



**Roskilde
University**

Creating dialogues as a quiet revolution

exploring care with women in regenerative farming

Aare, Ane Kirstine; Umantseva, Anna; Sørensen, Laura Brandt

Published in:
Agriculture and Human Values

DOI:
[10.1007/s10460-024-10605-z](https://doi.org/10.1007/s10460-024-10605-z)

Publication date:
2024

Document Version
Publisher's PDF, also known as Version of record

Citation for published version (APA):
Aare, A. K., Umantseva, A., & Sørensen, L. B. (2024). Creating dialogues as a quiet revolution: exploring care with women in regenerative farming. *Agriculture and Human Values*, *Forthcoming*.
<https://doi.org/10.1007/s10460-024-10605-z>

General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain.
- You may freely distribute the URL identifying the publication in the public portal.

Take down policy

If you believe that this document breaches copyright please contact rucforsk@kb.dk providing details, and we will remove access to the work immediately and investigate your claim.



Creating dialogues as a quiet revolution: exploring care with women in regenerative farming

Ane Kirstine Aare¹ · Anna Umantseva¹ · Laura Brandt Sørensen¹

Accepted: 24 June 2024
© The Author(s) 2024

Abstract

Around the world, practitioners and academics are engaging in the rise of regenerative farming. On the margins of the predominant farming system, and often with little support and acknowledgement, regenerative farming is surprisingly persistent and represents a radical response to industrialization, ecological crises and alienation. This study uses feminist theories to grasp farmers' regenerative experiences and explores how dialogical methodologies can create collective thinking among farmers and between academia and practice. The study is based on dialogues and iterative writing between three female researchers and two female regenerative farmers in Denmark in which we explore regenerative farming practices, female perspectives, feminist (more-than-human) care, and the sustainability crises we are facing today and in the future. The exchange of thoughts provides insights into what it is to be human in farming, including more-than-human relationships, as well as reflections on composting as a reproductive practice, and the (quiet) revolutionary potential of regenerative farming. Thus, we experience how creating collective thinking about common concerns across academia and practice can entail feelings of being part of a community as well as involve actual consequences and risks. Finally, it reminds us that sharing fragility by laying bare our work (and thoughts) as both researchers and practitioners allows for careful dialogues and valuable insights.

Keywords Participatory research · Dialogical methods · Feminist theories · Regenerative farming · Care · More-than-human

Introduction: regenerative farming as a practical and epistemological concern

Despite advances in productivity in farming systems, Green Revolution logics and technologies have caused the huge depletion of soils around the world (UNCCD 2017; Veerman et al. 2020; IPCC 2022). To counteract this, regenerative farming seeks not merely to sustain, but to rebuild the foundations of farming by improving soil health (Moyer et al. 2020; Schreefel et al. 2020). Regenerative logics and practices echo the farming pioneers of bygone times, and their origin can be traced to indigenous knowledge and practices that have been marginalized through colonial territorial and cultural dispossession (Altieri 2004; Tittonell et al. 2022). However, in the last few decades regenerative farming has flourished in response to environmental and economic crises

and to the production-orientated farming and agro-industry (Newton et al. 2020; Siegfried 2020; Seymour and Connelly 2022). In a northern European country like Denmark, where 62% of the territorial land is used for agricultural production (Statistics Denmark 2020) which accounts for 24% of the total national greenhouse gas emissions (Dalgaard et al. 2011) regenerative farming is receiving increased attention. Radical change in the agrifood system is needed to counteract the negative effects of post WWII intensification and specialization of production, that have led to drastic biodiversity loss (Danish Biodiversity Council 2022), nitrogen leaching to surface waters (Kronvang et al. 2008), a decrease in soil carbon stocks (Adhikari et al. 2014), and very high debt and thus path dependency among farmers (Hansen 2019).

Many interpretations of regenerative farming exist side by side, since numerous different actors are increasingly interested in the concept, often with very different visions (Newton et al. 2020; Giller et al. 2021; Kallio and LaFleur 2023). The Rodale Institute, which originally used the term, summarizes regenerative farming as “working to achieve closed nutrient loops, reduction or elimination of biocidal

✉ Ane Kirstine Aare
akaare@ruc.dk

¹ Department of People and Technology, Roskilde University, Roskilde, Denmark

chemicals, greater crop and biological diversity, fewer annuals and more perennials, and practices that mimic natural ecological processes” (Moyer et al. 2020). Furthermore, in some interpretations, regenerative farming combines soil (or, more broadly, nature) restoration with a critical perspective on food production and the broader farming system (LaCanne and Lundgren 2018; Al-Kaisi and Lal 2020; Schreefel et al. 2020; Tittonell et al. 2022). This is done by also questioning the role and welfare of all actors in the farming system, the role of capitalism, and what knowledge is appreciated (Duncan et al. 2020). Thus, in its extensive interpretation, regenerative thinking and farming imply a radical systemic shift from current predominant farming practices, which focus on input-output cost calculations, to a broader understanding of a farming system that restores the wellbeing of all beings.

Regenerative agriculture (RA) has become an ambiguous discourse and practice used by actors who seemingly belong to opposite sides of the farming debates (Tittonell et al. 2022; Gordon et al. 2023). Food corporations are increasingly incorporating RA into their discourses as an add-on farming technique, without otherwise changing the productivist and industrialized basis of farming (Gordon et al. 2023). Gordon et al. (2023) detail a variety of regenerative agriculture discourses and their levels of departure from the status quo, ranging from merely a new technique of on-farm management to “regenerative cultures” including more equitable value chains and farm labor, and more radical socio-political transformations (food sovereignty and agroecology). With this variety of conflicting discourses and a rapidly changing landscape of what regenerative agriculture is and will become, this paper intends to contribute to exploring how RA can be more than merely a technical change; it can be a transformative movement by the application of collective and relational thinking. Regenerative farming is thus both a practical and ethical ontological and epistemological exercise (Gibbons 2020; Newton et al. 2020; Egmosen et al. 2021). Hence by paving the way for new paradigms, regenerative farming cannot be reduced to a set of farming practices, but involves new ways of relating – in nature, in the economic system and in human collectives (Leitheiser et al. 2022).

Relational thinking in agricultural studies has developed in the conjunction of feminist theory and posthuman studies as a theoretical and critical reflection on the sustainability crisis by introducing concepts such as more-than-human relations and ethics of care (Tsing 2015; Haraway 2016; Puig de la Bellacasa 2017; Beacham 2018; Hassink et al. 2020; Seymour and Connelly 2022). More-than-human ethics of care rejects an anthropocentric and human-centered perspective by exploring relations between humans and more-than-humans (such as plants, soils, animals and ecosystems). The recognition of such interconnectedness allows an exploration

of a multiplicity of embodied, affective and situated relations. This perspective provides a radical counterposition to the perspective embedded in the industrialization of farming where humans are perceived as superiors controlling and manipulating eco-systems (Gilson 2015). Perceiving positions and agency differently allows for new ways of understanding and engaging in farming systems, for researchers and practitioners alike.

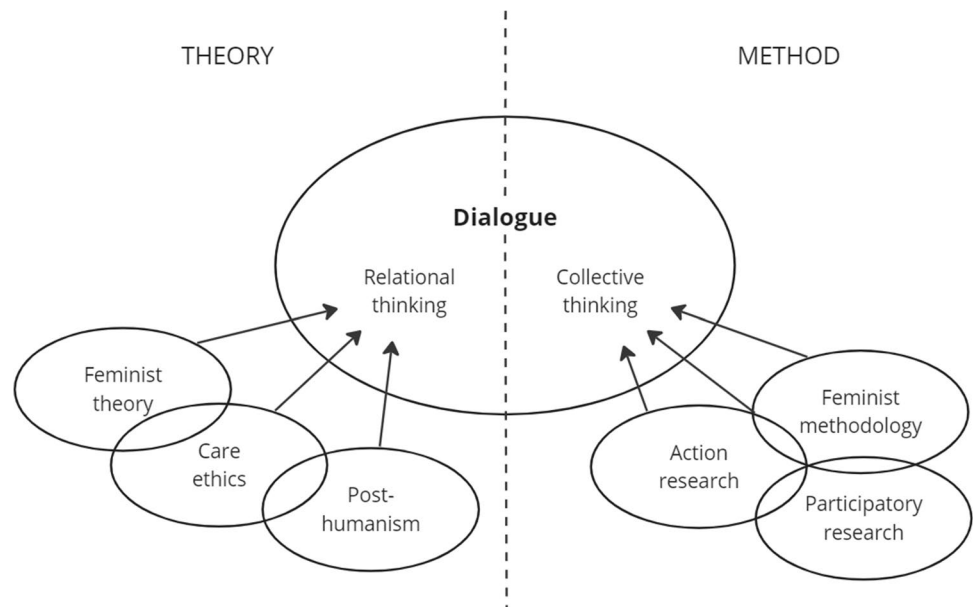
Apart from looking towards relational ontologies, we situate this article within a broader tradition of feminist theory addressing questions of care and social reproduction as undervalued labor (Bauhardt 2018). According to the feminist thinker Vandana Shiva, farming has been historically constructed as a male-dominated, patriarchal activity, often devaluing and invisibilizing the crucial role of women’s knowledges and labor (Shiva 2009, 2013). Studies in certain parts of the world, especially in developing countries, show a trend of “feminization of agriculture” – women engaging more in agricultural labor or becoming farm managers for a variety of reasons, such as male labor outmigration to urban areas with women taking up the roles in farming previously performed by men (Kawarazuka et al. 2022). Despite this acknowledgement, women’s agricultural labor, as well as farming practices and mindsets traditionally considered “female”, such as care and reproductive activities, often remain marginalized in theory and practice (Shiva 2013).

In European countries, the number of women in farming has slowly been increasing in recent years, however the differences between countries are significant. The number of farms managed by women range from 45% in Latvia and Lithuania to 5–8% in Denmark, Malta and the Netherlands (European Commission 2021). In Denmark in 2020, only 5% of the land belonged to farms owned by female farmers, and women-owned farms are significantly smaller in size than male-owned ones (Statistics Denmark 2021).

As regenerative farming contests the societal structure of current farming systems, we suggest that understanding and co-creating transitions towards more caring and reciprocal relations between humans and more-than-humans needs to go hand in hand with addressing issues of patriarchy, capitalist orientation, individualism and colonial epistemic injustices as these issues create conditions for the hierarchization and exploitation of care and reproduction (of humans and more-than-humans) (Trevilla Espinal et al. 2021). By combining diverse strands of feminist theory, including more-than human care, feminist economy and ecofeminism, we explore the conditions for careful farming practices, and thus contribute to the growing field of exploring how people live with, negotiate with and relate to the practices of regenerative farming.

