Alexandra Hammer

Negotiating Sustainabilities.
Navigating Organic Practices in Capitalist Markets[1]

Abstract

Organic agriculture aims at enabling sustainable food economies. But agricultural temporalities and practices do not necessarily align with demands and schedules posed by packers, processors, or retailers – a detachment that complicates the actors' pursuits of sustainability. This paper builds on participant observation during nine workshops with actors along the German organic food supply chain. Viewing these events through an ethnographic lens reveals the complex web of agricultural, political, and economic constraints that needs to be navigated from farm to supermarket. Situated at the intersection of more-than-human anthropology and anthropology of time, this article asks how actors involved in the production, distribution, and marketing of organic foods negotiate and (re)imagine sustainability. What obstacles do they see, and whose agencies and fates do they consider within their negotiations? How do these narrations and practices point to possible reconfigurations of sustainability? The analysis sheds light on sustainability's emergent nature and its relations to prevailing (global) power imbalances and wealth gaps. Looking at the organic food supply chain through the lens of time frames and rhythms allows for a conceptualization of sustainability as a situated endeavor, variable across time and space and deeply dependent on nonhuman agencies and specific situational contexts. Following globalized connections further demonstrates how sustainability must include disadvantaged and exploited people within and across national borders.

Keywords: sustainability, organic agriculture, more-than-human anthropology, food supply chains, capitalist logics, Germany, ethnography

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https://orcid.org/0000-0002-8228-6422
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Introduction[2]

In the context of its strategy for sustainable development, the German government seeks to increase the share of organic farmland to 30% by 2030 (Koalitionsvertrag 2021–2025, 46).[3] Based on the Brundtland definition of sustainable development as "meeting the needs of the present without compromising the ability of future generations to meet their own needs" (Brundtland 1987, 16), this strategy enacts a framing of organic farming as a sustainable form of agriculture. Cultural and social scientist on the other hand claim that it is impossible to identify whole bundles of practices or entities as (not) sustainable (Jonas 2016, 347). Sociologist Siegehard Neckel (2018, 13) proposes to conceptualize sustainability as a problem to be analyzed rather than the solution: Debates and practices regarding sustainability make visible, "which socio-economic change is taking place, which new lines of conflict and which inequalities and hierarchies are emerging".[4] This points to the necessity of research about the interconnections of sustainability and societal power relations.

Ecofeminists and critical anthropologists of climate change position the roots of recent ecological crises in the context of global capitalism. Hans A. Baer and Merrill Singer (2014) argue that "climate change perhaps more than any other environmental crisis illustrates the unsustainability of the capitalist world system" (Baer & Singer 2014, 76; see also Gaard 2017, 9). Organic agriculture as a way of farming that is supposed to align more with nature aims to be part of more sustainable food systems. But within capitalist food markets, (organic) farmers must arrange their practices not only with weather and ecological but also "economic cycles from season to season and year to year." (van Dyk 2021, n. pag.). As agricultural temporalities do not necessarily

2 My thanks go to all the actors who participated in our workshops and gave us insights into their perspectives and (work) realities. Moreover, I want to thank my colleagues within the AVOeL project: Hanin Al- Gassani, Regina F. Bendix, Seline Bezen, Laura Bulczak, Johanna Käsling, Alexandra Keinert, Sascha Kesseler, Konstanze Laves, Torsten Näser, Henning Niemann, Antje Risius, Constanze Rubach, Achim Spiller, Johanna Tepe and Matthias Wiemer. I'm also extremely grateful to Valeria Hänsel, Elisabeth Luggauer, Svenja Schurade as well as the participants of our doctoral colloquium, especially Jonathan Kurzwelly, all of whom added valuable perspectives and ideas to the discussion. I thank Regina F. Bendix, Viktorija L.A. Čeginskas, Riikka Aro and Liia-Maria Raippalinna and the anonymous reviewers for their careful reading of the manuscript and their many insightful comments and suggestions.

3 In 2021, 10,8% of German farmland was cultivated organically, which puts Germany only slightly above the EU average (Eurostat 2022; BÖLW 2022: 7 & 23). Currently, German organic farms cannot meet the domestic demand for organic food (Hartmann 2022).

4 A note on language: citations from secondary literature in German have been translated by the author, all of the empirical material cited has been translated from the original German.

align with demands and schedules further along the supply chain, analyzing frictions between those different temporalities sheds light on emerging struggles for sustainability and the impacts of capitalist logics. Capitalism is typically understood as an economic system that is controlled through the market and based on private ownership of the means of production and the principle of profit maximization (Walsh 1998, 16). But it is shown to transform social live beyond economic spheres by quantifying the value of people, actions and things and turning them into commodities (Jenks 1998, 3). Anna Tsing (2015, 38–40) defines capitalist logics as those that stem from and reinforce striving for uniformity, homogeneity, and interchangeability of (living) things.

Drawing on more-than-human anthropology and anthropology of time, this paper analyzes efforts made toward sustainability within the German organic food market. In this article I ask, how actors involved in the production, distribution, and marketing of organic foods negotiate and (re)imagine sustainability: How is sustainability understood and what current obstacles are discussed? Whose agencies and fates do these conceptualizations take into account, who do they exclude and how does this relate to societal and economic power imbalances? How do these narrations and practices point to possible reconfigurations of sustainability? Concepts from more-than-human anthropology diversify who counts as an actor and has the ability to shape the world. More-than-human agency "encompasses all enabling and constraining (inter)effects within diverse actor constellations" (Langthaler 2021, 42) – including animals, plants, or fungi as well as microorganisms and inanimate objects, the weather, or soils (ibid.; Peselmann 2021). Posthumanist practice theory helps to focus on phenomena in their continual emergence, instead of conceptualizing them as quasi-natural objects. Practices are not to be equated with intentional actions, but describe types of activities (e.g. practices of speaking, cooking, or shopping). Posthumanist or more-than-human practices are composed of multiple participants, which can again be conceptualized as specific practices consisting of multiple participants (material and immaterial, organic and inorganic, human and nonhuman) (Schadler 2013, 58). The field of anthropology of time breaks with the notion of absolute time that dominates everyday language. It questions the idea of time as a neutral, objectively given framework, which is prior to the realm of culture and society (Hengartner 2002, 33; Reckwitz 2016, 117). The sociologist Andreas Reckwitz (2016, 172) proposes a praxeological concept of time, which can show how practices organize temporality. Time then appears to be "the result of performed activities that realize, for instance, a certain rhythm", time frame or temporality.

