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Regeneration at a distance from the state: From radical imaginaries to alternative practices in Dutch farming

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Abstract

This article combines a 'zoomed-out' political economic analysis of Dutch agriculture with a more 'zoomed-in' empirical exploration of small new entrant farmers who are carving out space for alternative food networks and practices in the Netherlands. Developing a concept of proto-regenerative imaginaries, we define proto-regenerative farmers as those farmers whose work is driven by a desire to contribute to social and ecological well-being. The use of the term 'regenerative' does not imply just the use of practices associated with 'regenerative agriculture', but to regeneration as a holistic framework rooted in a paradigm of care in which productive activities (e.g., agroecology) go hand in hand with the reproduction of social and ecological well-being. Data comes from an in-depth ethnographic study on a peri-urban farm that expanded to other farms and initiatives ($n = 5$) within the network. Strategies used by farmers to carve out these spaces of regeneration include de-commodification of their produce through 'solidarity payment' schemes, the forging of reciprocal relationships and networks with other farmers, and

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the use of cooperative resource pooling and municipal resources to access land. All of these strategies help proto-regenerative farmers to implement radical alternatives to the current mainstream in agricultural production. Such examples, which are not necessarily new, show that the building blocks for building a new paradigm in agriculture (and beyond) exist all around in the form of civic activity, and is too often at a distance from the state. A major challenge for academics is to narrate these proto-regenerative imaginaries as not just anecdotes, but as the raw materials of a systemic alternative which can inspire a new intellectual project, supported by a state framework for agroecology, rural development, and beyond.

KEYWORDS

alternative food systems, political economy, regeneration, transdisciplinarity

INTRODUCTION

Modern industrial agriculture is increasingly confronted with social and environmental problems and contradictions. Glaring problems are widely acknowledged but have not spurred a major shift towards a sustainable agricultural future. Meanwhile, many individual citizens, farmers and collective initiatives are, themselves, already busy navigating towards solutions. The role of 'ordinary' citizens, small-scale farmers and alternative food networks in building food sovereignty has been widely discussed in the literature and is acknowledged by scholars as crucial in navigating towards sustainable and agro-ecological food systems (Anderson et al., 2021; Duncan et al., 2020; Marsden et al., 2018; Vivero-Pol et al., 2019). Despite this potential, the practices of these individuals and groups have not yet been able to gain significant traction as part of building a broader, systemic political alternative in public discourse and policy-making (Desmarais et al., 2017; IPES-Food, 2019; Marsden et al., 2018; Van der Ploeg, 2020). Instead, they have persisted in the margins with minimal support or recognition from governments and scientific institutions (Anderson, 2019; Anderson & Bruil, 2021; Vanloqueren & Baret, 2009). Mainstream political debates on the direction of food system change too often overlook these 'seeds of change' that are scattered all around them, dormant and waiting for the right conditions to grow into robust alternatives.

Agrarian political economy has long served as an important lens through which the complex processes that shape food systems can be understood (Buttel, 2001; Friedmann, 1993; Friedmann & McMichael, 1989). Traditionally, this scholarship has focused primarily on a critical analysis of the ways in which market dynamics and the modern state structure the organisation of agro-food systems (Bernstein, 2017; Tilzey, 2019). As food-system-related crises intensify, some scholars have identified a need to expand political economy scholarship beyond expert analysis to include a role of co-constructing, or 'co-theorising' (Carolan, 2013) alternatives, with citizens engaged in

political praxis (Duncan et al., 2019; Levkoe et al., 2020). That is, in other words, a more post-structuralist agrarian political economy (and ecology), grounded in critical dialogue with social movements, civil society organisations and citizens who are confronting norms and conventions in practice and building alternatives (Leff, 2015).

Following from the need to broaden and connect such perspectives, this article combines a 'zoomed-out' political economic analysis of Dutch agriculture with a more 'zoomed-in' empirical exploration of farmers working to build new food systems from the ground up. The main questions we address are: How do new entrant proto-regenerative farmers (a term that we explain below) in The Netherlands imagine and engage in the construction of regenerative socioecological relationships? What strategies do farmers use to carve out spaces of regeneration?