In the following sections, this paper will (1) Present the conceptual framework that builds on intersections of feminist theories, more-than-human thinking and collective

Fig. 1 Conceptual framework for the use of dialogue in the study. Dialogue includes both the methodological (collective thinking) and theoretical (relational thinking) approach applied. The dialogical approaches draw on inspiration from different theoretical and methodological traditions



organizing as a way towards transformative change. (2) Detail the methodological steps of building a dialogue between researchers and regenerative farmers. (3) Introduce the analysis structured around three interrelated themes. (4) And, finally, in a discussion and conclusion section, reflect on the vulnerabilities of the process of creating collective thinking as well as the potential of this conceptual and methodological approach to build pathways towards transformative regenerative thinking.

Building dialogue as a conceptual framework

Applying relational thinking as well as feminist perspectives to the farming system implies a critical view of the role of researchers and preconditions for knowledge creation. Regenerative farming thus also requires renewed relations between research and practice. Action research, participatory research, feminist research, etc. represent research approaches that incorporate different ways of knowing into the research. The arguments range from grasping complexities, including diversity of knowledge (embodied, experienced, informal, etc.), supporting transitions, as well as democratization and empowerment (Naples 2007; Egmore et al. 2022). However, in reality, the knowledge produced within research processes is often formulated and passed on through texts written by academics (Phillips et al. 2021, 2022a). As the interpretation and presentation involve mechanisms of exclusion and inclusion of knowledge, such research processes involve power imbalances. Researchers have tried to compensate for such unequal power relations by, for example, involving practitioners in defining

or criticizing the research process (Naples 2007; Phillips et al. 2021) or by using non-traditional academic formats for presenting research outputs such as autoethnography (Phillips et al. 2022a, b), co-writing (Raider-Roth et al. 2019), or dialogues between researchers to demystify partial and situated knowledge construction pathways (Van de Pavert and Ressorio 2023). Building on these traditions and concerns, we wanted to create dialogues with farmers in which they could participate in analyzing their own situation and thoughts. This means that the term *dialogue* has a double connotation in the study as presented in Fig. 1. It refers both to the epistemological exercise of collective knowledge creation (the methodological approach) and to the ontological perception of dialogical relations between human and more-than-humans in farming (the theoretical lenses).

In the following we will introduce the two strands of the conceptual framework as both a theoretical and methodological approach.

Framing care and social reproduction within feminist political economy, ecofeminism, and ethics of care

Care and social reproduction are central concepts in several strands of feminist scholarship. This section delves into the convergence and divergence of these notions within feminist political economy, ecofeminism, ethics of care and the evolving discourse of more-than-human care. While care, reproduction and more-than-human care arise from distinct theoretical frameworks, they intersect in ways that invite critical exploration.

Emerging out of broader feminist and post-human studies, the concept of more-than-human care acknowledges

that care extends beyond the human realm. This perspective recognizes the agency and value of more-than-human entities. More-than-human care thus challenges the binary separation between humans and nature, advocating for an ethic of coexistence and mutual care. It converges with the feminist understanding of care by reinforcing the importance of empathy, relationality and interconnectedness. Maria Puig de la Bellacasa has played a significant role in introducing the “ecological turn” into care conceptualization (Puig de la Bellacasa 2012, 2015, 2017). Taking up Joan Tronto’s (1993) conceptualization of care as “species activity that includes everything we do to maintain, continue and repair our world”, and combining it with readings of the post-human thinkers Latour (2007) and Haraway (2013), Puig de la Bellacasa (2017) explores questions of what it means to care in the context of the more-than-human world. She notes that “care is human trouble, but this does not make of care a human-only matter” (ibid., p. 2). In her reading, she goes beyond perceiving care as a normative stand encouraging humans to care for the more-than-human nature. Rather, she understands care as an ontological condition of being in a relational world, and hence care is unavoidable. The question is then: How can we care? From the more-than-human perspective, care turns into a search for ability and autonomy in the other (Schrader 2015) and a way to learn to recognize “multiple needs and agencies without submitting to desire for control” (Bresnihan 2020).

The feminist approach of more-than-human care seeks to zoom in on, re-discover and re-imagine how people relate to nature, and how cultivating and exploring these relations is key to renewing mindsets and paradigms for a sustainable world. For example, Krzywoszynska (Krzywoszynska 2019) shows how farmers’ “attentiveness” to soil through embodied and cognitive practice restores soil biota, but also makes farmers vulnerable within farming systems where soil care is not rewarded or considered a valuable part of food production. Other researchers (Kimmerer 2013; Barnett 2023) link care in human-nature relations to traditional indigenous knowledges, where relations between people and their environment are perceived as a matter of “reciprocity”, as the Earth is perceived as a gift that allows us to live with it and requires us to give back.

In feminist political economy, care and reproduction are also focal points as they shape the dynamics of labor, economy and power. Care work, predominantly performed by women, forms the foundation of social reproduction, maintaining economic systems and societal structures (Bauhardt 2018). This perspective highlights the invisible labor that sustains societies and economies, and emphasizes the gendered inequalities that persist through the division of labor.

The feminist political economy’s emphasis on the undervaluation of care labor resonates with the ecofeminist critique of the exploitation of both women and the environment.

The fusion of these concepts highlights the systemic underpinnings of socio-ecological injustices and offers an analysis of the intertwined struggles for gender equity and ecological justice. At the same time, ecofeminism is often criticized for essentializing women by saying that women are more closely connected to nature, thereby feeding into patriarchal assumptions about women as less rational, more emotional and closer to nature than men (Bauhardt 2018). However, the contributions of ecofeminism cannot be limited to comparing women and nature. As Bauhardt (Bauhardt 2018) suggests, ecofeminism points to how social and ecological reproduction (caring for humans and more-than-humans to sustain life) are “at the same time a relationship of labour and exploitation and a source for creating bonds with the material foundations of life” (p. 32). This resonates with feminist calls (feminist ecology and feminist economies) for the need to re-think economics in terms of “caring economies”, where reproduction (activities of sustaining, restoring and regenerating human and more-than-human lives) becomes the primary principle (Biesecker and Hofmeister 2010; Biesecker and von Winterfeld 2018).

Collective thinking as a way of organizing?

Various strands of feminist theories perceive processes of social change as a collective endeavor opposed to individualized paths based on “rational choice theory and a Homo economicus conception of what it means to be human” (García-López et al. 2021). This is reflected, for instance, in the interpretation of commoning as “maintaining relationships between human and non-human communities” (ibid, p. 1201) to sustain social and environmental reproduction. New ways of relating between humans can occur in gifting or communal management of resources, including taking care of surpluses, waste, etc. (Beacham 2018; Jones 2019). Collectivity thus becomes a feminist way of organizing, as opposed to approaches that begin with the unified, individualized, rational and Anthropocentric perspective. This is what Anna Tsing calls *contras* to the unified continuity of Man (Tsing 2016). Through her work, Anna Tsing discovers that the critical perspective of the Anthropocene has drawn scientists, artists, philosophers and anthropologists into conversations on the heterogenic relationships between beings (human and more-than-human). Thus, if we perceive regenerative thinking as radically different to industrial-productivist ideas, new discourses need to be made by sharing personal perspectives and stories, and by engaging in collective learning between different experiences and perspectives (Gordon et al. 2021). According to Bastian et al. (2016), there is a need to bring together and explore linkages between the emerging more-than-human approaches and more established fields of participatory research because both approaches are interested in developing methods that

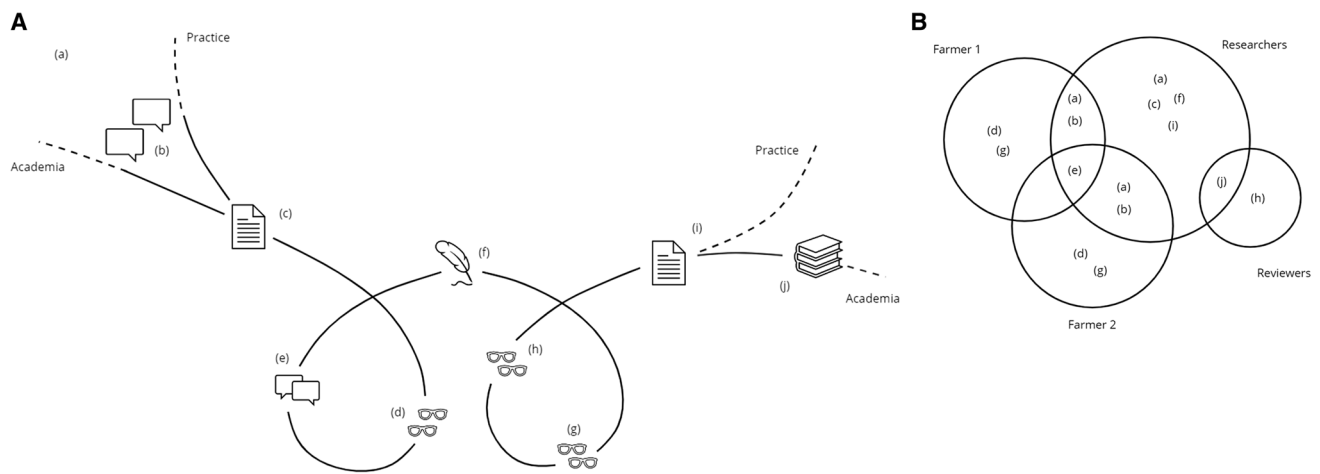


Fig. 2 **A** Illustration of the methodological process of dialogue applied in this study: (a) prior talks between research and farmers, (b) individual farmer interviews, (c) researcher analysis, (d) farmers reading (e) collective discussion, (f) revision, (g) farmers reading, (h)

reviews, (i) revision and (j) publication. **B** Illustration of actors (farmers, researchers, and reviewers) involved in the events of the dialogue (a–j)

can give voice to those excluded from dominant knowledge production. In the ethnographic tradition of Science and Technology Studies (STS), the inclusion of non-human actors as informants would have been one way to approach this ambition. However, in the present case we use post-human thinking to unfold the farmers' own interpretation of the relations and care at stake in regenerative farming. The methodology applied in this study thus seeks to explore ways to create shared subjectivities between female farmers and female researchers who share an interest in regenerative thinking and farming. Following ideas of relationality and feminist care ethics, we wanted to integrate these ambitions into the methodology of the study, and in this way enact a thinking-with-care approach through the analysis and writing process.