Looking at organic food supply chains through these lenses allows for a view of sustainability as a situated endeavor. This theoretical framework encourag-

es critical reflections of the intersections of nonhuman and human agencies, different time frames and rhythms, and prevailing (global) power imbalances and wealth gaps. Although this study is primarily interested in the way in which sustainability is framed and negotiated by the actors, this reflexive-critical perspective does not oppose the normative claims that are associated with sustainability within current discourse (see also Neckel 2018, 14). Therefore, the notion of sustainability is used as a concept that describes the positive effects of a given practice on nonhuman and human actors and entities (see also Cielemęckac & Daigle 2019). By doing so, I simultaneously recognize the desirable nature of sustainable endeavors and the fact that sustainability is not an objective, extrinsic feature of entities or practices.

The study draws on fieldnotes written about nine workshops with actors working at different nodes of the German organic food supply chain – from farm to supermarket. In the context of the research project "Authenticity and Trust in Organic Food",[5] we elicited discussions on the realities of the German organic food system in the manner of focus groups (Bloor & Frankland & Thomas & Robson 2001). At the core of the inquiry were questions of (enabling) sustainable futures. The participants painted a picture of the complex web of agricultural, political, and economic constraints which they need to figure into production and distribution of organic foods. Farmers voiced the rhythms and effects of non-human animals, plants, and other entities – narrations that can be read as calls for a more-than-human perspective on food supply chains (see also Heitger & Biedermann & Niewöhner 2021; Peselmann 2021). They narrated organic agriculture as a place where agricultural – framed as 'natural' – and capitalist logics clash, complicating their pursuit of sustainability.

After a brief outline of the project's methodological approach, the paper looks at the German organic food market as a whole, and examines how a simple contrast of organic versus non-organic foods renders invisible situated aspects that are shown to deeply influence the sustainability of practices. Then follows a closer look at organic farms as places of clashing temporalities and logics, with more-than-human agencies on the one hand and marketing practices on the other side jointly affecting the agricultural realities. The farmers' framing of organic as more 'natural' food is shown to suggest a more-than-human conceptualization of sustainability. From there I will further broaden the perspective, following the connections which the actors draw to global-

5 In German „Authentizität und Vertrauen bei Bio-Lebensmitteln" (AVOeL). Apart from the focus groups with actors from the organic sector on which this article draws, our project team conducted semi-structured interviews with consumers, participant observation in shopping settings, media analyses and consumer surveys (see Hammer, Näser, Bendix & Risius 2021).

ized markets and the interconnections of power and different time frames. These negotiations bring forth a vision of sustainability as a project that takes (global) wealth gaps and power imbalances into account. Throughout, it is the emergent nature of what is when sustainable for whom that is of interest, as striving for sustainability can never be the pursuit of a singular concern. Organic food production and distribution illustrates this complexity and dynamic. Sustainability is one major motivating factor in producing organic foods; especially the farmers present elements constitutive of sustainable thinking and acting from their on-the-ground perspective.

Ethnographic perspectives on organic food supply chains: Workshops at the intersection of focus groups and participant observation

Our team consists of agricultural economists, researchers from the division of Teaching and Learning in Higher Education, cultural anthropologists, and a practice partner who is an organic farmer and a consultant for actors in the organic food sector. Together, we organized nine workshops in which actors along the German organic food supply chain discussed organic food markets. Six workshops focused on one organic product each: vegetables, milk, apples, meat, cereals, and eggs. They were followed by two joint workshops that addressed all plant products and all animal products respectively. Finally, we invited actors across all groups for a joint event. All workshops were documented with fieldnotes which serve as the empirical basis for the present paper.

Our workshops integrated differing disciplinary conventions and expectations, with agricultural economics more positivist in its orientation and a more critical and reflexive cultural anthropology. The events' success depended on incorporating questions relevant to the participating actors so they would willingly spend four to six hours there. This required that we successfully incorporated the potential participants' interests and needs. Our practice partner identified such pressing issues in cooperation with other practitioners. We further invited stakeholders – representatives of producer or animal welfare groups – to give presentations as part of the workshops. They also participated as discussants and were chosen by our practice partner, who was responsible for hosting the events. He, as well as other project members, moderated different parts of the program. From an ethnographic perspective, this inclusion of the organic sector's current issues proved valuable as it ensured the format to hold space for unexpected, potentially surprising topics that we did not anticipate.

Our events were attended by farmers, representatives of certification organizations, distributors, packers, processors, and retailers. The largest group represented were farmers; representatives of the big German retail companies

accepted our invitation less frequently – a circumstance that reflects the power imbalance between those groups as the later are less dependent on communication with the former. Our workshops benefited greatly from our practice partner's contacts and his ability to launch events that bring together different voices from the organic food sector – including those that are usually hard to come by. Some of the attendees – farmers, but especially packers, processors, and retailers – handled both, organic and conventional products, while others were so-called organic pioneers – actors that are known for having advanced the organic project and sector in the 1970s and 80s. Several actors had known each other for years of decades – due to doing business together, being part of the same producer group, or collectively working on different projects. On average, 16 people participated in each workshop – for a total of about 130 participants. Due to the Covid-19 pandemic, we switched to a digital format in 2020. Most of our in-person events were held in northern Germany, wherefore actors from this area tended to be overrepresented. More people from other regions joined our online workshops. Some of the workshops were built on an ongoing roundtable for actors in the vegetable sector. One attendee repeatedly praised this roundtable for being a great format bringing together even those who used to be at odds with each other (Fieldnotes, Workshop 1 & 3).