We draw on in-depth ethnographic work on one Dutch farm and further interviews with five 'proto-regenerative' farmers. We define 'proto-regenerative' farmers as those whose practices are, to varying degrees, driven by regeneration of social and ecological wellbeing, even though some do not explicitly define themselves as regenerative.¹ This includes agro-ecological practices that are still developing or coming into being. Proto-regenerative imaginaries are understood in line with Castoriadis' (1987) concept of the *radical imaginary*, which is defined as a symbolic narrative that broadens an existing framework of political possibility to include 'something that does not actually exist yet, something that is still in the making' (Castoriadis, 1987, cited in Kaika, 2011, p. 971). A radical imaginary is an orientation through which alternative concepts and visions can be formed and ultimately built and developed into real practices and institutions. To be clear, proto-regenerative imaginaries do not refer specifically to on-farm practices associated with regenerative agriculture (e.g., less or no tillage). Nor do we suggest regeneration as an alternative discourse to agro-ecology—in fact, we observe that these discourses are often used interchangeably by practitioners. While agro-ecology is a science, a practice and a movement, we refer to 'regeneration' as a more general holistic framework, rooted in a paradigm of care, in which productive activity reproduces the conditions necessary for socioecological wellbeing (Bauwens et al., 2019; Duncan et al., 2020; Gibbons, 2020; Gordon et al., 2021; Kelly, 2012). Regeneration, as such, is understood as a framework for socio-natural relations, of which agro-ecology is a central part. As a sort of prototype, proto-regenerative imaginaries form the building blocks of such a framework.

We find that there are a plethora of proto-regenerative imaginaries in farming emerging in practice from the bottom-up in The Netherlands, at a distance from the state in civil society. We aim to highlight the paradox in which institutional frameworks continue to largely undermine regenerative practices (in agriculture and beyond), which reproduce the conditions for life and wellbeing (cf. Bauwens et al., 2019), while extractive practices that erode the conditions for life and wellbeing are supported by policies. Our macro-analysis explores how policy debate and practice in Dutch agriculture have largely remained within a narrow (eco-)modernist paradigm (Horlings & Marsden, 2011) that does not significantly depart from the axioms of the modern industrial paradigm while relying heavily on technological solutions, intensification, scientification (Van der Ploeg, 1987) and a strong top-down role of the state. The contradictions of the industrial modernisation paradigm are no longer ignorable as demonstrated by the intensification of the nitrogen pollution crisis. Our analysis highlights three interrelated processes that we see at the root of socioecological harms: (1) a modernist social imaginary, which ontologically separates humans (and agriculture) from nature; (2) the dis-embedding of food production from a place (Wiskerke, 2009), a relationship to land and community and ecological constraints and (3) the commodification of land as a financial asset and food as a standardised object to be bought and sold on the global market. The state's pursuit of solutions within a framework of post-politics, and the absence of regenerative imaginaries in the mainstream discourse, has created a sustainability deadlock

(cf. Swyngedouw, 2022). We see regenerative imaginaries as those practices and strategies that form the raw materials of an alternative institutional framework of regeneration (Harvey, 2000), based on a holistic understanding of humans as interdependent and in relation to each other and natural systems (Duncan et al., 2020; cf. Capra & Mattei, 2015; Peter, 2021; Shiva, 2016). Our discussion explores collective action and engaged scholarship as pathways for navigating towards regeneration. The remainder of the article begins with an overview of the empirical work, followed by the zoomed-out analysis of Dutch agriculture, results of the empirical section and discussion.

EMPIRICAL WORK

As Kaika (2018) has argued, the gravity of contemporary challenges creates a need for a 'scholarship of presence'. In line with the work of others like Gibson-Graham (2006, 2008), Huron (2018) and Wright (2010), Kaika calls for scholars to help add gravitas to local alternative practices, narrating them as budding radical imaginaries, which can compete with capitalist-technocratic discourses about how socioecological problems and change should be understood and addressed. This is a form of engaged scholarship, which 'as a form of praxis' is 'driven not simply by a desire to interpret and understand the world, but also to change it' (Franklin, 2022, p. 3). In this work, there is both a need for what Kaika calls the perspective of the frog (a zoomed-in analysis of particular alternatives) and the perspective of the eagle (a zoomed-out analysis of the contextual backdrop, which may help different institutional frameworks come into view; cf. Huron, 2018). This analysis is important as it heeds wider constraints and enclosures of neoliberal globalisation while not falling into a 'capitalocentric' trap that obscures and covers up local possibilities and capacities for doing things differently (Gibson-Graham, 1996). In short, an investigation of how and why local opportunities for change emerge is contextualised into an understanding of macro-dynamics and structural drivers of socioenvironmental problems. The former emergent alternatives are understood as 'living indicators' (Kaika, 2017): illustrative examples that signpost urgent needs and desires of citizens and demonstrate possibilities for doing things differently. They are what Harvey (2000) has referred to as the 'raw materials to grow an alternative' (p. 193). We acknowledge that our focus on farming strategies ties into community resilience and resourcefulness theory (Franklin, 2018; White, 2018). However, we choose to focus more on the ways in which these strategies can provide heuristics for new institutional frameworks because we aim to contribute to relevant and topical public debates.