Methods: finding careful ways to explore regenerative farming and collective thinking

This study arose, firstly, out of our (researchers) own curiosity about the potential of feminist theories to grasp farmers' regenerative farming experiences and, secondly, out of an interest in exploring methodologies to create collective thinking.

The use of participatory approaches in studies on agricultural transitions has drastically increased in recent years. Considerable focus is placed on co-learning about sustainable practices and on solutions to existing unsustainable practices and systems through experimentation and innovation (see e.g. Frank et al. 2022). However, the participation of actors is used to a lesser extent as a tool to understand the perspectives and experiences of working in new ways.

We argue that more ambitious participatory methodologies are needed to contribute to the radical transformation that is suggested in regenerative farming and thinking.

The ambition behind this study was to use academic theories and interpretations as a platform to improve the understanding of being in regenerative farming – for researchers as well as farmers. Collective thinking thus refers to the *process of dialogue* as much as to the final product (the analysis).

We have drawn inspiration from other attempts to go beyond mere interviews by e.g. illustrate the reflexive dialogue among researchers (see e.g. Van de Pavert and Resiore 2023) and represent practitioners' response to academic analyses (see e.g. Aare et al. 2020). However, we did not find an approach that was consistent enough with the dialogical ambition in this study, so we exploratively developed the following methodological approach (Fig. 2).

The study builds on dialogues involving two female farmers, Sidsel and Marianne¹, and three female researchers, Ane, Anna and Laura. The two farmers were acquaintances from previous participatory research and networking in the regenerative farming community. Initiating this study stemmed from conversations with the two farmers and among the three researchers prior to the actual empirical collection (a).

We had our first dialogue with Sidsel and Marianne in spring/summer 2022 at the respective farms where they were then working (b). The dialogues were held with Ane, lasted

¹ One of the farmers expressed a desire to remain anonymous in the study. She chose the name Marianne as her alias, while Sidsel used her own name.

between one hour and 90 min, and were loosely structured around two main questions: What does it mean for you to work with regenerative farming? and What is it like being a female in it? The ambition of presenting quite open questions was to allow the farmers' lived experience and engagement to guide the study (Naples 2007).

After the initial dialogues with the farmers, the researchers combined the experiences and thoughts articulated by the farmers with feminist theories into a first draft of an analysis (c). We followed an abductive approach as our primary analytical strategy, going back and forth between the data and the theory, between shaping conceptual and empirical themes (Timmermans and Tavory 2022). In Western scholarship, the theories or philosophical approaches presented above are relatively new, and can often be interpreted as unconventional from the perspective of what are considered to be more established scientific approaches (Kimmerer 2013). Hence, for us, applying these theories to analyze the real-life practice of farmers without engaging them in the analysis seemed like a one-sided practice where participants most probably have not heard of these theories. Hence, we intended to familiarize the farmers with the theories, as well as present the narrative we produced using these theories to interpret their practices in order to make the knowledge production more equitable and dialogical. Therefore, theoretical concepts were (and still are in this final version) explained in the analysis (rather than solely in the theoretical chapter), to make the thoughts explicit for farmers in the iterative work with the analysis.

The draft of the analysis was sent to the farmers (d) with the aim of initiating a co-writing process. However, we (researchers) realized that finding the time, inclination and courage to engage in writing or editing an academic text was not an option immediately open to the farmers. Instead, we arranged an online meeting to discuss the text (e). The collective meeting allowed us to discuss the concrete analysis (enabling us to rewrite the final analysis (f), as presented below), as well as hear about the farmers' experiences of being portrayed through the analysis (presented in the discussion).

The final version was sent to the farmers for their last comments (g) and they were asked whether they would like to co-author the publication. After this feedback, the paper was sent to the journal and the responses from the reviewers were received as a further dialogue among researchers (h), leading to the final revisions by researchers (i) and publication (j).

Presentation of the farmers and researchers

In feminist political economy, care is traditionally seen as a gendered activity. Although feminist more-than-human care builds on decades of feminist scholarship, it tends to distance

care from its gendered version, viewing practices of care as anything that has to do with reproducing and supporting life. Nevertheless, for the dialogues we chose to invite two *female* farmers who practice (in different ways and to differing degrees) regenerative farming. On the one hand, the values and practices of regenerative farming resonate with feminist thinking, such as the idea of interdependent relationships, collective living and care practices, which do not necessarily have a pronounced gender dimension. On the other, regenerative farming, at least in Denmark, seems to have a significant representation of female participants, something that cannot be observed in the general landscape of farming. Hence, the discussion about how feminist theories relate to the gender dimension, and if they are necessarily interconnected, is an open question in this research. Finally, the study questions whether the collective experiences of being females engaging in patriarchal world structures might increase our ability to address the lack of caring and reciprocity in both farming and academia. The study thus also explores how gendered collective experiences create the basis for an interesting discussion about regeneration and (more-than-human) care.

The two farmers engage in regenerative practices on two very different farms. Marianne runs a 400 hectare farm in Jutland using principles from conservation agriculture and regenerative agriculture. She sells her produce to wholesalers, but is also experimenting with niche products sold through minor sale channels. She owns the farm and has one employee and one trainee. Sidsel was on a small organic farm in the middle of Zealand. Recently one hectare was converted to a market garden, which is run by a company partly owned by restaurants in Copenhagen to produce fresh and local vegetables for them and other restaurants. Two or three people are hired to manage the farm with help from voluntary workers.

The first time the researchers and farmers met (d), the two farmers introduced themselves to each other and to us as researchers. This is how the two farmers presented themselves:

Marianne: “Well, I run my father’s farm and actually also my mother’s. I started in 2016. Actually, it wasn’t always on the cards, but I’m an only child and if I wanted to stay here on the farm then I had to figure out how myself. It’s a conventional pig farm. Or it was until 10 years ago. And well, it’s probably 4–5 years ago that I really started to take an interest in regenerative farming because I met Jill Clapperton, an American researcher who has a global network, and she has really tried a lot of things. [...] And I have to admit that it was all-encompassing when we first started to take an interest in this. After all, it’s not small things that you need to be able to do in order to move in a

more sustainable and regenerative direction. But it's just so interesting that I can't really help it either. I can also feel a little frustrated sometimes because I think my progress is a little slow, but that's just the way it is. Because I still use pesticides. So I'm not organic. There's still a long way to go. So I run an arable farm, a semi-large one, or even quite large if it has to be done regeneratively. I have 400 hectares. And there are advantages and disadvantages to that. But you are always allowed to take a piece of land where you do something on a small scale. So I try to find time for that, but sometimes the time is a bit snatched, I must admit."

Sidsel *"I wasn't supposed to be a farmer either. I grew up in Copenhagen and have been around for a while. I've been very interested in education, democratic education and green education, and by that detour I was involved in a project in Lolland, which is about starting a folk high school that also deals with farming. And I came across the all-time eco-feminist Vandana Shiva and saw some films about seeds and so began to get drawn into that world, i.e. more from a political perspective. That was my starting point, I think. And then because of the things I found exciting about education and pedagogy and 'dannelse', it only becomes really exciting when it is about moving something in the world, when it is connected to something in practice. So it makes a lot of sense for me to link farming and education together. And then I went to a farming school in Norway for two years and have been part of running a small vegetable production operation last year by the skin of our teeth. And now I've just moved from Fejø to Lolland, and I'm sitting right now looking at the hectare of land that comes with the folk high school in Søllested. But right now I am mostly head of the secretariat and therefore have a lot of administrative work. So I mostly look at that field while I'm sending emails and stuff, but hopefully in a year I'll be out there rooting around in the soil."*

As researchers, we initiated this study out of a common interest in regenerative farming and feminist theories. However, like the farmers, we also bring different personal and professional perspectives to the dialogue.

Anna is a cultural anthropologist whose research and teaching focuses on civil society-driven eco-social transitions. Her interdisciplinary research interests are regenerative trends in farming, community economies, feminist epistemologies, and epistemologies of the South. She is interested in the dynamics of knowledge co-production, and understanding how engaging with a plurality of knowledges can contribute to eco-social transitions.

Laura is a social scientist within the research field of sustainable food and farming systems. She is working with research questions concerning food anthropology, agrifood education, and relational approaches to sustainable and systemic transformations. She is especially interested in how knowledge is constructed and focuses on posthuman onto-epistemologies, more-than-human relationality, and the role of care, values and embodied experiences.

Ane is a trained environmental planner who is engaged in research questions regarding the transition towards regenerative farming practices. She is concerned about the divergent perspectives, needs, and dreams among different actors within transition processes, especially those of farmers. Her concern about the experiences and roles of farmers in such processes has led to an increased focus on different kinds of knowledge (embodied, tacit, etc.) as well as the plurality of drivers for change, including non-economic ones (care, justice, etc.).

Below we present the analysis that was adapted following the second dialogue with the two farmers.

Analysis: combining regenerative and feminist experiences and thoughts

The analysis is structured into four overall themes that aim to create collective thoughts on dimensions of regenerative farming practices and care theory. The themes are "Being human in farming: making affective engagements in farming visible", "More-than-human relationships in farming", and "Composting as a reproductive practice".

Being human in farming: making affective engagements in farming visible

One thing that was emphasized in the dialogue with the farmers was the importance of "being human" in farming. The urgency of this need seems to be a consequence of a collective experience of *not* being able to be human in today's farming system, which is shaped by an industry that builds on control, productivity, efficiency and profit. Both Sidsel and Marianne express a longing for change, which includes more room for the unmeasurable aspects of farming practice, such as caring and nurturing.

"I have thought a lot about how our economy is organized. Structurally, we value systems that provide profit and systems where we can extract value. Some of the things we are about to do differently in farming are some of the things that are difficult to measure: which is to make agriculture a more comfortable place to be human, the landscape more pleasant to be in, the country more inviting, and to invest in some of the changes

in practice whose effects you cannot measure the next year, soil fertility. And I definitely associate that with something more feminine.” Sidsel.

“I don’t know where that wanting to change comes from, but I think it’s the female aspect of caring. That wanting to nurture. In any case, it’s deep within me. But it is of course individual.” Marianne.

In these quotes, “being human” is related to societal values, but also to a “female” way of being. At the same time, Marianne indicates that “wanting to nurture” might also be an individual characteristic rather than something she has because of her gender. In our follow-up dialogue, Marianne adds to this perspective by referring to a group of *male* farmers who meet regularly to share knowledge about healthier soils and plants. In the end she says: *“Of course, I haven’t asked them what their motives are, whether they are the same as mine”* (Marianne). Sidsel agrees that regenerative farming does not necessarily only appeal to a specific gender. However, she points towards a particular demographic group that has been attracted to regenerative farming in recent years: *“They come from one of the bigger cities, have studied something at university, and have become frustrated. And I think maybe there is a preponderance of women in these environments”* (Sidsel).