The workshops featured open discussion rounds about the attendees' experiences and their opinions regarding chances and issues of the organic food market. Specific questions relevant to the respective groups were debated in a more focused manner. During our "World Café" (Brown 2007), participants then formed three smaller groups, rotating between tables, and discussing different questions. While some of those methods included written documentation by the participants in the form of mind maps and note cards, others relied on spoken words and had to be transferred into writing by the researchers. Three team members took separate notes which we compiled into joint, more detailed fieldnotes afterwards. Our different disciplinary backgrounds were noticeably reflected in the focus and writing style of our notes. The result was fieldnotes that unified these conventions, expertise, and foci while also leaving differing experiences and priorities visible.

In terms of format, the workshops are situated at the intersection of focus groups and participant observation. The verbal dimension of the discussions allowed us to capture the actors' narrations and perspectives while our participation made it possible to gain deeper insights into non-discursive practices (Cohn 2014). Our practice partner used preexisting social relations and networks to launch the invitations, we did not define criteria for constructing a group of people 'representative' of the respective sectors. Thus, these group settings allowed for an integration of social contexts and interpersonal re-

lations between actors sharing aspects of a given lifeworld, surpassing what we could have achieved in the form of individual interviews.[6] The focused nature of the workshops offered access to experiences and bodies of knowledge shared by the actors, yet also gave space to divergent positions.

The analysis of the material aimed at a material-guided approach. My research ethics are generally informed by critical perspectives regarding the intersections of "gender, race, class, sexuality, species, and […] justice" (Gaard 2017, 9), as well as dis/ability; hence those theoretical concepts shaped my reading and analyzing of the material in profound ways. In order to prevent the research object from being narrowed down too much, the material was first coded openly with the aid of grounded theory (Glaser & Strauss 2008; Götzo 2014). When recurring topics arose, the material was condensed further, now deliberately taking into account concepts from the fields of more-than-human anthropology and anthropology of time, as these themes were prevalent throughout the material. Thus, the themes of the analysis were classified in theoretical contexts after their categorization. This approach made visible regularities as well as contrasting interpretations and practices of the actors (Strübing 2008, 18–22).

"Retail has an incredible amount of power". Consumer communication and the invisibilization of situational contexts

This section focusses on the different stages of the German organic value chain and the way they relate to one another. Participants problematized a power imbalance from retail to processors to farmers. This hierarchy reinforces market practices that separate the nonhuman actors that are our food (see also Watters 2018, 4) from their situational contexts. This tendency goes hand-in-hand with capitalist logics that adhere to ideas of exchangeability, uniformity and homogeneity. In discussing the German organic food market as a whole, the actors also enacted a concept of sustainability that includes the specific situational contexts of food production.

Throughout, the actors equated 'organic' with a sustainable way of farming that benefits nonhuman and human actors and environments. One fruit grower asked rhetorically:

> "Why do we do organic at all? To do something good for the world, to not exploit the land on which we farm as much as the conventional farmers do. But the population must be made aware of these reasons before it is too late". (Fieldnotes, Workshop 3)

6 I conducted a qualitative interview with an organic farmer and recurring workshop participant to gain a deeper understanding and further contextualization of topics addressed in those events (Interview 1). Informal conversations in different contexts were collected in my field diary and added to the material.

His argumentation stems from the idea, that ultimately consumers are responsible for the success of products and in consequence the sustainability of the food market. Thus, the urgent question is how to communicate this "added value" to consumers (ibid.). This is especially relevant in the context of a food market in which many stages of the value chain stand in between producers and consumers (Niggli 2005). Farmers and consumers rarely communicate directly, as most grocery shopping in Germany is done at supermarkets and discounters (Ahrens 2020). This "filter through the supermarket" – as one attendee called it – allows retail companies to control the flow of information, leaving consumers and farmers alike dependent on the stores' communication policies (Fieldnotes, Workshop 3; see also Hering & Fülling 2021, 341–342). This special position of retailers is also based in the power imbalance from retailers to processors to farmers. The imbalance was repeatedly problematized by the other actors (Fieldnotes, Workshop 1 & 3). A retail representative redirected the responsibilization associated with this assessment by claiming that retail, as much as everybody else within the supply chain, is subjected to the consumers' choices (Fieldnotes, Workshop 9). The German Bundeskartellamt (the federal authority responsible for enforcing antitrust and competition law) on the other hand confirms a very high market concentration of a few big retail companies that results in structural advantages (Bundeskartellamt 2014). This hierarchy also appears to be enabled in the context of globalized food markets (see the final section).

The retailers' communication policies include the supermarket chains' implementation of their own organic labels. It was problematized how those labels deliberately equalize organic products from different origins, concealing information about the sites of production and the actors and practices involved (Fieldnotes, Workshop 3).[7] Therefore, those organics appear to be interchangeable units. This practice is based in (and reinforces) the idea that the central distinction policy is the one between organic and non-organic origins, making invisible situated differences and varying practices on site. This is closely interwoven with the regulation of organic agriculture through certification practices. Certification often unifies conflicting interpretations (Wiegand 2018, 44) and can then be taken into account in making economic, political or shopping decisions. However, it does so at the expense of includ-

7 Organic-food associations such as Demeter, Bioland or Naturland require their members to adhere to more ridged standards than EU-law. Thus, the organic actors frequently debated the implications of the fact that "organic does not equal organic". Especially the "organic pioneers" communicated fears of a "conventionalization of organic" in the context of its growing market (Fieldnotes, Workshop 1 & 2).

ing concrete, situational aspects.[8] Similarly, information necessary for consumers to make regional food choices are made invisible. When processed in noodles, for example, the local origin of eggs is not labeled. With a focus on short transport routes, regionality is viewed as a sustainable quality. But this equation is questioned by others. When striving for $C0_2$ reduction, consumers often choose regional over organic produce. But attendees argued that buying regional to live sustainably may lead to the exact opposite. Different crops have different needs regarding soil or weather. To render food chains regional by only selling produce that was grown 'nearby', one would have to grow crops under conditions that don't meet their needs – increasing the demand for energy or water. And without enough demand on site in regions with better conditions, produce might not even be harvested and left to rot on the field as this might be the most profitable option (Fieldnotes, Workshop 6 & 9). Here, organic products are framed not as a general category of food, but as situated, depending on work attending to individual entities, growing in specific settings that are variable across space and time.