Our empirical work is partly based on extensive ethnographic work carried out by the first author at one peri-urban farm in Groningen, The Netherlands, called the Urban Farm. Our analysis of the agrarian political economy context has been to a large extent, inspired by this immersion in ethnographic work, dialogue with participants and publications by their associated organisations (see e.g., Van Veen et al., 2019). This ethnographic work was oriented towards a dialogue about the kinds of practices, strategies and institutions that could make a food system based on regeneration more viable. As such, analysis of our empirical data was done with an 'ethos of appreciation' (Moriggi, 2022, p. 133) associated with appreciative inquiry. The latter focuses on bringing forth a positive, strengths-based analysis of the proto-regenerative strategies found in our data.

The Urban Farm is a two-hectare biodynamic farm that grows a variety of vegetables and fruits and raises chickens and ducks. The business model of the Urban Farm is based on Community Supported Agriculture (CSA), and the produce is sold in a shop in the city centre. The farm is explicitly not certified by an external auditor (e.g., organic) but is rather unofficially certified by the CSA community as in participatory guarantee systems (Montefrio & Johnson, 2019).

Farm/initiative	Interviewees / participants	Location	Type of data
The Urban Farm	Meike (new entrant) Trainees	Groningen area	Participant observation, interview, volunteering
The Walled Garden	Eva (new entrant)	Wageningen area	Interview
Soil Vision	Alena (new entrant)	Nijmegen area	Interview
The Fruit Garden	Kees (experienced farmer) Trainees	Amsterdam area	Interview, volunteering, participant observation
The Earthmakers	Jan and Bram (new entrants)	Appeldoorn area	Interview

FIGURE 1 Empirical data

The farming practices used at the Urban Farm are not very typical in the Netherlands, compared with other European countries (e.g., in Germany, there are over 400 CSAs in the SoLaWi network).² At the time of writing, there are approximately 100 CSA farms in The Netherlands and about 25 food co-operatives that are connected to CSAs.³ While the share of organic farming and the trend of CSAs have been gradually increasing in recent years, the percentage of organic farming in The Netherlands remains one of the lowest in Europe at four per cent, less than half of the EU average (Hofstede, 2022).

In addition to growing vegetables, the Urban Farm also prides itself as an incubator for new entrant farmers, who mostly come to work for a period as interns as part of their training at the biodynamic agricultural school Warmonderhof. The first author worked alongside the interns at the Urban Farm over the course of the 2020 and 2021 growing seasons (an average of 1 day per week from late winter to late fall). Here, he was able to gain various insights through participant observation and dialogue. Many casual conversations about issues faced by new entrants were complemented with more structured discussions about problems faced by the farmers. The latter included an organised meeting in June 2021 with a representative from a government-sponsored project (Toukomst's Oogst van Groningen), which is focused on promoting regional agriculture in the province of Groningen.⁴ The group's efforts to influence the project were largely disbanded after it was concluded that their main concern—land access—was too political for the project and therefore considered out of scope. These discussions helped the first author to identify the main issues and concerns faced by the farmers and their colleagues and also complemented our analysis of the current state of Dutch agriculture.

Inspired by his work at the Urban Farm, the first author also sought interviews with other farmers connected to the farm's network through the Warmonderhof and the Dutch chapter of La Via Campesina called Toekomstboeren ('future farmers' in English). In selecting interviewees, we did not focus on any particular characteristics or a representative sample of (agro-ecological) farmers but searched for new entrant farmers who were involved in what we perceived as proto-, or explicitly, regenerative projects (see Figure 1). The small sample size is compensated for by the depth of the work at the Urban Farm, where insights were also gained by working closely alongside three trainees who have since started their own farms. The first author has also been involved in brainstorming and labour of setting up one of these farms, beginning in the winter of 2022. New entrants are here defined as farmers who have less than 10 years' experience in farm management and did not inherit their farm from a previous generation. Experienced farmers are those with more than 10 years' experience. This selection was made as new entrants are in general more likely to be inclined towards alternative food systems and face many barriers to entry.

In-depth, semi-structured interviews were conducted with six farmers (five new entrants and one experienced farmer) at various farms throughout The Netherlands. In most cases, a farm visit was not possible, and three interviews were conducted online, largely due to the COVID-19 pandemic restrictions. However, farm visits were possible in two cases, in addition to the extensive work at the Urban Farm. Also, the first author participated in a day of volunteering at the Fruit Garden near Amsterdam, where he worked alongside Warmonderhof graduates.