Being a human in farming for Marianne and Sidsel also involves emotions and affection. Both emphasize experiencing exhaustion (physical and emotional) and vulnerability. Marianne, for example, talks about how practicing regenerative techniques makes her vulnerable because she deviates from what is considered the norm. Here Marianne refers to judgment from other farmers because her fields look different from conventional fields, as well as a lack of understanding from her employees. Sidsel in turn talks about how farming in general is hard and exhausting because of the small financial margins. Hence, engaging in caring practices, including the emotional engagement that comes with it, while at the same time thinking about financial survival, is draining.

“Actually, I just want to enjoy myself. I really like growing vegetables, I love it, I really like taking care of animals, I love it, but I think it’s hard that the conditions are so strained. You think about efficiency all the time and whether you make enough money. It takes up so much mental space. And that’s no fun.” Sidsel.

These accounts provoke several reflections. Affection and emotions, such as “joy”, “love” or “distress”, are rarely addressed in farming and sustainability research. In the literature, the affective dimension and emotional engagement are often linked to individual motivation or values (Alrøe et al. 2017). Thus, in an educational course on eco-justice, Walsh et al. (2020) identify “love” as a competence. They

argue that love, and relating through love, is the basis for establishing meaningful relationships with others (both human beings and other beings, such as animals, plants, soil, etc.). Here, love and relating through love give access to alternative perspectives that cultivate a renewed sense of intimacy with nature. They suggest that “love” can be a skill of extending and receiving care for more-than-human beings that fosters reciprocity and co-creation of meaning, which is important in developing sustainable and alternative farming systems. When Sidsel uses the term “love”, it is not necessarily in its literal sense; it might refer to extending and receiving care from growing vegetables and interacting with animals (Kimmerer 2013; Van de Pavert and Ressorio 2023). To Sidsel, loving and caring are not an added value, but a prerequisite for her doings, thus challenging the idea of work as a primarily rational activity for subsistence:

“[...] when I have to find something I want to do, I have to actually like it. And also on a somewhat philosophical, poetic level. It’s just such a big part of me that I can’t do anything every day if I don’t feel like it. That is, if I don’t have feelings for it.” Sidsel.

“Being human” in farming thus involves feeling a connection between one’s practice and belief. Recognizing this perspective in the context of farming might reveal or even invite new conversations about how we would like to produce food in future. However, Sidsel explains that she avoids talking a lot about the affective dimensions of farming out of fear that her colleagues do not think she is suited to a leading position on a farm or in a school. However, when she does articulate affection, she often finds that she delegitimizes herself to avoid others doing it. This is something that she finds quite problematic:

“It’s a problem because we measure the success of a farm by very few parameters, and none of the parameters are the welfare of those who are on the farm, either animals or people, right? There are plenty of successful farms where people do not have a great time, and there are plenty of unsuccessful farms where people have a great time.” Sidsel.

“While we can’t talk about feelings, while we can’t talk about what kind of everyday life people have, what kind of stress you live with [...] then it will never ever be an important bottom line to assess how successful a farm is. And then I don’t believe that it will get any better.” Sidsel.

Following feminist economy scholars, exhaustion resonates with devalued care work (Federici 2020). This means that care becomes exhaustive, and even oppressive, if not recognized and accounted for at the structural level and through societal awareness. Puig de la Bellacasa (2012) argues that care practices in relation to sustainability are an

ethical (and political) concern that emphasizes the issues of devaluated labor, other living beings, and an urgent need to recognize the “inevitable interdependency essential to the reliant and vulnerable beings that we are” (p. 198).

Marianne and Sidsel both recognize the need and experiences of interdependency between human beings and more-than-human beings (soil, plants, animals, etc.). Marianne explains how she experienced interdependency and vulnerability in her own life:

“One of our children has had an intestinal disease, which they [doctors] say is chronic. Now she’s healthy because she made some changes [in her diet]. In this process, I read a lot about nutrition and recognized the responsibility we have. I took it seriously, regarding my responsibility as a farmer in terms of what kind of products are passed on to animals and people. If we are to make good fodder and food, we must learn to work with the soil.” Marianne.

This reflection pinpoints the interdependency between healthy soil and human health, but also reveals the lived experiences of being a mother with a sick child. In this way, the example illustrates how farming also involves being a human beyond a profession, extending it to family life and society in general.

Thus “being human” in farming questions our understanding of what is included and excluded in farming practice. Sidsel and Marianne exemplify in different ways how being a farmer is not solely a professional act of running a business or producing food, but involves situated experiences and interrelatedness that embed emotional experiences.

Relationships in regenerative farming

What makes regenerative farming or rather regenerative thinking resonate with the care approach is the focus on relationships as a fundamental element of wellbeing and sustainability. Adeline Johns-Putra, among other thinkers, suggests relating care and the environmental crisis by re-acknowledging the collectiveness, dependency and responsibility in a world where human beings live together with other living beings (Johns-Putra 2013). Yet how do we relate to what we do (e.g. the farm, farming, being a farmer)? How do we relate to other living beings in the food-production process (close by or at a distance)? And how do we create a relationship with a plant?

As became evident when talking to both farmers, regenerative thinking entails a move away from focusing on crops to being concerned about the soil as a complex web of living and non-living elements. This increases the number of more-than-human actors involved in farming, and thereby the complexity and collectivity (Puig de la Bellacasa 2017).

Both farmers reflect on how they can support the different actors in the soil food web, for example by creating conditions for the plant to be an active agent. Marianne explains that changing her way of fertilizing the plant allows it to be more selective in how it absorbs its nutrients.

“Like spoon-feeding. The thing about feeding a little bit at a time. It is much more adapted, whereas if we come with everything [all at once] [...] these are some huge meals. And the plant can’t choose whether to absorb it or not.” Marianne.

Sidsel, in turn, talks about farming as a dialogical relationship, and the importance of accepting the lack of human control over all the factors involved in farming:

“(F)arming is fun because it’s a dialogue. You do something and then it comes back somehow. It’s not like typing on a computer. There is something that is out of control: the weather and all sorts of things. It’s pretty crazy to farm. I like that. And I think that’s also healthy to practice –losing control a little.” Sidsel.

Both farmers thus portray the farmer as part of an interconnected system responding, providing and supporting, rather than mastering nature or food production (Plumwood 1994). As Marianne explains:

“So this whole way of thinking that if we can [...] shift the plant’s ability to defend itself [...] If you really have a good microbial turnover, diversity and all that, then I actually think the system can do it by itself, but until you get there I think it will be wise to introduce some tricks to just to help it over, so that you help the plant strengthen itself until it has established that good collaboration with the entire microbial life.” Marianne.

The idea of “helping the plant to strengthen itself” is a good example of a reciprocal relationship and integration of the farmer as an actor in the soil food web. Marianne assists the plants that help themselves establish a good collaboration with the entire microbial life, which provides “good” soil to grow healthy crops for her, her children and others. However, such a collaboration can be challenging:

“It requires huge work with myself, which is partly about becoming good at listening and using my attention, and when something goes wrong – or how should I put it? Yes, then, it’s about the fact that we haven’t found the right rhythm together.” Sidsel.

Regenerative farming thus requires new ways of knowing and learning, as well as unlearning *with* farming, in more-than-human relationships. To Sidsel, this involves going beyond theoretical quantifiable knowledge and using one’s senses, what she calls a “peasant sense”.

"It is some of the things we also need to do as farmers; insist that there are other ways of perceiving the soil which are legitimate. Other than just getting soil tests done and getting some numbers back or looking at some research and doing it like the research says. [...] Other methods that are less tangible, quantifiable, and much more complex. That makes it really fun because you can get much better at it, and suddenly you're able to understand some things and sense some things that were inaccessible to you before, because you've learned to know the soil and learned to know your field." Sidsel.

However, learning through new methods and unlearning can be difficult and lonely. Sidsel explains how she longs to expand her "collective" beyond her existing network of small-scale farmers. From her perspective, all the learning needed to succeed in regenerative farming requires one to be part of a (larger) collective, both to have an extended collective pool of experience and knowledge, but also because unlearning is uncomfortable. Thus you need somewhere to find support, motivation and stamina to continue.

After engaging in regenerative farming, Marianne has joined new farmer networks. To her the essential criterion is that the networks provide safe spaces for sharing experiences and new ideas about how to cultivate soil. Thus, engaging in relations with other farmers and being part of processes of collective learning and thinking might be vital for farmers' caring abilities and more-than-human relationships. Or the caring ability might already exist, but the collective learning can increase the awareness, recognition and feeling of acceptance of regenerative caring practices. This highlights how caring can be exhausting and oppressive if it is not recognized and taken into account.

Caring relationships in farming systems also involve dilemmas and compromises. During the small talk before the second dialogue, Marianne confessed that she had applied insecticides on some of her fields this year. It could be said that she chose to care more about yield than about aphids. Caring for her employee is another reason why Marianne compromises on her own ambitions and beliefs:

"An example of something that we've done so that he (employee) also thinks it's a nice place to be: he doesn't like weeding wild oats, so I've actually bought some wild oat remedy that we've sprayed on so he doesn't have to go and weed wild oats. Well, just thinking that it should be an employee concern makes me a little sad." Marianne.

Relational work and interdependency thus expand beyond more-than-humans in the soil food web to humans and to society in general. This is reflected in the two farmers'

holistic approach to what farming encompasses. Firstly, they recognize that they are part of a food system, including value chains, policies, consumption patterns, etc. where their practice is affected and affects the rest of the system.

"(R)egenerative farming is not only about how we treat the soil, but also how we treat each other and what kind of food system we are part of on a larger scale."

Sidsel.

However, the two farmers are also thinking holistically in the sense that they perceive farming as part of a whole life, including farmers' private stories and affective engagement. For example, Sidsel is concerned about her future life (parenthood, joy, physical wealth, etc.) if she stays in farming, which has made her doubt her professional engagement in farming in future. Thus, relationships enact different realities of regenerative farming, and these are co-existing and sometimes contradictory (caring for the soil, the employee, the child, the economy, etc.).

Time for composting as a reproductive practice

Feminist theory, and especially the feminist economy, criticizes the unbalanced appreciation between production and reproduction. Today's global soil depletion demonstrates that reproduction in farming in the form of revitalizing soil is not an acknowledged or valued practice in market terms. To both farmers, the ambition of regenerative farming is precisely to achieve a balance between production and reproduction.