Against such specificity, a retail representative argued for clear information via packaging: "The message that has to come across is: it is an organic product." (Fieldnotes, Workshop 6) As actors along the organic chain now have the ambition to sell produce unpacked; the space available to convey information shrinks. This development was viewed as one downside of increased environmental consciousness (ibid.). The use of packaging may well lead to a reduction in overall environmental impact, because it can protect food from damage and contamination and extend its life (WBAE 2020, 189). Similarly, due to the interwovenness of current marketing structures, a lack of organic dairies especially in northern Germany, the different weight of the packaging options and the respectively necessary resource investments, the attendees identified milk in cartons as a more sustainable alternative than bottled milk (see also Kauertz, Bick, Schlecht, Busch, Markwardt & Wellenreuther 2018; Hammer 2020). The number of dairies has been declining for years throughout Germany, resulting in longer transport routes. The attendees agreed that this situation rendered bottled milk less sustainable – demonstrating how such an assessment relies on more aspects than the properties of a material. Still, the idea that reusable bottles are theoretically more sustainable is at the core of this discussion: the northern German actors reflected upon how it might be possible to collectively build an organic dairy "up here" to reduce CO_2 emissions (Fieldnotes, Workshop 2).

8 Similarly, studies show how depending on the situated context the sustainability of organic farming varies, see Smith et al. 2020.

The retailers' position in the German food market has consequences beyond the transfer of information to consumers. In making their decisions, retailers weigh between their knowledge and interests and thus limit as well as enable consumers in their choices – "You can't buy something if it's not on the shelf." (Fieldnotes, Workshop 6; see also Jonas 2016, 352–353) When asked whether retailers ought to be included in the efforts towards more sustainable food supply chains, responses differed. Some argued in favor of such an inclusion to develop joint strategies. Others saw little use in this, and one farmer pointed out that retailers would always act according to their own interests (Fieldnotes, Workshop 3). The representative of a juice factory called out the "violent and cynical structures" of the market. The group had discussed how a drought causing crop failures may prove positive for pricing, and he exclaimed: "A good harvest is… bad. This is cynical!", for which farmer would wish for environmental disasters in order to keep the prices from dropping? (Fieldnotes, Workshop 3) With his indignation, he points the finger at how in the present food system, ecological sustainability and the survival of enterprises are constantly in danger of undermining one another.

At the same event, an apple grower problematized the usual procedure of calculating retail prices (ibid.). Organic farming is more cost-intensive due to several aspects such as lower yields per hectare, the need for more manual labor or scaling effects, as the organic food sector is smaller than its conventional counterpart (Field diary, 02.03.2022). Currently, retailers calculate retail prices by adding mark-ups relative to the purchase prices: the higher the purchase price for a kilo of produce, the more the retailer earns without having to do additional work. The apple grower claimed that this results in organic foods being disadvantaged. To show how this procedure of calculating prices is a result of active decisions guided by the logic of the market and not without alternative, he recalled how in the 1990s the *REWE*-store chain[9] deliberately forewent margins to establish their position in the organic food market. By not adding the usual mark-ups, they had aimed at becoming a market leader – a strategy they no longer pursue. He called for a different way of thinking among the buyers at the retail companies. But "all are trained according to the same pattern," he said and demanded: "market economy orientation must move toward responsible thinking." (Fieldnotes, Workshop 3) Antitrust laws prevented the participants from discussing the topic of pricing in more detail. These laws prohibit producers from directly or indirectly setting retail prices with retailers (Field diary 24.10.2019; Bundeskartellamt 2017). Those laws were never discussed in depth during the workshops, but when questions arose

9 REWE is the second largest food retailer in Germany, offering both conventional as well as a range of organically produced goods.

about pricing, participants were quick to remind others to be careful (Fieldnotes, Workshop 3, 6 or 9). Thus, those legal concerns hovered like a constant threat in the backs of the participants heads, potentially influencing the way they talked and what topics to avoid.

Others did not criticize structures as openly. One organic farmer argued: "Everyone must do their job. The buyers' job is to get the best quality at the best price. We have to counter this, and despite opposite interests, this can work with understanding and sympathy." (Fieldnotes, Workshop 6) Another farmer disagreed:

> "In fact, it is precisely these concepts of the past that have led to the problems of today – in agriculture but also in the environment. […] Yes, the system works like this, but our aspiration should be to move forward from here."

Later he went on to state: "Retail has an incredible amount of power", and "communication about the added value of organic products remains on the back burner". Therefore, retail must be part of the solution: "Our current crises are too big to take the time to convince 80 million consumers." Supermarket buyers, so this participant's assessment, were the ones who had to be convinced to communicate the linkages of organic foods to sustainable goals to consumers (ibid.). While he openly questioned the current structures, his proposed solution is still based on the idea that with the right information, it is up to consumers to accomplish sustainable foodways. Similarly, participants repeatedly argued in favor of integrating the ecological costs of modes of production that are not environmentally friendly in the retail prices (Fieldnotes, Workshop 2 & 4). With both strategies, the ability to act sustainably remains dependent on the consumers' financial resources; the concept of sustainability those solutions enact renders sustainability an endeavor one has to be able to afford. While participants argued fervently for those different solutions – educating retailers or questioning current economic practices and structures in general – their arguments congeal into an ambivalent assessment of the organic food market and possibility and necessity for changing it. Here, arguing about organic food turns into arguing about production and distribution contexts and the limits of communication.