Interviews were all conducted in English and were geared around questions of motivation, barriers and how institutions might better support the farmers' regenerative work. Prior to the interviews, research aims and intentions were explained to all participants in advance and informed consent was obtained for the use of all quotes. Due to the politically sensitive nature of responses, pseudonyms have been used for participants and their farms. Participants were sent quotations to confirm their permission in advance of article submission. Recordings and transcripts were made in four cases. The first author also attended the Boerenlandbouw Conferentie (Farming Conference), hosted by a network of Dutch farming organisations in the fall of 2021, where several interviewees were also present. Here, participant observation during conference sessions and informal conversations with conference participants also contributed to the data and analysis.

The sustainability deadlock in Dutch farming

The risk we run in Europe is that the bill for the necessary ecological transition [...] will be paid for by the poor. In the case of the agricultural sector, family farmers (both entrepreneurial and peasant-like farmers) will be the losers. They not only face ever lower incomes but also new swathes of environmental restrictions that will be imposed in the transition [...] In this context, there is an urgent need to develop an agro-ecological proposal that builds on, and unites, the many 'pockets' of peasant agriculture and that, at the same time, deals in an integrated way with the socio-economic and environmental problems of an industrial agricultural model that is no longer fit for purpose [...] If not the countryside will become a bastion of the extreme right. (Van der Ploeg, 2020, p. 603)

As the quote above rightly points out in regard to the now ongoing Dutch farmer protests, the costs of policies that aim to mitigate ecological problems always run the risk of being pushed down to those with relatively little power (cf. Kaika, 2017; Swyngedouw, 2007; Turnhout, 2018). In the event that such policies are implemented from the top-down through elite post-politics—that is, without the possibility for disagreement or an explicit debate over *who pays* and *who benefits*—a reactionary backlash is, in our estimation, an unsurprising outcome. In The Netherlands, we see an ongoing deadlock in the mainstream sustainability debate over nitrogen pollution between elite post-politics on the one hand and reactionary populism on the other. Although the Dutch government has rightly recognised the need to mitigate ecological problems caused by industrial agriculture, its failure to overcome the trap of post-politics has largely pushed costs and responsibility onto family farmers. In turn, many farmers have become indignant (e.g., on a drive through the Dutch countryside in the summer of 2022, one will notice many national flags being flown upside down). As no path forward for agriculture has been articulated at the institutional level, these discontents have been mobilised in defence of the *status quo* (Van der Ploeg, 2020). We will elaborate on the current nitrogen situation further below, but first, this section aims to provide a

brief historical contextualisation of the development trends that have contributed to the nitrogen crisis, which provides a zoomed-out framing for our empirical work.

As both a worldview and an intellectual project, agricultural modernisation has effected a major transformation of agriculture in the latter half of the 20th century across Europe (Karel, 2010). In The Netherlands, agricultural modernisation was embedded into a food regime based on a neo-corporatist alliance of Dutch ministries, industry, agricultural schools and universities (Frouws, 1994). This alliance formed an institutional regime called the 'Green Front', in which 'policy, research and extension services worked in unison', promoting agricultural modernisation as synonymous with rural development (Horlings & Hinssen, 2014, p. 126). In The Netherlands, and elsewhere, modernisation meant 'de-peasantisation', as farm labour and traditional knowledge were increasingly replaced with capital-intensive technologies and techno-scientific knowledge, also referred to as 'scientification' (Van der Ploeg, 1987). Between 1950 and 2015, agriculture in the Netherlands underwent a near threefold increase in units of energy required to produce food, and a decrease of 407,000 full-time-equivalents in direct farm labour (Smit, 2018). As farming became more geared towards specialisation and global market integration, farmers lost much of their autonomy and became dependent on market exchange and external institutes like extension services (Horlings, 1996).

On the one hand, the agricultural modernisation paradigm has been incredibly successful in The Netherlands. Per unit of land, The Netherlands stands as the most productive and efficient producer of agricultural products in the EU (Van Grinsven et al., 2019). As one of the most densely populated countries in the world, it has become a global leader in the agricultural market, recording 95.6 billion euros of exports in 2020.⁵ The Dutch have been heralded internationally for their efficient agricultural production: called the 'tiny country that feeds the world' by National Geographic (Vivano, 2017) and celebrated by the likes of David Attenborough as a model for sustainable agriculture (Oudman, 2020). However, while it created a great deal of new knowledge, the modernisation paradigm has 'also resulted in large and new areas of ignorance' (Van der Ploeg, 2018, p. 236). For example, modernisation has eschewed care for the soil (which cannot be standardised or commodified) that comes from being bound to and working closely with the land. As such, the modernisation paradigm and its social imaginary have been the driver of the interrelated processes of dis-embedding of food from a place and the commodification of land as mentioned in the Introduction section.