Thinking with care theories, the activities of reproduction are crucial to creating and sustaining relations with the more-than-human world. Reproductive activities thus become "doings which support livable relationalities" (Puig de la Bellacasa 2011) rather than mere peripheral activities that support productive tasks. This does not mean, however, that relating to soil with care cannot include decisions and actions that can be viewed as controlling or even violent – e.g. using chemicals in the field or eliminating actors in the soil food web for the sake of helping the whole ecosystem survive (Beacham 2018; Krzywoszynska 2019; Kallio and LaFleur 2023).

Making, processing and distributing compost are concrete examples of reproductive activities where one becomes more closely connected to the soil as a living organism (Puig de la Bellacasa 2019; Kallio and LaFleur 2023). To Marianne, compost is her way of "curing" soil microbial life, something she is experimenting with in her own DIY laboratory. Sidsel, however, experiences composting through affectivity and sensory engagement:

"I get a huge kick out of the wonder of life. The connection between the very down-to-earth – the practical,

physical turning of the compost – and how philosophical a compost is. How funny it is to see life and death unfold right there. It gives rise to many thoughts and feelings. At the same time as it being so ridiculously concrete and sensuous. I also think there is something with sensuousness.” Sidsel.

To Sidsel, compost reflects one part of a cycle where ‘waste’ goes back to life. Wanting to “take care of what is left from production” (Sidsel) reveals a cyclic understanding of the farming system and acknowledgment of the existence and value of what is outside the productive system.

However, when caring practices are not part of the productive system, they are also less respected. This puts farmers in a dilemma not just financially, but also with regards to acknowledgement. Sidsel explains:

“I think because I don’t have a farming background at all [...] I needed to prove myself. I became very interested in becoming a professional. I was only a real farmer if that was my profession. And since then, I’ve thought it was bullshit. That something becomes legitimate if it becomes part of the economy.” Sidsel.

With this quote, Sidsel argues that farmers are only acknowledged if their farming is production-oriented. This might not exclude engagement in reproductive activities such as composting, using cover crops, etc., provided it is not at the expense of producing commodities. However, in practice this can be challenging, as reproductive caring practices such as composting are time-consuming without generating short-term financial profits.

“Time” is raised as an issue by the farmers in two different ways: firstly, the lack of time to do what needs to be done if farmers want to farm regeneratively, and secondly, regenerative farming requires a sense for temporal rhythms that call for another pace and perspective of time:

“It makes good sense to look at which weed it is, where it is; what the wind, rain, sun, soil are like. It’s insane to think that you can just decide what happens to it (the land), that you just move in and fix it. It requires time that most people don’t have because it costs money.” Sidsel.

“A big [theme] in regenerative farming is working with a different time horizon. There is, after all, much of what I am talking about with the term regenerative, that also gives something to the bottom line, but it is just a completely different time perspective.” Sidsel.

In the same way, many scholars working with the concept of care argue that in order to integrate care one needs to reflect on the perception of time, and how this perspective affects others (Bastian 2009; Johnson 2015; Schrader 2015; Puig de la Bellacasa 2017). Michelle Bastian (2009) and

Boaventura de Sousa Santos (2014) suggest that the concept of linear time that informs the Western worldview is not universal, and other timescales, such as cyclical time, can be fruitful for analyzing how time affects people’s relationship with the environment. With her notion of “soil times”, Puig de la Bellacasa (2017) adds to the multiplicity of ecotemporalities, as opposed to the one-way anthropocentric temporality that goes with productivism. She argues that if caring is to be increased, it is necessary to “make time for soil care”.

However, to convince oneself and others about the effects of the time spent on regeneration, both farmers express that they need proof. This is due to the lack of direct response to their practice because “soil cannot provide feedback on the care received in the same way as humans can” (Van de Pavert and Ressorio 2023). Marianne explains that if she could prove the effects of her practices, she would be more confident talking about her methods and ideas with other farmers. Similarly, Sidsel is longing for good practical examples or research that she can refer to when communicating her ambition. The search for evidence that caring practices lead to greater regeneration thus illustrates how caring can also be associated with feelings of insecurity and doubt.

Discussions and conclusions: collectively thinking with care about activism, dialogue and feminist theories

The dialogues led to understandings of regenerative practices and relations with human and more-than-humans in farming systems. The dialogues also brought up themes about how thinking regeneratively can be activist, and how the encounter between research and practice provides spaces for thinking with care. Finally, in this section we reflect on the input that the dialogue has provided for future dialogue and research on regenerative farming by combining different feminist strands and experiences from practice.

“I feel like a little rebel, but quiet”

Regenerative farming is a response to several ecological crises, including climate change, biodiversity, pollution etc., but is also related to several social crises of inequality, alienation, and mistrust:

“In addition to the many crises we have, the climate crisis, biodiversity crisis and environmental crisis, I think we also have a crisis of confidence. Control has almost become a mantra, because we cannot trust that farmers of their own free will do something that leads in the right direction, and it is probably a mistrust that

has come about for a reason. There is no doubt about that.” Marianne.

Marianne uses her considerations about becoming certified organic as an example of this crisis. Her perception is that innovative farmers are challenged by strict regulation, as it reduces the flexibility for trying out new practices. Through her engagement with regenerative farming, Marianne has also become very skeptical about (commercial) actors and structures in the farming system, including agricultural advisers, the agroindustry, etc.

“I’ve never really been interested in politics. And I always just fitted in and did what was expected of me, so I kind of feel like something has happened. I simply have to be an activist, at least in my own place. So I’m increasingly critical of authorities, and I’ve become increasingly critical of the marketing in agriculture and the agricultural press. I don’t read it at all in the same way as I used to.” Marianne.

“I grew up very loyal to authorities, but all this [regenerative farming] breaks with the conventions and I feel like a little rebel, but quiet.” Marianne.

Edgar Burns (2020), who studies the emergence of regenerative farming networks in New Zealand, calls the practice a “quiet revolution” in farming because of the fundamentally different way of doing and perceiving farming. Discussing the analysis with Marianne and Sidsel in the follow-up dialogue generated an interesting conversation about a quieter or even careful kind of activism. Both Sidsel and Marianne explain that their strategy today, especially towards other farmers, is to seek dialogue rather than confrontation, because as Sidsel explains: “We’re all in the same boat”.

“You can be an activist in many different ways. So maybe it’s really more about formulating a new concept of what it is to be an activist, which is a little more dialogue-seeking and a little more caring, and not about storming into the National Federation of Large Farmers’ Unions and telling them what big dumbasses they are. But a slightly soft sensitive activism, which is also about being a little more caring towards those who are doing their best right now.” Sidsel.

The quiet and sensitive activism presented by Sidsel and Marianne has clear commonalities with the careful and relational approach to farming they both describe. Exploring careful ways of conducting research was also the aim of this paper and the arguments behind the conceptual framework. Being careful in research corresponds with the posthuman and feminist understanding of academic engagement. Studies within sustainability research highlight in particular the urgent need for radical change and the related epistemological and methodological implications. Bertella (2023)

advocates for a ‘care-full academic activism’ that offers a holistic, innovative and practical perspective on care-based research aiming to connect sustainable transformation with care. Pottinger (2020) “explores moments of *taking care*” by drawing on ethnographic fieldwork on gardeners’ everyday activisms with seeds and plants. She points out that a gentle methodological approach can hold utility for exposing and theorising under-acknowledged forms of care-full political and environmental action, which might be significant. Both thinkers provide examples of how to use sensitivity towards relationality, attentiveness, and ethics of care when doing academic research.

By applying a careful research approach, we hope to contribute to the discussion on what consequences it may have to include ethics of care and relational methodologies, and bring forward a discussion on dialogical and participatory research within regenerative farming.

Collective thinking as a means of transformation

“Transformation, I think we are all in it. You as researchers and us [...] So we must try to contribute from where we are.” Marianne.

The ambition of this study was to create collective thinking among regenerative farmers and researchers, both to reduce the distance between theory and practice, and to unravel common experiences between the two farmers. Furthermore, we wanted to create a possibility for sharing engagement on social change between practitioners and academics. From an action research and eco-feminist perspective Egmo et al. (2022) argue that researching together can foster eco-social transformation by i) enabling social learning spaces to make visible the ways we are socially and ecologically related; ii) re-imagining how we want to live and relate in wider ecologies; iii) seeking alternatives to mastery through tangible practices; and iv) enabling new organizational forms for societal reorganization”. When discussing this ambition with Sidsel and Marianne in the second dialogue, they shared with us how the consolidation of experiences and thoughts (through the analysis) affected them:

“You have formulated some of the things that mean something to me in relation to being a farmer and some of the things that have meant that I did not take the well-trodden path and that I have no intention of continuing along that path either.” Sidsel.

Between the first and the second dialogues, Sidsel changed her job from being a small-scale farmer to being the coordinator of a new school focusing on regenerative farming and food. The analysis reminded Sidsel of how experiences (individual or collective) affect personal life

choices, thus retrospectively creating meaningful and coherent stories.

To Marianne, the collective story presented in the analysis made her feel “hopeful”:

“If you as researchers can find a common thread in the talks with us, that somehow makes me a little hopeful. So maybe there is a more general picture. Then I can feel like part of something bigger, even if I’m just walking around a bit alone in a field. That I am part of a community even without being in a direct working community or established networks. So that makes me hopeful in one way or another.” Marianne.

The collectivity created around practical, academic and personal engagement in regenerative thinking and doing can thus provide a feeling of support in the engaged individuals’ lives.

However, the concern about objectification of the farmers rather than actual democratic involvement made us ask the farmers about how it made them feel to be the object of analysis by researchers. Sidsel reported: *“It’s actually quite flattering in a way to read it, right? And I thought, well, but if that’s what you get out of what I do, what matters to me, then it’s really nice to actually hear”* (Sidsel). Marianne does not feel flattered. Instead she says: *“[...] such a quite shy farmer who just tends to run in her own field. I think: Did I say that? But I don’t feel misunderstood. I don’t”* (Marianne). Instead, she explains how reading the analysis made her reflect on her own practice: *“It has contributed with some thoughts about why I would like the change”* (Marianne). *“So it’s really comprehensive. Also more than we might experience on a daily basis”* (Marianne). Again, bringing together experiences and theoretical lenses can help create meaningful stories about one’s own situation and the situation of others. To Marianne, this means both finding meaning but also expanding her individual experiences to a collective pool of experiences, and thereby situating them in broader structural issues. Whether this leaves one in a better place is an open question.