The discussions revealed the complexity of implementing sustainable food industries. One manufacturer pointed to the downside of the institutionalization and regulation of organic practices through European Union law. These regulations concern everybody who wants to produce or trade organic food. They regulate what seeds, fertilizers, pest control or food additives are allowed and forbid genetically modified organisms. Other requirements concern soil fertility, biodiversity or animal welfare (EC 2018/848). Practices that go be-

yond those regulations usually cannot be communicated to consumers and made profitable as retail communication prioritizes price and organic labels. Thus, he argued: "Every form of creativity is prevented. If someone has a good idea that is not in the law, it cannot be implemented. Even if the new aspect is constructive and useful." (Fieldnotes, Workshop 3) This is the core issue of the attendees' discussions about sustainable food chains: in the context of a complex food market built on the idea that it is consumers' choices that accomplish sustainability, simple distinctions and information are needed to put them in the position to make such decisions. As our workshops show, practices of homogenization and simplifying are based in the separation of nonhuman entities – such as vegetables or fruits – from their situated origins (see also Maasen, Sutter & Trachte 2018, 185–186). Practices of certification help to enact those distinctions. But standardization also potentially hinders the implementation of more sustainable practices as it may be precisely those situated contexts on site that render products (un)sustainable. Without communicating such factors, one cannot make them profitable. In the current economic system, the implementation of sustainable practices in companies must be economically justifiable (Wiegand 2018, 44). "In capitalist farms, living things made within ecological process are coopted for the concentration of wealth" Anna Tsing argues, drawing attention to how the pursuit of sustainability is not the main goal of capitalist endeavors (2015, 62–63).

Those previous examples point to the emergent nature of sustainability. The question of what practices, products or substances are viewed as sustainable are constantly up for change, depending on short-term and long-term developments, the situation on site as well as the question of which factors are included in the calculations (see Meurer 2021). As the question of milk packaging shows, such diagnoses might not be transferable to a general, nationwide level: the authors of a study on the environmental impact of different packaging found that it is impossible to develop a model of a returnable system for UHT milk containers representing average German conditions. Their findings only apply to fresh milk (Kauertz et al. 2018, 165–166) – a limitation, that makes the complexity of generalized assessments of sustainability visible. To Anthropologists Marc Brightman and Jerome Lewis (2017, 27), sustainability is dependent on diversity, on a "pluriverse of multiple worlds [that] must be defended against the 'one world world' of pedlars of top-down development and outdated, ill-considered visions of 'progress.'" Such diversity is at stake in the present-day food markets that render situated differences invisible. If it is up to consumers to enforce sustainable practices through their shopping choices, the lack of information about the situational contexts that impact sustainability is a problem. Moreover: "How are consumers supposed to keep track? I don't

want to have to do a whole study to decide on a pack of eggs. And then I have to do the same at the meat counter and in the bakery. That way I will never be able to leave the store", as an egg farmer argued (Fieldnotes, Workshop 7). Retail prices – that were shown to be not just the result of more cost-intensive organic practices, but also of active decisions and routinized retail practices guided by the logic of the market – exclude people from lower income households from the organic food market. The inequality in negotiating prices along the chain thus reinforces the inequality of purchasing power within society.

In the web of interconnected factors and entities that make up organic food and supply chains, the characterization of practices, substances, or products as sustainable is always at stake. Once something has been identified as a sustainable option, this quality cannot simply be transferred across time and space into other contexts. Thus, this conceptualization of sustainability cannot only rely on generalized assessments but needs to take specific situational contexts into account. Tsing (2015, 62) argues that capitalism today "requires acts of translation across varied social and political spaces", framing translation as "the drawing of one world-making project into another". Regarding organic food chains, such translation becomes obvious: complex realities and situated practices that make up the organic products must be translated into simplified and recognizable labels and symbols. Tsing further argues that one main aim of supply chains is the translation of value between non capitalist and capitalist value systems to the benefit of dominant firms (ibid., 63). What comes to light in our workshops is the huge amount of context that gets lost in translation, making it impossible for consumers to consider all the aspects that make up a food to make a sustainable decision.

"Not everything is uniform, because that is not how nature works". Arguing for a more-than-human perspective

This section focusses on organic farms as places of clashing temporalities and logics, with natural agencies on the one side and marketing practices on the other jointly affecting the agricultural realities. Due to the power of retail companies in shaping shopping environments, prices, and product palettes, educating supermarket buyers was identified as necessary to render German food supply chains more sustainable. To this aim, the farmers' argued that communicating the reality of farming as highly dependent on nature was needed further along the supply chain. These narrations demonstrate an understanding of sustainability as more-than-human endeavor (see also Cielemęckac & Daigle 2019; Tschackert 2022, 15).

Our workshops were scheduled within a series of regularly held roundtables, brought into existence by an organic producer organization in the early

2010s. This format stemmed from the farmers' desire for being understood by others along to supply chain. As shown in the previous chapter, this goal was considered crucial for consumer communication and thus for the implementation of sustainable food industries in the current market system (Field diary, 20.07.2021). As shopping environments and product ranges impact consumer choices, retail decision makers need to be (made) aware of the advantages of organic production: "The ecological footprint and the protection of species in the context of organic agriculture" need to be emphasized (Fieldnotes, Workshop 1). Even though organic law and regulation affect all stages of the supply chain, the participants focused on pointing out advantages of organic farming. In so doing, they represent the farm as the focal point of discussions concerning the sustainability of organic food. The equation of organic food systems with organic agriculture is reenforced by marketing strategies that purposefully reduce food systems to farms, while other spatial contexts that are not considered to be as effective in marketing – such as logistics – deliberately remain invisible (Hering & Füller 2021, 342–343).

Farmers identified the effects of nonhuman entities on organically produced foods as a reality that needs to be communicated more effectively to further actors along the chain: "We are more dependent on nature than the conventional sector "(Fieldnotes, Workshop 9). The participants argued in favor of firsthand experience over pure information transfer: inviting other actors – especially retailers – to the farms and showing them the realities of their workdays would, so they hoped, impart knowledge through experience. It would make the realities of "seasonal impacts, weather dependencies, or crooked vegetables" tangible, as one attendee claimed, and it would show that "not everything is uniform, because that is not how nature works." (Fieldnotes, Workshop 6) Organic farmers thus depicted 'nature' as a powerful actor shaping their workdays, the food, and agricultural rhythms, thus needing to be viewed as an important factor within the whole supply chain.

This argument breaks with two modern ideas. It views nature as an actor that takes part in making up the world, including spheres we have come to think of as human domains such as economic markets (Gesing, Amelang, Flitner & Knecht 2019, 7–8). Further, it challenges the idea of nonhuman, natural entities as mere backdrops against which human activity takes place (Gibas, Pauknerová & Stella 2011, 10). Recent posthumanist scholarship has come to reject classic humanistic divisions that "draw a sharp distinction between humans as 'cultural' and 'active' and other living beings as 'natural' and 'passive'." (Langthaler 2021, 40) Those concepts consider human existence as deeply interwoven with other species and entities. Humanity as a species is not only highly dependent on nonhuman actors to survive; recent scholarship

regards modern anthropocentric narrations of human exceptionalism as vast simplifications, ignoring the agency and the constant co-becoming of nonhumans and humans (Fenske 2019, 177; van Dooren 2014, 293).