Practices associated with agricultural modernisation have long been connected to environmental harms, and the waning legitimacy of the agricultural modernisation paradigm has been discussed for decades (Goodman, 2004; Van der Ploeg et al., 2000). While particular problems have been politicised in an isolated manner, wider systemic root causes have not. The above-mentioned trends have created path-dependencies, lock-in and the covering up of possibilities that make a meaningful departure from the modernisation paradigm. This lock-in has impeded the institutionalisation of a truly 'new developmental model for the agricultural sector' (Van der Ploeg et al., 2000, p. 392), which has long been understood as.

In the face of increasing urgency, including pressure from scientists, farmers, citizens and social movements, there have been some shifts towards a practice and discourse of 'nature-inclusive farming' ('*natuurinclusieve landbouw*' in Dutch) both at the government and farm levels in The Netherlands (Runhaar, 2017). A notable prioritisation of agricultural sustainability is (at least rhetorically) detectable at various levels of the Dutch government (Ministry of Agriculture, Nature and Food Quality, 2019; Sibbing et al., 2021; Smaal et al., 2020). Nature-inclusive farming is a Dutch concept that generally includes farming practices that attempt to 'avoid a negative impact on biodiversity' (Westerink et al., 2021, p. 61). There are three 'levels' that the Minister of Agriculture,

Nature and Food Quality has identified for nature-inclusive farming, the most advanced of which includes a 'fully integrated agro-ecological farming system' (Westerink et al., 2021, p. 61). Yet, these remain unspecified visions, and it is not clear at this time how many farms in The Netherlands fall into these three categories. In practice, nature-inclusive farming has not thus far triggered a significant shift from business as usual. As subsidies are largely rewarded on a per-hectare basis, incentives for farmers remain aligned in the direction of economies of scale and modernisation: 'get big', mechanise, specialise, intensify, and so forth (Poppe, 2020). Dutch farmers also hold a great deal of debt with banks that limits their autonomy. In recent years, this debt has been estimated to be in excess of 30 billion euros—which is '10-15 times as much as the total agrarian income in normal years' (Van der Ploeg, 2018, p. 239). This creates a dependency in which farmers are 'bound to a script defined by others, notably the food industry, trading companies, retail chains, input delivery industries, banks and state bodies' (Van der Ploeg, 2013, p. 83; see also Benvenuti, 1982). Integration into the world market is still the predominant mode of agricultural development that is promoted and administered in The Netherlands. Although EU policy is not the focus of this analysis, it is important to mention that these developments in The Netherlands are taking place in a European context where sustainable agriculture is increasingly becoming a priority. Green Deals, the Farm 2 Fork Strategy, the European Innovation Partnerships (EIPs)-Agri Operational Groups, Horizon 2020 (which involves a multitude of multi-actor projects), and the current Horizon Europe programme all represent a shift towards fairer, healthier and more environmentally friendly food systems. Yet, as a collective response from food sovereignty scholars to the Farm 2 Fork strategy underscores, most of these developments at the European level remain firmly entrenched within the '(green) economic growth paradigm'.⁶ Food is still viewed as a commodity and capital-intensive forms of innovation like digitalisation are prioritised, which will likely promote further dependency for farmers. Looking at the allocation of funding, the fact remains that the majority of institutional responses to the problems in the food system have remained 'locked into the current system which focuses on increasing productivity and global market opportunities, following a technology-led and largely top-down agricultural development logic' (Anderson and Bruil, 2021, p. 3). In short, even when environmental concerns are confronted, it seems to be mostly done in a superficial way that does not address the root causes of unsustainability in industrial agriculture and the global corporate food system.

Again, we identify these root causes as comprising of three interrelated elements (1) a modernist social imaginary, (2) dis-embeddedness, (3) and commodification. A modernist social imaginary is understood as the backdrop which connects various meanings and structures that steer both individual subjectivities and collective action and institutions. Modernism is based on the assumption of ongoing linear progress, economic growth, and the replacement of human labour, which comes about through industrial development and techno-scientific developments. Dis-embeddedness refers to disconnections in: space and time between food production and consumption; a relationship to land and community; local ecological conditions and biophysical constraints; and between raw materials and end products. Commodification, which is always on a spectrum and never *fully* commodified or de-commodified, subjects food to market principles, as opposed to non-market forms of organisation such as reciprocity or social obligation (Zerbe, 2019). This erodes other values of food, including social, cultural and ecological ways of determining how food is produced, consumed and allocated. The corporate food regime continues short- and long-term socio-ecological harms as 'negative externalities'—costs that are detached side-effects of the production process (Friedmann, 2005; Vivero-Pol et al., 2019). Where these are accounted for, it is commonly done in a way that seeks to minimise the impact of agriculture—a 'less of the bad' approach. A system

built on these foundations eschews problems that fall outside of its narrow focus on short-term profits or achievement of metrics defined from the top-down (Scott, 1998).