Toledo et al. (2023) explain how feminist methodology of sharing experiences can be used to “inspire joy, generate connection, find community, and build new dwellings” (Toledo et al. 2023). Building dwellings refers to Sara Ahmed’s notion that “(to) build feminist dwellings, we need to dismantle what has already been assembled; we need to ask what it is we are against, what it is we are for, knowing full well that this *we* is not a foundation but what we are working toward” (Ahmed 2017). Despite the fact that the contexts in which the two farmers engage in regenerative practices are rather different, their differences were not an obstacle for bringing their personal thoughts and experiences together for collective thinking. Furthermore, the situation of being practitioners and researchers with very

different contextual approaches and knowledge did not hinder a dialogue; instead it added another conceptual reflection about regenerative thinking to the dialogue and analysis. Using time to present and weave together their experiences of regenerative farming instead allowed the farmers and the researchers to look at things from a meta-perspective and see the comprehensive extent and consequences of regenerative thinking. It also allowed the creation of a *we* attached to this story to strive for and be supported by, a *we* that appreciates and makes space for regenerative farming and thinking. Despite the potential of collective thinking, both Sidsel and Marianne expressed their reluctance to share the analysis with everyone². When we asked the farmers why they would not like to be associated with the analysis in which they said they felt represented and even flattered, Marianne and Sidsel explained:

“So, for example, in the farmers’ group there is someone who’s employed in my bank. And I have a big loan. In other words, it’s of no use if your creditors think you are completely on the fence about what you do with the money you’ve borrowed. So it is, for example, one thing, but it is also about reputation. I think everyone knows that when you sit down and formulate something as researchers, you also want, if you submit an article, that it passes a review. Yes, I will be sorry if I behaved in such a way that when I come to some gathering, people just avoid me like this or if I have opened my mouth and they just shrug their shoulders like this or laugh a little or so. It can do something to you, I think.” Marianne.

“There are some of the farmers I talk to who I actually don’t want reading this. Just because it’s quite controversial actually. At least, someone will take me less seriously if they read this first.” Sidsel.

These thoughts recall experiences of how thinking with feminist theories and methodologies can also be controversial in academia. Laura adds:

“So, I think that we can recognize many of those things from academia. It also depends on the context, whether we would present these thoughts, for example. Because it will not be recognized in all places either. [...] And some might think that it’s very sweet what we’re doing, but what are we going to use it for? So yes, we may say that we’re doing research, but there are some who might not think that this was particularly research-based or that these are perspectives that are worth pursuing. So, it is really the feeling of ‘ouf’ who will

² Both farmers agreed on the conditions of the study through written consent. One of the farmers expressed a wish to remain anonymous and chose an alias for the study.

hire me and where will the money come from tomorrow.” Laura.

Despite the fact that we often “think-with” the subjects of our academic studies, Puig de la Bellacasa notices that “affective attachments to collectives are misplaced in academic texts, deemed empathetically uncritical, or even self-indulgent” (Puig de la Bellacasa 2012) and that “academic settings do not really value eclectic writing-with, especially when it explodes the category of disciplined peers” (p. 202).

In this way, producing written text about the engagement in regenerative thinking can have concrete consequences in practice as well as in academia; something that reminds us that writing, researching, and relating in knowledge production are not isolated activities, but influence the world in which we live (ibid.).

In this study, we felt obliged to present the interpretations to the subjects we had been thinking-with. In doing so, we were reminded of the reflexivity and care needed when we interpret the experiences of others (Puig de la Bellacasa 2012; Staffa et al. 2022). Presenting abstract theories compared with the tough everyday life of farmers implies recognizing the privilege of researchers to hover over everyday life with philosophical perceptions and critiques. In this study, the act of laying out the interpretation and inviting practitioners to theoretical thinking allowed us to reverse the roles between researchers and practitioners by exposing ourselves to critique and the vulnerability that comes with it. Our experience was that sharing something vulnerable both as researchers and practitioners fostered care. Furthermore, sharing the experience of breaking norms (Ahmed 2017) weaved our life-worlds together, despite our differences. The atmosphere of both the first and the second dialogues was therefore gentle, caring and joyful. The personal relationships as well as the themes of analysis (being more personal and not very factual) made it both awkward and warm. As insinuated above by Puig de la Bellacasa (2012), relation building and feelings around doing interviews are in many methodological schools intended to be prevented by “professional” distancing. With the intention of meeting on a more equal footing, bringing ourselves as researchers into the room, creating transparency about the aim, process, and ambitions was necessary and unavoidable.

In this study, we did not manage to *write* together with the farmers. During the study we realized that to undertake co-writing as a way of thinking collectively requires a lot of engagement and equal appreciation of the writing process as a common third. Through our contact with the farmers, we learned about the contrasting pace of academia and the busy and changeable rhythms of our lives. One of the farmers articulated a wish to engage in further discussions about the text, while at the same time acknowledging the limitations related to a lack of time in her current situation. However,

the indication that the dialogue might continue beyond this paper offers hope for future collective regenerative thinking. Finally, the farmers’ articulation of the potential consequences of sharing their thoughts also made us reconsider the idea of co-writing in this situation.

Taking the dialogue forward

With this study we aimed at exploring the potential of regenerative farming as a transformative movement by applying collective and relational thinking. The need for collective thinking is already emphasized in regenerative agriculture papers (Gordon et al. 2021; Seymour and Connelly 2022), and in feminist theory and posthuman studies (Tsing 2015; Haraway 2016; Puig de la Bellacasa 2017; Beacham 2018; Hassink et al. 2020; Seymour and Connelly 2022). The farmers introduced in this paper indicate that regenerative thinking is different from defining “what is in and what is out” in farming. Instead, it is about inclusion, relationality and care when approaching and thinking about farming. However, little is written about how to make collective thinking and care transformative.

The practices of the farmers we spoke to can be described as attempts to engage in more-than-human care to create a relationship with the more-than-human on the farm. This can be seen, for example, in caring for things that do not produce human-centered value in themselves (such as extending care to the soil and soil microorganisms). This, as Sidsel suggests, implies partially ceding control, recognizing that not everything can or should be controlled by the farmer, and thereby giving more agency to the more-than-human entities. For Sidsel and Marianne, this means learning and unlearning how to be present differently with plants and animals; how to establish one’s role as a farmer who is attending to the plants rather than exercising control; and being confronted with dilemmas and uncertainties of more-than-human care when there needs to be a balance between the wellbeing of soil and plants and the necessity to produce food for sale and support the farm financially.

These relational dynamics between farmers and plants are mirrored in the farmers’ care and reproductive labor beyond the farm. Stories of their interactions with plants, soil, and soil organisms are intertwined with how they see and experience their role in social reproduction, including their personal and family life and care for other workers on the farm. The reproductive work they do in regenerative farming is thus interlaced with broader social reproduction towards their families and broader society.

This focus on reproductive work, e.g. composting or treating the plants differently, has very real and tangible implications for farmers. It requires being vulnerable, sometimes not

being recognized as legitimate farmers, because the legitimacy is often linked to production-oriented metrics.

Hence, by thinking of more-than-human care from a feminist perspective, we situate these practices as part of a broader context of social reproduction that reveals the undervalued labor (physical and emotional) and the risk of isolation and delegitimization associated with it. That is why we argue that, for these farmers, more-than-human care is also largely about *being human* in farming, attending to the reproduction of life, a longing to nurture, and experiencing love and affection.

Feminist ideas of social reproduction in society hence direct an analysis of regenerative practices towards a critique of the undervalued role of reproduction and care in farming systems and research, calling for a greater focus on how reproducing human and more-than-human life are integral components of farming systems.

We suggest that an analysis of farming that attempts to transition from an industrialized production-oriented paradigm to regenerative thinking can be enriched by combining a more-than-human care perspective with broader critical feminist thinking. While more-than-human care invites us to think about how uncovering the interconnectedness of human and more-than-human wellbeing through relations of care and reciprocity can inform new ways of relating to nature, conceptualizations of care in other feminist strands remind us of the undervalued place of care and reproduction (human and more-than-human) within existing economic paradigms and societies as a whole.

Finally, through the dialogues, it is clear that insisting on being human in farming, creating relationships with more-than-human elements, spending time on reproductive activities, and perceiving through various temporalities are all examples of rebellion against the established farming system. However, rather than being performed in political arenas, these are carried out as concrete local acts of care in farming. Hence, creating places for dialogue across these quiet revolutions are crucial in order to move beyond individual experiences to collective thoughts and visions for a future regenerative farming system in theory and practice. Hence, we suggest that there is a need for more engagement in dialogues between researchers and practitioners, and for the inclusion of diverse forms of knowledge (e.g. feminist, bodily, affective) in studies of transitions to regenerative farming and thinking. It is our ambition and our hope that bringing different forms of knowledge into a care-full dialogue can be a part of the theory of change for transformative regenerative thinking.

Acknowledgements We are very grateful to Sidsel and Marianne for their time, commitment and curiosity, which made this research possible. We also want to thank the reviewers for their constructive comments and participating in the dialogue, which helped us to improve the paper.

Author contributions All authors contributed to the study conception and design. Material preparation, data collection and analysis were performed by all authors. All authors contributed and commented on all versions of the manuscript. All authors read and approved the final manuscript. No funding was received for conducting this study.

Funding Open access funding provided by Roskilde University.

Declarations

This study was performed in line with the principles of the Declaration of Helsinki. Approval was granted by the Ethics Committee of Roskilde University (Date 02.01.24). Written informed consent was obtained from all individual participants included in the study.

Competing interests The authors have no competing interests to declare that are relevant to the content of this article.

Open Access This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>.