Mirroring such the debates, organic actors questioned anthropocentric framings of sustainability. One person pointed out how organic farming tackles species extinction, adding: "Compared to our problems with biodiversity, even climate change is a rather minor problem" (Fieldnotes, Workshop 6). As another actor stated in a different context, the consequences of climate change will affect the planet for an estimated one million years, while the loss of species through extinction will be evident for more than ten million years and thus long after humans have been living on this planet (Field diary, 22.11.2021).[10] Such a reframing introduces a concept of sustainability that depends on whose destinies are considered relevant and worthy of consideration. It points to the multitude of potential focus points, goals and consequences that can be put at the center of negotiation – deliberately including those that cannot be made profitable for humans. In this perspective, sustainability turns into sustainabilities: the sustainability of a given practice depends to a large extent on the actors that are considered in the assessment. The question we must then ask is: "Sustainable for whom?".

The question of whose agencies to consider was also discussed in regard to the impacts of 'natural' entities and processes on the quality of organic produce: The farmers depicted themselves as caught between the demands of 'their' livestock, plants, and agricultural rhythms, while also trying to fulfill the market's demands and schedules – a tension that often hinders sustainability. This became visible when the representatives of a group of organic farmers gave a talk at one workshop (Fieldnotes, Workshop 9). The talk critically reflected on prevailing quality criteria for potatoes. Those criteria result in excluding big amounts of potatoes from the food market (Fieldnotes, Workshop 9) – potentially leading to food waste (Hermsdorf, Rombach & Bitsch 2017, 2534).[11] The presenters argued for a reassessment of criteria that concern purely aesthetic features. During the discussion that followed the presentation, one farmer explained: "Such quality criteria primarily ensure that I do not include the crooked carrot [in the delivery to the next stage] in the first place, instead of risking that quality management might send it back." He added that due to the many stages along the chain there are many instances at which the actors

10 Climate change and mass extinction are closely interwoven phenomena, as the climate crisis is shown to also result in further species' extinction, see Thomas, Cameron & Green et al. 2004.

11 For an analysis of the relations of marketing standards, consumer expectations and food waste see Risius & Schneider 2021.

– farmers, packers, or processors – have to decide "whether one takes the risk that the next station might send the produce back" (Fieldnotes, Workshop 9). Here, Zsuzsa Gilles'(2012, 31) assessment that "the ability to shield oneself from risks and to increase another's exposure to them is a key source and result of power", rings true. This issue reveals how in the structures of today's food market, even actors who actively want to act more sustainably are potentially hindered from doing so. In this, an enabling factor appears to be the power imbalance from retailers to processors to farmers, that perpetuates rigid marketing standards.

By foregrounding nonhuman agency, farmers are akin to cultural and social scientists who view human culture as highly influenced by and dependent on nonhumans. In farming, the practitioners experience how what is generally called natural has been vastly manipulated by human practices and interests. (Organic) agriculture reveals just how impossible it is to distinguish nature and culture (Fenske & Peselmann 2021). Still, the producer group framed organic potatoes as "natural product" that is therefore "variable": in a cold and wet spring, potatoes might be planted two weeks later, have less time to grow and thus be smaller than usual. Weather, soils, the size and number of farms in a region, their ratio of direct marketing to selling to the retailers, as well as the number of harvested potatoes and their storage stability constitute components that "are composed anew every year", influencing the "available quantities in the market". None of these factors can be fully controlled or adhere perfectly to the market's schedules: "We plan of course, but it still remains seasonal dependent! It is just a plan. " (Fieldnotes, Workshop 9) In choosing to thoroughly explain the vagaries of organic farming to an audience mainly consisting of farmers familiar with the matter, the presenters at our workshop targeted retailers. They addressed retail's main interest in a reliable potato supply, using their economic concerns. This is one strategy the farmers employ to navigate this situation of unequal power and still strive for sustainability.

Market realities and nonhuman actors jointly affect agricultural practices. This is also visible in the customary rhythms in which farmers butcher their laying hens. When hens reach a year, they molt – they loose and regrow feathers as part of their life cycle. Just before molting, hens lay eggs with a thinner shell that cracks easily. While hens molt, they do not lay eggs at all. To avoid losing a productive stretch, most farmers butcher the hens before they reach a year. An actor narrated the case of an organic farmer who has three groups of hens. The first group would be butchered just after Christmas, the second group after Easter. That is due to the high demand for eggs for those holidays. The third group would be butchered right before the summer holidays, because of the very low demand for organic eggs during summer – those who can af-

ford to buy organic, often spend their holidays abroad (Field diary, 22. March 2021). Not only agricultural practices but also the lives and deaths of nonhumans are related to both multispecies and economic time frames.

As previously shown, temporal and spatial variability is enormously relevant in growing food sustainably, and it leaves a deep imprint on the produce itself. Yet in the food market, produce is expected to be quite uniform. Organic farming entails cooperation with the different rhythms that impact growth and ripening. Selling organic produce, however, entails negotiating with food retailers (represented by quality management) who base their practices on the idea that produce must meet the same criteria throughout the years – regardless of such situated differences. For organic farmers, such consistency over time is an illusion based on economic practices that have been decoupled from agricultural realities. By arguing in favor of taking differences into account, the presenters render organic food as a variable, temporalized entity that does not adhere to the market's standardized desires for uniformity, interchangeability, and consistency (see also Tsing 2015, 38–40).