It should, however, also be acknowledged that Dutch farming remains heterogeneous. As we have outlined above, throughout the post-war era, farmers' options have become increasingly limited as institutional frameworks have strived for and incentivised agricultural modernisation. Many (but not all) farmers have taken this 'entrepreneurial' route of scaling up and integrating into global markets, yet farming in The Netherlands remains variegated among different styles (Horlings, 1994; Van der Ploeg, 2013). The existence of alternative food networks, peasant farming (Van der Ploeg, 2013), localised speciality food and short-supply chains has long been noted in The Netherlands (Renting et al., 2003). Farmers of all sorts still incorporate practices of 'farming economically', which essentially means cutting down on costs by using less external inputs (Van der Ploeg et al., 2019). More recently, there have been indications that even those farmers who have modernised their operations also want to build better relationships between agriculture and nature. Voluntary and self-initiated conservation efforts of individual farmers and a large number of farmer's associations have been on the rise in The Netherlands since the 1990s (Horlings, 1996; Renting and Van der Ploeg, 2001) as farmers of all sorts seek to provide more ecological function on their land (e.g., making space for enhanced bio-diversity; Runhaar et al., 2018). An extensive 2018 opinion survey of Dutch farmers conducted by Wiskerke, called the State of the Farmer ('*Staat van de Boer*' in Dutch) found that more than 80% of farmers, the vast majority of whom practice conventional farming, wanted to transition to nature-inclusive methods (Bouma & Marijnissen, 2018). 'More than half' felt that the focus should not be on export-driven business models and 'three quarters' were willing to work with 'critical green movements' (ibid., translation by the first author). However, the report also revealed that many farmers felt unsupported in making any change (by both government and consumers), dissatisfied with their representatives and anxious about the future. This discontent is likely exacerbated by hierarchical and bureaucratic regulatory schemes that have constrained farmers' ability for manoeuvring and experimenting with alternative sustainable practices (Horlings & Marsden, 2011; Marsden et al., 2010; Van der Ploeg, 2008). In the face of pressure that is perceived as unempathetic, many farmers feel cornered ('*in de hoek gezet*' in Dutch) by politicians, media, supermarkets and environmental organisations who misunderstood *them* as the problem as opposed to the system (Bouma & Marijnissen, 2018).

These feelings of unease came to a head in September 2019. A Dutch National Institute for Public Health and the Environment (RIVM) committee had then determined that, due to excessive nitrogen emissions, a rapid solution was necessary. A major political party, D66, then introduced a proposal to halve the number of livestock in the country.⁷ In response to this and other grievances, farmers took to the streets all over The Netherlands in a widespread demonstration of discontent. Many perceived this proposal as a direct attack on their livelihoods and way of life, and in turn, set out to defend themselves—occupying public space, shutting down roadways with tractor blockades and threatening politicians. The RIVM policy bolstered underlying sentiments of antagonism towards political representatives amongst farmers and triggered an instinct to defend the *status quo*. This included a denial of problems. In a follow-up of the 2018 State of the Farmer survey, conducted in the wake of the protests in 2019, approximately 73% of farmers stated they did not believe the nitrogen problem actually existed (Bouma & Marijnissen, 2019). As the handling of the nitrogen problem was delayed after the protests, some observers saw these movements as mobilising the many (farmers who were already generally disaffected) in defence of the interests of the few (farmers who were benefitting from the *status quo*; Van der Ploeg, 2020). At the time of writing, the controversy over the nitrogen problem has once again reached a tipping point. As discussions of land 'buyouts', which would compensate farmers to cease their operations

(Rutten & Kuiper, 2021), have escalated, farmers have once again erupted into discontent as tens of thousands of farmers have used their tractors to block off highways and distribution centres in protest. Fears of mass farm closures and land seizures have enflamed the situation with increasingly radicalised farmers, like those in the Farmers Defence Force, many of whom are intensely distrustful of their representatives.⁸ A farmer and leader of the organisation Agraractie is reported to have said at a recent farmer protest, 'The State of the Netherlands is at war with the farmers' republic' (DutchNews.nl, 2022).

