.org/10.1016/J.AGSY.2010.07.003>.
- Velicu, I. and OGREZeanu, A. (2022) ‘Quiet no more: The emergence of food justice and sovereignty in Romania’, *Journal of Rural Studies*, 89, pp. 122–129. Available at: <https://doi.org/10.1016/J.JRURSTUD.2021.11.024>.
- VERN (2023) *Compendium 2023: Katalog für seltene Kulturpflanzen*. Angermünde OT Greiffenberg. Available at: www.quagga-illustrations.de (Accessed: 12 August 2023).
- da Vià, E. (2015) ‘Food Sovereignty in the fields: seed exchange and participatory plant breeding of wheat landraces in Italy’, in A. Trauger (ed.) *Food Sovereignty in International Context: Discourse, politics and practice of place*. London and New York: Routledge, pp. 198–211.
- VLOG (2020) *GMO-contaminated maize/corn seeds sold and grown*, Verband Lebensmittel ohne Gentechnik e.V. | Available at: <https://www.ohnegentechnik.org/en/press/articles/gmo-contaminated-maize-corn-seeds-sold-and-grown> (Accessed: 2 August 2023).
- Vrolijk, H.C.J. *et al.* (2010) *Farm viability in the European Union Assessment of the impact of changes in farm payments*. The Hague.

- Wieland, T. (2006) 'Scientific Theory and Agricultural Practice: Plant Breeding in Germany from the Late 19th to the Early 20th Century', *Journal of the History of Biology*, 39, pp. 309–343.
Available at: <https://doi.org/10.1007/s10739-006-0006-4>.
- Zinke, Dr.O. (2022) *Biogetreide: Hohe Preise und niedrige Erträge - Das Dilemma*, *agrarheute.com*.
Available at: <https://www.agrarheute.com/markt/marktfruechte/biogetreide-markt-bleibt-nische-trotz-hoher-preise-589069> (Accessed: 3 August 2023).

8. Appendix

a. Interview Guide

(Translated into German)

Hello, my name is Leo. I am a student at Lund University in Sweden. I am working on a research project to document traditional ecological knowledge and food practices and understand how this knowledge is practiced, preserved and passed on within and between generations.

I am very grateful that you are willing to participate in this interview to share your knowledge about your food practices. This includes gathering information about how communities gain, maintain and share knowledge and information.

Before we begin, would it be okay if I record our discussion? This ensures greater accuracy in the data. Your answers will be anonymized.

Do you have any questions before we begin?

1. Could you tell me a little about your history in relation to your practice?
 - a. How long have you (or your family) practiced it / grown or produced food in this community?

2. Please describe your practice.
 - a. How did you get involved into the project of recultivating the Mecklenburger Marienroggen?
 - b. What were your motivations to join?

3. What major social, economic or cultural changes have taken place in your territory/community during your lifetime?
 - a. How did each of these events affect you?

4. How did you respond to these changes?

5. How does politics affect your practice?

6. In your community do people usually work together or do they usually work alone?
 - a. If so, what are the reasons for people to work together?
 - b. What are some examples of when people work together?

7. How do you perceive the future of your practice?
 - a. What would help preserve it?
 - b. What would you need to make your dream future come true?