These examples show the effects of nonhumans on organic practices and strives for sustainability: the weather, pests and the agencies of plants are incorporated in the product's aesthetic and taste as well as its availability. But the discussions also make clear that agricultural realities are highly influenced by the realities and logics of capitalist markets. Market and societal rhythms, expectations, and quality criteria as well as the agricultural and marketing structures on site jointly affect each other. When calling for a diversity perspective of sustainability, Brightman and Lewis (2017, 19) seek to take the plurality of actors, entities, situations, cultures, or economies into account, that impact the sustainability of practices, and ask us to diversify what counts as sustainable (ibid., 26–27). The farmers' narrations demonstrate such a perspective. They work with a more-than-human concept of sustainability that takes a variety of actors and entities into account. It also becomes obvious, how attempts to neatly separate and untangle those factors, sorting them into categories such as 'cultural', 'natural', 'agricultural', or 'economic' is a hopeless task (see Gesing et al. 2019). Nonetheless, framing some factors deliberately as natural holds the promise of making them appear as unchangeable and inherently good (Maasen et al. 2018, 184).

"African domestic poultry markets are collapsing". Organic supply chains in globalized capitalist markets

In the context of globalized markets, national food production can no longer be thought of outside a global context (Schmidt 2020, 175). International connections shape organic food supply chains, the actors working along it,

and thus also the workshops this paper draws on (Langthaler 2021). In several instances, the workshop attendees pointed to global connections and/or differences between the German situation and other countries regarding organic food. In this section, I trace the mentions of globalized markets in the fieldnotes of our project. I discuss how sustainability remains emergent in the interweaving of power imbalances and differing time frames along organic supply chains. These discussions point to the necessity of a concept of sustainability that takes global wealth gaps and power imbalances into account as well as the continuing consequences of colonial exploitation.

During our workshops, imported organic vegetables were repeatedly identified as an issue affecting German actors and their striving for sustainability. A complex web of ecological and social consequences of imported foods unfolds when looking at the debates around Egyptian new potatoes in German markets. One farmer portrayed the following recurring scenario: "We have great [German] potatoes in stock, but consumers buy Egyptian new potatoes" – despite their connection with "water scarcity and social ills", as another participant added (Fieldnotes, Workshop 9). Partly, this issue has been addressed by now. The buyer of one big organic food supermarket "ensured, that [they] no longer sell Egyptian new potatoes." (Fieldnotes, Workshop 6)

International connections were also discussed regarding migrant workers. Due to the concentration of work during harvest, farmers are dependent on additional labor for those limited time spans (Schmidt 2020, 128). Because of the precarity and low pay of such labor it is difficult to find workers in Germany. Thus, German farmers directly profit from the wealth gap in the EU when hiring seasonal workers – nowadays manly from East and Central Europe (ibid., 125–128). This is true also for the organic sector (Fieldnotes, Workshop 2). The precarity of the workers' situation was identified as an unsolved problem. Several organic actors founded a cooperative to render organic supply chains fairer – but so far, their agenda does not explicitly mention seasonal workers (Fieldnotes, Workshop 1; Field diary, 19.07.2022). During the lunchbreak at one of our events, the owner of the restaurant – an organic blueberry farmer – mentioned how this season, the harvest was so late in the year, that some of the seasonal workers went home before the picking was finished (Fieldnotes, Workshop 8). Her narration points to differing concepts of a 'season' that apply in this situation. While the farmer's season is more-than-human in nature, adhering to the time when the blueberries are ripe and ready to be harvested, the workers' seasons do not necessarily align with that time frame but are also dependent on their (work) life's rhythms at home (see also Peselmann 2021, 64–65).

The coexistence of different conceptions of season in the context of agriculture seems self-evident. But alternate concepts of season now coexist that have developed alongside these agricultural temporalities. They do not even have to be congruent in relation to the same food from the perspective of different human actors. A retail representative explained her company's seasonal planning: "We try to create a season schedule so that all actors know what is planned for the next season." This information is forwarded to the suppliers and then further on along the chain. She talked about the option of giving consumers additional information at the start or the end of a season: "For example, at the beginning of the season, organic lemons are a little greener, and then at the end of the season basically everything is ok." (Fieldnotes, Workshop 6) She puts the retailers' definition of the season at the center of the practices and rhythms of all the actors along the chain. In the context of globalized markets, German food retail companies are in the position to more or less simply inform other actors along the chain of their needs and these actors may or may not be able to actually decide whether they can adhere to it. Attendees repeatedly argued that depending on resources, not every actor is in the position to decline such selling options (Fieldnotes, Workshop 3). Using the notion of a season, the retailer draws on the connection between the time periods in which a food item is offered in the supermarket and the agricultural rhythms of planting and harvesting goods. The former might still vaguely adhere to the actual times of the respective produce being available from German farms, but the notion of seasons also points to the (growing) disconnection from these origins. Her use of lemons as an example – a fruit that Germany primarily imports from Spain and that is not cultivated in Germany (Backhaus-Cysyk 2020) – highlights the disconnections of retailers' seasons from domestic agricultural seasons.

Due to the globalization of (organic) food markets, the supermarket season of a given produce usually lasts longer than the domestic agricultural season.[12] Such differing concepts and realities of a season in different stages of the organic food supply chain appear to be crucial for upholding the power imbalance in the food chain. Global interconnections allow for a longer retail season, as the areas, from where agricultural seasons are incorporated, go far beyond national borders. As a consequence, retail is less dependent on domestic farmers' supply. However, recently, the farmers' investment in storage technologies have resulted in also stretching agricultural seasons. This investment was narrated as a deliberate reaction to the current market situation regarding the prevalence of Egyptian new potatoes (Fieldnotes, Workshop 9).

12 For reflections on the role of logistics in those redefinitions of seasons see Hering & Fülling 2021, 350–351.

Differing seasons shape and clearly relate to one another while also unfolding effects regarding their respective spheres of the supply chain – the farm in the case of agricultural season, retail in the case of the selling season. Seasons function as a way for retailers to structure their array of products that resonates back into agricultural practice. The interwovenness of these spheres indicates how agricultural rhythms themselves – even though framed as natural by the farmers – have incorporated societal and economic logics and expectations and thus cannot be fully grasped without taking globalized interconnections and prevailing power imbalances into account.