In disregarding politically sensitive questions, mainstream debates (e.g., surrounding nitrogen pollution) fail to recognise and address the underlying root causes of contemporary agriculture's environmental problems. In doing so, they have exacerbated the discontents of family farmers, many of whom have already been negatively impacted by modernisation (it has long been noted that farmers who have most closely followed the prescriptions of the institutional regime (again, the state, agro-industry and science) are the most disillusioned in moments of unrest (Eizner, 1985; Van der Ploeg, 2018). Thus, as the state pushes to solve problems of modern agriculture with technocratic solutions that place the burden on family farms, discontents are absorbed into a regressive populist politics (Van der Ploeg, 2020), consistent with the situation in other European countries (Hajdu & Mamonova, 2020; Mamonova & Franquesa, 2020). This creates a deadlock, which overlooks a diverse landscape of possibilities and avoids an analysis of the root causes of unsustainability and discontent in the modernisation paradigm (Bilewicz, 2020). Conflict over the system itself is externalised, while the terrain of struggle remains within the axioms of the existing system. This ties into the de-politicisation thesis that Erik Swyngedouw, among others, have argued is central to the eco-modernist sustainability discourse.

To review, it is not that particular issues (e.g., nitrogen pollution) are de-politicised. It is rather that the overarching modernist imaginary, linked to the dis-embeddedness and commodification of food and land, is not brought into political debate—neither by the majority of farmers nor by the state. Favouring a techno-scientific fix rather than a reflexive analysis of root problems, narrow eco-modernisation sets arbitrary limits on political possibilities. For example, paying farmers to stop farming is discussed regularly in the media, while a fully integrated agro-ecological farming system that begins to flatten the distinction between nature and farming is not seriously pursued. Avoiding political conflicts that would make such a programme possible (e.g., over issues of ownership, land access, subsidy and support, business models, social relationships with nature, etc.) does not make these latent antagonisms disappear (Mouffe, 2005). It pours fuel onto the flames of discontent, contributing to regressive populism as in other European countries (Hajdu & Mamonova, 2020; Mamonova & Franquesa, 2020). When farmers feel blamed and misunderstood, rather than supported and heard, those willing and eager to transition towards sustainability can quickly become radicalised against environmental measures, as the survey conducted by Wageningen University and Research (WUR) suggests (Bouma & Marijnissen, 2018). This results in a political deadlock in which no 'real' progress towards sustainability can be made (see Oosterlynck & Swyngedouw, 2010; Swyngedouw, 2022). Crucially, our analysis of the present state of the Dutch political economy is not completely new or unique. This underscores the urgent need to 'change tools, methods, questions' and interlocutors (Kaika, 2017, p. 6) in order to pursue a more socially just and ecologically sustainable future. The next section sets out how the notion of regeneration can provide an alternative to the modernist social imaginary and frames our analysis of how proto-regenerative farmers are already busy building the foundations of a regenerative paradigm. Our empirical work then demonstrates how new strategies of re-embedding and de-commodifying agricultural development are already being built under this imaginary on the

ground. However, as we will show, without collective action and the wider engagement of public institutions, these potential seeds of change are likely to remain dormant.

CARVING OUT SPACE FOR REGENERATIVE FOOD SYSTEMS: FOOD AS AN ARENA FOR REGENERATIVE ACTION, CITIZENS (AND FARMERS) AS RADICAL IMAGINARIES

Scholars are increasingly questioning the limits of sustainability as a science, practice and movement (Gibbons, 2020; Gordon et al., 2021; Swyngedouw, 2007). As sustainability is associated with ‘incremental change’ and ‘addressing symptoms rather than causes’, scholars are turning to other notions, like regeneration, which are perhaps more capable of bringing a transformative paradigm into view (Gibbons, 2020, p. 1). The notion of regeneration is catching on and is increasingly seen as adding a useful framing by both farming practitioners (Perkins, 2019; White, 2020), academic scholars and activists (Duncan et al., 2020; Shiva, 2020). Regenerative agriculture is associated with a variety of practices and discourses, which range from a radical and holistic way of thinking about and re-designing human-nature relations, to slight variations on industrialism that aim to use less tillage (Gordon et al., 2021). Of course, a change in terminology does not guarantee a change in substantive content and the concept of regeneration is just as open to co-option, contestation and greenwashing as is the term ‘sustainability’. However, we concur that ‘it is clear that we need better concepts and new stories that position us as part of nature; not as sustainers of nature, but as active participants in an integrated cycle of regeneration’ (Duncan et al., 2020, p. 4). We use the concept of regeneration in this spirit, and see it as underpinning a changing story of socio-natural relations in an age of unsustainability that can inspire new practices and institutional design.