References

- Aare, Ane, Jonas Kirstine, Søren Egmose, Lund, and Henrik Haugaard-Nielsen. 2020. Opportunities and barriers in diversified farming and the use of agroecological principles in the Global North—The experiences of Danish biodynamic farmers. *Agroecology and Sustainable Food Systems* 00. Taylor & Francis: 1–27. <https://doi.org/10.1080/21683565.2020.1822980>.
- Adhikari, Kabindra, Alfred E. Hartemink, Budiman Minasny, Rania Bou Kheir, Mette B. Greve, and Mogens H. Greve. 2014. Digital mapping of soil organic carbon contents and stocks in Denmark. *PLoS One*, 9. <https://doi.org/10.1371/journal.pone.0105519>.
- Ahmed, Sara. 2017. *Living a Feminist Life*. Durham and London: Duke University Press.
- Al-Kaisi, Mahdi M., Rattan Lal. 2020. Aligning science and policy of regenerative agriculture. *Soil Science Society of America Journal* 84: 1808–1820. <https://doi.org/10.1002/saj2.20162>.
- Alrøe, Hugo F., Marion Sautier, Katharine Legun, Jay Whitehead, Egon Noe, Henrik Møller, and Jon Manhire. 2017. Performance versus values in sustainability transformation of food systems. *Sustainability (Switzerland)* 9: 1–31. <https://doi.org/10.3390/su9030332>.
- Altieri, Miguel A. 2004. Linking ecologists and traditional farmers in the search for sustainable agriculture. *Frontiers in Ecology and the Environment* 2: 35–42. [https://doi.org/10.1890/1540-9295\(2004\)002\[0035:LEATFI\]2.0.CO;2](https://doi.org/10.1890/1540-9295(2004)002[0035:LEATFI]2.0.CO;2).
- Barnett, Joshua. 2023. Imagining more-Than-Human Care: from multi-species Mothering to Caring relations in finding the Mother Tree. *Journal of Ecocriticism* 2: 9–20. <https://doi.org/10.33182/joe.v2i1.2861>.
- Bastian, Michelle. 2009. Inventing Nature: re-writing Time and Agency in a more-than-Human World. *Australian Humanities Review* 99–116. <https://doi.org/10.22459/ahr.47.2009.10>.

- Bastian, Michelle, Owain Jones, Niamh Moore, and Emma Roe. 2016. Introduction: More-than-human participatory research: Contexts, challenges, possibilities. In *Participatory Research in More-than-Human Worlds*, ed. Michelle Bastian, Owain Jones, Niamh Moore, and Emma Roe, 1–15. Routledge. <https://doi.org/10.4324/9781315661698>.
- Bauhardt, Christine. 2018. Nature, care and gender. Feminist dilemmas. In *Feminist Political Ecology and the Economics of Care*, ed. Christine Bauhardt and Wendy Harcourt, London: Routledge.
- Beacham, Jonathan. 2018. Organising food differently: towards a more-than-human ethics of care for the Anthropocene. *Organization* 25: 533–549. <https://doi.org/10.1177/1350508418777893>.
- Bertella, Giovanna. 2023. Care-full academic activism for sustainable transformations in tourism. *Current Issues in Tourism* 26. Routledge: 212–223. <https://doi.org/10.1080/13683500.2022.2030305>.
- Biesecker, Adelheid, Sabine Hofmeister. 2010. Focus: (re)productivity. Sustainable relations both between society and nature and between the genders. *Ecological Economics* 69 Elsevier B V 1703–1711. <https://doi.org/10.1016/j.ecolecon.2010.03.025>.
- Biesecker, Adelheid, and Winterfeld Uta von. 2018. Notion of multiple crisis and feminist perspectives on social contract. *Gender Work and Organization* 25: 279–293. <https://doi.org/10.1111/gwao.12206>.
- Bresnihan, Patrick. 2020. The more-than-human commons: from commons to commoning. *Space Power and the Commons* 105–124. <https://doi.org/10.4324/9781315731995-13>.
- Burns, Edgar A. 2020. Thinking sociologically about regenerative agriculture. *New Zealand Sociology* 35: 189–213.
- Dalgaard, T., J. E. Olesen, S. O. Petersen, B. M. Petersen, U. Jørgensen, T. Kristensen, N. J. Hutchings, S. Gyldenkerne, and J. E. Hermansen. 2011. Developments in greenhouse gas emissions and net energy use in Danish agriculture - how to achieve substantial CO₂ reductions? *Environmental Pollution* 159: 3193–3203. <https://doi.org/10.1016/j.envpol.2011.02.024>.
- Danish Biodiversity Council. 2022. *From loss to progress: protected nature in Denmark in an international perspective (in Danish)*. Biodiversitetsrådet.
- Duncan, Jessica, Michael Carolan, and Johannes S.C. Wiskerke. 2020. Regenerating food systems: a social-ecological approach. *Routledge Handbook of Sustainable and Regenerative Food Systems*. Book. Eds. Jessica Duncan, Michael Carolan, and Johannes S.C. Wiskerke, 1–11. Routledge.
- Egmose, Jonas, Henrik Hauggaard-Nielsen, and Stefan Gaarsmand Jacobsen. 2022. Action research in the plural crisis of the living: understanding, envisioning, practicing, organising eco-social transformation. *Educational Action Research* 30. Routledge: 671–683. <https://doi.org/10.1080/09650792.2022.2084433>.
- Egmose, Jonas, Stefan Gaarsmand Jacobsen, Henrik Hauggaard-Nielsen, Lars, and Hulgård. 2021. The regenerative turn: on the re-emergence of reciprocity embedded in living ecologies. *Globalizations* 18: 1271–1276. <https://doi.org/10.1080/14747731.2021.1911508>.
- European Commission. 2021. *She Fig. 2021*. <https://doi.org/10.2777/06090>.
- Federici, Sylvia. 2020. Re-enchanting the World: Feminism and the Politics of the Commons. Article. *Journal of International Women's Studies* 21. Bridgewater: Bridgewater State College: 409–411.
- Frank, Markus, Mariano M. Amoroso, Martina Propedo, and Brigitte Kaufmann. 2022. Co-inquiry in agroecology research with farmers: transdisciplinary co-creation of contextualized and actionable knowledge. *Agroecology and Sustainable Food Systems* 46 Taylor and Francis Ltd 510–539. <https://doi.org/10.1080/21683565.2021.2020948>.
- García-López, Gustavo A., Ursula Lang, and Neera Singh. 2021. Commons, Commoning and Co-becoming: Nurturing Life-in-common and Post-capitalist futures (an introduction to the theme issue). *Environment and Planning E: Nature and Space* 4: 1199–1216. <https://doi.org/10.1177/25148486211051081>.
- Gibbons, Leah V. 2020. *Regenerative—The New Sustainable?* *Sustainability* 12: 5483. <https://doi.org/10.3390/su12135483>.
- Giller, Ken E., Renske Hijbeek, and Jens A. Andersson, James Sumberg. 2021. Regenerative agriculture: an agronomic perspective. *Outlook on Agriculture* 50: 13–25. <https://doi.org/10.1177/0030727021998063>.
- Gilson, Erinn Cunniff. 2015. Vulnerability, relationality, and dependency: Feminist conceptual resources for Food Justice. *IJFAB: International Journal of Feminist Approaches to Bioethics* 8: 10–46. <https://doi.org/10.3138/ijfab.8.2.10>.
- Gordon, Ethan, Federico Davila, and Chris Riedy. 2021. Transforming landscapes and mindscapes through regenerative agriculture. *Agriculture and Human values*. Springer Science and Business Media B V. <https://doi.org/10.1007/s10460-021-10276-0>.
- Gordon, Ethan, Federico Davila, and Chris Riedy. 2023. Regenerative agriculture: a potentially transformative storyline shared by nine discourses. *Sustainability Science* 18. Springer Japan: 1833–1849. <https://doi.org/10.1007/s11625-022-01281-1>.
- Hansen, Henning Otte. 2019. The agricultural treadmill - a way out through differentiation ? An empirical analysis of organic farming and the agricultural treadmill. *Journal of Tourism Heritage & Services Marketing* 5: 20–26.
- Haraway, Donna J. 2013. A Cyborg Manifesto. *Manifestly Haraway* 3–90. <https://doi.org/10.5749/minnesota/9780816650477.003.0001>.
- Haraway, Donna J. 2016. *Staying with the trouble. Book. Experimental futures*. North Carolina: Duke University Press. <https://doi.org/10.1215/9780822373780>.
- Hassink, Jan, Angela Moriggi, Saverio Senni, Elisabeth Hense, and Dries de Moor. 2020. Caring agricultural and food practices. *Routledge Handbook of Sustainable and Regenerative Food Systems* 126–140. <https://doi.org/10.4324/9780429466823-10>.
- IPCC. 2022. *Climate Change and Land. Climate Change and Land*. Cambridge University Press. <https://doi.org/10.1017/9781009157988>.
- Johns-Putra, Adeline. 2013. Environmental Care Ethics: Notes Toward a New Materialist Critique. *symplek* 21: 125–135.
- Johnson, Elizabeth R. 2015. Of lobsters, Laboratories, and War: Animal studies and the temporality of more-Than-Human encounters. *Environment and Planning D: Society and Space* 33: 296–313. <https://doi.org/10.1068/d23512>.
- Jones, Bradley M. 2019. (Com)Post-Capitalism: cultivating a more-than-Human Economy in the Appalachian Anthropocene. *Environmental Humanities* 11: 3–26. <https://doi.org/10.1215/22011919-7349347>.
- Kallio, Galina, and Will LaFleur. 2023. Ways of (un)knowing landscapes: Tracing more-than-human relations in regenerative agriculture. *Journal of Rural Studies* 101. Elsevier Ltd: 103059. <https://doi.org/10.1016/j.jrurstud.2023.103059>.
- Kawarazuka, Nozomi, Cheryl R. Doss, Cathy R. Farnworth, and Rhianon Pyburn. 2022. Myths about the feminization of agriculture: Implications for global food security. *Global Food Security* 33. <https://doi.org/10.1016/j.gfs.2022.100611>.
- Kimmerer, Robin. 2013. *Braiding sweetgrass: Indigenous Wisdom, Scientific Knowledge and the teachings of plants*. Minneapolis, UNITED STATES: Milkweed Editions.
- Kronvang, Brian, Hans E. Andersen, Christen Børgesen, Tommy Dalgaard, Søren E. Larsen, and Jens Bøgestrand, Gitte Blicher-Mathiasen. 2008. Effects of policy measures implemented in Denmark on nitrogen pollution of the aquatic environment. *Environmental Science and Policy* 11: 144–152. <https://doi.org/10.1016/j.envsci.2007.10.007>.
- Krzywoszyńska, Anna. 2019. Caring for soil life in the Anthropocene: the role of attentiveness in more-than-human ethics. *Transactions*