Global power imbalances and the wealth gap also became graspable during a discussion concerning specifics of raising male chicks. Within laying hen husbandry, male chicks used to be killed after they hatched as they do not lay eggs. But as of 2022, this practice is illegal in Germany (Bundesregierung 2021). One farmer asked whether it is true, that "the sister, the old laying hen, is exported to Africa as poor people's food?" He recalled a documentary about the severe consequences such exports have for farmers in the Global South: by "exporting the poultry that we don't want to eat here, African domestic poultry markets are collapsing, young people have no jobs". Another attendee stated that this was true for old conventional laying hens, "African local farmers don't even dare to keep their own chickens anymore." Old organically raised hens are more easily sold in the German market, "but the conventional old laying hen really goes super cheap to Africa." (Fieldnotes, Workshop 7) By considering how current economic practices harm people in the Global South, this debate frames organic agriculture as a bundle of practices not only striving for intergenerational sustainability, "where the current generation chooses to […] (sacrifice) her own benefits […] (for) considering future generations." (Shahen, Kotani & Saijo 2021, 1) By contrasting it with the exported conventional chickens, resulting in further exploitation of citizens of formerly colonized countries, organic supply chains appear to also render sustainability an intragenerational effort. Once again, this appears to be more a result of better marketing options rather than deliberate choices. Again, profitability impacts the sustainability of practices.

This farmer's distress in the face of profound debates and political decisions regarding the ban on chick-killing highlights the extent to which sustainability efforts not informed by postcolonial critique run the risk of making human suffering invisible and thus potentially enforcing it (see James & Tynes 2021; Davis, Moulton, Van Sant & Williams 2018; Folkers 2020, 594). In looking at these globalized connections, the danger becomes visible how efforts to attain sustainability rely on and reinforce global inequalities. These aspects need to be considered when aiming for more sustainable food systems.

Taking situational contexts, more-than-human entities, and intersecting inequalities into account: Emergent conceptualizations of sustainability

This paper illustrated how actors working along the German organic food chain negotiate sustainability in the context of capitalist markets. The characterization of this chain as 'German' is in itself a simplification. It conceals the multitude of global interconnections and dependencies in which German organic actors and their work is embedded. However, this simplification proved valuable to carve out parallel, partly overlapping or even conflicting concepts of sustainability. In foregrounding temporalities, the relations and interdependencies of human and more-than-human rhythms and practices could be made graspable, as they come together in the context of asymmetrical relations of power that impact organic supply chains – a power imbalance that they also reproduce.

When discussing the sustainability of the (organic) food market, the attendees reflected upon its (current) limitations: efforts toward environmental and social sustainability potentially undermine one other – as organic agriculture is dependent on precarious labor to remain profitable. An emphasis on regionality or avoidance of packaging may foster a waste of other resources. The goal to produce less food waste is hindered by prevailing marketing standards. All these instances show, how the implementation of more sustainable practices is prevented by the need to legitimate decisions with their profitability, by capitalist ideals of uniformity, homogeneity, and interchangeability, and by power imbalances that reenforce those ideas.

Still, many actors viewed sustainability as mainly to be achieved via consumers making conscious choices. The workshops can be read as situations in which different stakeholders negotiate possible and necessary food system transformations. The two main strands of the argument span along the question of the transformative potential of communication and those who need to be included in it. Those arguing in favor of enhanced – even more-than-human – communication of agricultural realities and organic values do so in line with the modes of operation of the current food system. They do not offer solutions for a better inclusion of so far excluded, exploited, or disadvantaged groups of people in Germany, East and Central Europe or the Global South – may they be consumers or workers. This group made up the majority of participants. To others, those structures themselves are violent, thus, they need to be overcome to achieve more sustainable food systems. To them, enhanced communication within the supply chain or towards consumers does not address the underlying problem.

Nevertheless, the attendees collectively negotiated different understandings of sustainability. In the course of this, sustainability was reimagined in three ways: First, it was grasped in regard to situational contexts, not only generalized abstractions. This way, sustainability can be seen as oscillating between an abstract level of causalities and interconnections (e.g. of transport routes, CO_2 emissions and the climate crisis) and situated actors and practices. Secondly, efforts towards sustainability need to include the agencies and fates of more-than-human entities. Drawing on this conceptualization, the lives of nonhuman others that cannot be made profitable will still be seen as worthy of consideration. And thirdly, the sustainability envisioned here includes disadvantaged, excluded, and exploited people within Germany and beyond. This is important for sustainability to not remain a project only of and for middle-class and wealthy people from the Global North.

Depending on whose fates are considered, the sustainability of a given practices varies. Sustainability cannot be viewed as an objective, extrinsic feature of a product such as organic food. But as Brightman and Lewis argue, "our collective actions have become a planetary force that is destabilizing the very life systems on which our future depends." Therefore we "must urgently formulate a more explicit project of transformation and transition." (2017, 27) The actors present at our workshops are envisioning such a project. Organic practices promise to be part of that transformation. But organic actors need to navigate a complex web of constraints in order to enact more sustainable foodways. Their debates show how pathways to enable a sustainable food economy are too complex to be adequately represented and implemented by just asking consumers to follow simple rules of thumb such as: 'buy local!', 'buy organic!', and 'avoid packaging!'

"Problems don't care about disciplinary boundaries" (Bendix 2020) and our project's transdisciplinary integration of different expertise proved valuable for generating a nuanced and comprehensive understanding of sustainability and it's (current) limitations. The economies provided an expertise regarding the realities of organic supply chains and the food sector, while the didactics added valuable competences regarding moderating and conceptualizing the workshops as a trusting, open environments. Our research greatly profited from the collaborative nature of our endeavor: working with an organic practitioner with his expertise and ability to launch events that bring together different voices from the organic food sector. Ethnographic methods allowed for the collection of rich, qualitative data that provided insights into the various actors, practices and logics that shape organic food chains. Further, a reflexive and critical cultural anthropological perspective

can contribute to a more critical and nuanced understanding of the way capitalism works in practice and can inform efforts to create more equitable and sustainable economic systems.

AUTHOR

Alexandra Hammer is a PhD student at the Institute of Cultural Anthropology/European Ethnology, Faculty of Humanities, University of Göttingen (Germany).
Affiliation: PhD student, Institute of Cultural Anthropology/European Ethnology, University of Göttingen, Germany

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