- of the *Institute of British Geographers* 44: 661–675. <https://doi.org/10.1111/tran.12293>.
- LaCanne, Claire E., and Jonathan G. Lundgren. 2018. Regenerative agriculture: Merging farming and natural resource conservation profitably. *PeerJ* 2018: 1–12. <https://doi.org/10.7717/peerj.4428>.
- Latour, Bruno. 2007. *Reassembling the Social: an introduction to actor-network-theory*. Oxford, UNITED KINGDOM: Oxford University Press, Incorporated.
- Leitheiser, Stephen, Ina Horlings, Alex Franklin, and Trelle Elen Maarja. 2022. Regeneration at a distance from the state: from radical imaginaries to alternative practices in Dutch farming. *Sociologia Ruralis* 62: 699–725. <https://doi.org/10.1111/soru.12403>.
- Moyer, Jeff, Andrew Smith, Yichao Rui, and Jennifer Hayden. 2020. Regenerative agriculture and the soil carbon solution [white paper]. *Rodale Institute*: Kutztown, Pennsylvania.
- Naples, Nancy A. 2007. Feminist Methodology. *The Blackwell Encyclopedia of Sociology*. <https://doi.org/10.1002/9781405165518.wbeosf042>.
- Newton, Peter, Nicole Civita, Lee Frankel-Goldwater, Katharine Bartel, and Colleen Johns. 2020. What is regenerative agriculture? A review of Scholar and Practitioner definitions based on processes and outcomes. *Frontiers in Sustainable Food Systems* 4: 1–11. <https://doi.org/10.3389/fsufs.2020.577723>.
- Phillips, Louise, Maria Bee Christensen-Strynø, and Lisbeth Frølund. 2022a. Thinking with autoethnography in collaborative research: A critical, reflexive approach to relational ethics. *Qualitative Research* 22: 761–776. <https://doi.org/10.1177/14687941211033446>.
- Phillips, Louise, Anders Larsen, and Lotte Mengel. 2022b. What Coproduction in Participatory Research Means From Participants' Perspectives: A Collaborative Autoethnographic Inquiry. *Journal of Participatory Research Methods* 3. <https://doi.org/10.35844/001c.37638>.
- Phillips, Louise, Lisbeth Frølund, and Maria Bee Christensen-Strynø. 2021. Confronting the Complexities of Co-production in Participatory Health Research: a critical, reflexive Approach to Power Dynamics in a collaborative project on Parkinson's dance. *Qualitative Health Research* 31: 1290–1305. <https://doi.org/10.1177/10497323211003863>.
- Plumwood, Val. 1994. *Feminism and the mastery of Nature*. London: Taylor & Francis Group.
- Pottinger, Laura. 2020. Treading carefully through tomatoes: Embodying a gentle methodological approach. *Area*. Blackwell Publishing Ltd. <https://doi.org/10.1111/area.12650>.
- Puig de la Bellacasa, Maria. 2011. Matters of care in technoscience: assembling neglected things. *Social Studies of Science* 41: 85–106. <https://doi.org/10.1177/0306312710380301>.
- Puig de la Bellacasa, Maria. 2012. Nothing comes without its world: thinking with care. *Sociological Review* 60: 197–216. <https://doi.org/10.1111/j.1467-954X.2012.02070.x>.
- Puig de la Bellacasa, Maria. 2015. Making time for soil: technoscientific futurity and the pace of care. *Social Studies of Science* 45: 691–716. <https://doi.org/10.1177/0306312715599851>.
- Puig de la Bellacasa, Maria. 2017. *Matters of care: speculative Ethics in more than human worlds*. *Posthumanities*. Minneapolis: University of Minnesota Press. <https://doi.org/10.5749/j.ctt1mmfspt>.
- Puig de la Bellacasa, Maria. 2019. Re-animating soils: transforming human–soil affections through science, culture and community. *Sociological Review* 67: 391–407. <https://doi.org/10.1177/0038026119830601>.
- Raider-Roth, Miriam, Amy Rector-Aranda, Tammy Kaiser, Liron Lipinsky, Alison Weikel, Sara Wolkenfeld, Liat Zaidenberg, Shared, and Power. 2019. Risk-taking, and Innovation: Participatory Action Research in Jewish Education. *Journal of Jewish Education* 85. Routledge: 187–208. <https://doi.org/10.1080/15244113.2019.1599234>.
- Santos, Sousa, Boaventura de. 2014. *Epistemologies of the South: justice against epistemicide*. Boulder, CO: Paradigm: Book.
- Schrader, Astrid. 2015. Abyssal intimacies and temporalities of care: how (not) to care about deformed leaf bugs in the aftermath of Chernobyl. *Social Studies of Science* 45: 665–690. <https://doi.org/10.1177/0306312715603249>.
- Schreefel, L., R. P. O. Schulte, I. J. M. de Boer, A. Pas Schrijver, and H. H. E. van Zanten. 2020. Regenerative agriculture – the soil is the base. *Global Food Security* 26 Elsevier B V 100404. <https://doi.org/10.1016/j.gfs.2020.100404>.
- Seymour, Madison, Sean Connelly. 2022. Regenerative agriculture and a more-than-human ethic of care: a relational approach to understanding transformation. *Agriculture and Human Values*. <https://doi.org/10.1007/s10460-022-10350-1>.
- Shiva, Vandana. 2009. Women and the gendered politics of food. *Philosophical Topics* 37(2):17–32. <http://www.jstor.org/stable/43154554>.
- Shiva, Vandana. 2013. *Caring for what we care about*, ed. Jack Appleton. Routledge. <https://doi.org/10.4324/9780203080177>.
- Siegfried, Alina. 2020. Insight into regenerative agriculture in New Zealand: the good, the bad, and the opportunity. *Pure Advantage*. <https://pureadvantage.org/insight-into-regenerative-agriculture-in-new-zealand-the-good-the-bad-and-the-opportunity/>. Accessed 08 Jul 2024.
- Staffa, Rachel K., Maraja Riechers, Berta, and Martín-López. 2022. A feminist ethos for caring knowledge production in transdisciplinary sustainability science. *Sustainability Science* 17. Springer Japan: 45–63. <https://doi.org/10.1007/s11625-021-01064-0>.
- Statistics Denmark. 2020. *The Danish agricultural area is large in an international perspective (in Danish): 2020–2021*. www.dst.dk/nyt/30807 (Accessed 15/4/2024).
- Statistics Denmark. 2021. *Women farmers cultivate only 5 per cent of the land (in Danish)*. <https://www.dst.dk/da/Statistik/nyheder-analyser-publ/nyt/NytHtml?cid=25865> (Accessed 15/4/2024).
- Timmermans, Stefan and Iddo Tavory. 2022. *Data analysis in qualitative research: theorizing with abductive analysis*. Book. Edited by Stefan Timmermans and Iddo Tavory. Chicago: University of Chicago Press.
- Tittonell, Pablo, Veronica El Mujtar, Georges Felix, Yodit Kebede, and Luciana Laborda. Raquel Luján Soto, and Joris De Vente. 2022. Regenerative agriculture—agroecology without politics? *Frontiers in Sustainable Food Systems* 6. <https://doi.org/10.3389/fsufs.2022.844261>.
- Toledo, Whitney, Maureen Flint, Caroline N. Sharkey, Sarah McColm, Brittney Ferrari, Oluwayomi K. Paseda, Adrienne Cottrell-Yongye, and Nia Mitchell. 2023. Building community through feminist collectivity: being and becoming women in academia. *Gender and Education* 35: 365–383. <https://doi.org/10.1080/09540253.2023.2193208>.
- Trevilla Espinal, Diana, María Lorena Soto Lilia, Helda Pinto, Morales, and Erin Ingrid Jane Estrada-Lugo. 2021. Feminist agroecology: analyzing power relationships in food systems. *Agroecology Sustainable Food Systems* 45. Taylor & Francis: 1029–1049. <https://doi.org/10.1080/21683565.2021.1888842>.
- Tronto, Joan. 1993. *Moral boundaries: a political argument for an Ethic of Care*. Routledge.
- Tsing, Anna Lowenhaupt. 2015. *The mushroom at the end of the world: on the possibility of life in capitalist ruins*. Book. Pilot project. eB... Princeton, NJ.: Princeton University Press. <https://doi.org/10.1515/9781400873548>.
- Tsing, Anna. 2016. Earth stalked by Man. *The Cambridge Journal of Anthropology* 34: 2–16. <https://doi.org/10.3167/ca.2016.340102>.
- UNCCD (United Nations Convention to Combat Desertification). 2017. *The Global Land Outlook*. First edition. Bonn, Germany.

- Van de Pavert, Michiel, and Adriana Ressorio. 2023. Caring with the non-human: reciprocity in market gardening. *Exchanges: The Interdisciplinary Research Journal* 10: 163–176.
- Veerman, Cees, Teresa Pinto Correia, Catia Bastioli, Borbala Biro, Johan Bouma, Emil Cienciala, and Bridget Emmett et al. 2020. *Caring for soil is caring for life - Publications Office of the EU*. <https://doi.org/10.2777/4833>.
- Walsh, Zack, Jessica Böhme, Brooke D. Lavelle, and Christine Wamsler. 2020. Transformative education: towards a relational, justice-oriented approach to sustainability. *International Journal of Sustainability in Higher Education* 21: 1587–1606. <https://doi.org/10.1108/IJSHE-05-2020-0176>.

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Ane Kirstine Aare is trained as an environmental planner engaged with research questions regarding transition towards regenerative farming practices. She is concerned about the divergent perspectives, needs and dreams among different actors within transition processes, especially those of farmers. Her concern about farmers' experiences and role in such processes has led to increased focus on different kinds of knowledge (embodied, tacit etc.) as well as the plurality of drivers for change including non-economic (care, justice etc.).

Selected publication: Aare, A. K., Lund, S., & Hauggaard-Nielsen, H. (2021). *Exploring transitions towards sustainable farming practices through participatory research: The case of Danish farmers' use of*

species mixtures. *Agricultural Systems*, 189, <https://doi.org/10.1016/j.agsy.2021.103053>.

Anna Umantseva is a cultural anthropologist, focusing her research and teaching on civil society-driven eco-social transitions. Her interdisciplinary research interests are regenerative trends in farming, community economies, feminist epistemologies and Epistemologies of the South. She is interested in dynamics of knowledge co-production, and understanding how engaging with plurality of knowledges can contribute to eco-social transitions.

Selected publication: Umantseva, A (2022). 'Regenerative' Social Innovation for European Rural Regions? Lessons from Regenerative Farming, *Journal of Social Entrepreneurship*, <https://doi.org/10.1080/19420676.2022.2134180>.

Laura Brandt Sørensen is a social scientist within the research field of sustainable food and farming systems. She is working with research questions concerning food anthropology, agrifood education, and relational approaches to sustainable and systemic transformations. She is especially interested in how knowledge is constructed and emphasizes posthuman onto-epistemologies, more-than-human relationality, and the role of care, values and embodied experiences.

Selected publication: Sørensen, L. B. (2023). *Towards Relational Approaches in Education for Sustainable Agrifood Systems: A qualitative and theoretical perspective on educational practices, sustainable agrifood systems and more-than-human ontologies*. Roskilde University. Ph.D. thesis.