While it remains a contested concept, we see a regenerative paradigm as creating radical imaginaries that challenge the view of humans and nature as separate and at odds. Nature is neither an object of exploitation nor a pristine and untouched wilderness, but is rather the basis of life with which humans are in an interdependent relation. Humans can even be understood as a ‘keystone species’—an organism that holds the ecosystem together (Kay & Simmons, 2004). Regenerative imaginaries draw on indigenous and practical environmental knowledge, including stewardship, concern for future generations and non-human animals and the mimicking of natural processes. Such practices are understood to have contributed to the emergence of symbiotic socioecological configurations in the past and are increasingly seen as a model for inspiring future sustainability (see e.g., Anderson, 2005; Armstrong et al., 2021; Smith, 2009). This foregrounds the notion that the relationship of humans to natural systems is not inherently extractive or harmful but can be generative in a symbiotic sense. This is, as Gibbons (2020, p. 1) argues, ‘inherently more inspiring and motivational’ than an austere sustainability discourse that puts the blame on individuals. Proto-regenerative farmers are just one group of actors who are busy building the foundations for a regenerative shift in socio-natural relations.

As food and agriculture are re-embedded into natural systems, they are also de-commodified—the use values of land, food and the labour that produces it are brought to the fore in place of exchange values (Matacena & Corvo, 2020). This marks a shift away from a system driven by atomisation and extracting profit at any cost and towards a relational system based on co-operative productive activity that also reproduces the conditions necessary for individual and socioecological wellbeing (Bauwens et al., 2019; Duncan et al., 2020; Kelly, 2012). This also changes the relationship to work. Technology becomes a means rather than an end in the labour process.

An example is the French co-operative *l'Atelier Paysan*, which is an organisation of farmers who collaborate openly in the development of various methods and practices that help them reclaim skills and self-sufficiency in their use of farming tools and machinery.⁹ This is regenerative as it repairs alienation from the labour process and the loss of agency experienced by farmers. As we move onto the empirical results section, we analyse the data using the key elements of (1) radical imaginaries, (2) embeddedness and (3) de-commodification already introduced above.

STRATEGIES: CARVING OUT SPACES OF REGENERATION

Changing stories of farming and food: Regenerative farming as radical imaginaries

From our perspective, regenerative farming is not so much about 'applying regenerative practices'. Rather it entails a fundamental cultural and spiritual transition in which we—as European farmers—move from a colonial and extractive worldview and its practices, towards a regenerative paradigm of care. This involves acknowledging and acting upon the histories and specificities of place and reconnecting in a fundamental way with land, communities, ourselves and all other living beings (Alena, Soil Vision).

Perhaps the biggest change that the proto-regenerative farmers we interviewed were able to demonstrate was the creation of a radical imaginary: a new story about what farming is, what it can be and what role farmers can play in the process of regeneration. These narrative shifts, exemplified by the quote from Alena above, were evident in the motivations, ways of thinking and values that brought our interviewees to begin farming in the first place. Many of these individuals have recognised both their own alienation, and the wider predicament of wicked socioecological crises, and have, in turn, set off carving out their own spaces of regenerative relation-building through the practice of farming. In doing so, many experience a personal transformation and challenge conventional ideas about the role of farmers and citizens in achieving a more sustainable society. They also expand notions of what is possible and push the boundaries of political imagination. Several quotes from our interviews show the ways in which food and farming are seen as an opportunity for both (1) re-imagining socioecological relationships and (2) putting them into practice with new economic models rooted in a regenerative framework.

Eva, a farmer from the Walled Garden articulated a common attitude among interviewees about the role that farmers take in pursuing regenerative socioecological relationships. That is, namely, a role of active agents of regeneration working on discovering viable pathways, not as passive subjects waiting for elites in government or industry to solve problems. She explained:

I am myself not so focused on the government. I'm not trying to change that because I just believe a bit more in the people and their creative ideas, and their optimism and coming together to do things—creative things that work.

[It] gives me more energy to really do it in practice instead of always trying to wait for the government to come up with something, while you know that then in the back, there is always a lot of lobby and stuff like that [...] it's really not my thing. I really like to work with people like the grassroots movements. And I see it happening a

lot, like so many people are trying all these things—regarding land, regarding food, regarding climate change, regarding so many things. So yeah—it’s really nice to see these initiatives and I’m really happy that it’s happening.

Here, Eva shows a common desire amongst proto-regenerative farmers to reclaim autonomy in the face of government inaction or frustration with hierarchical and bureaucratic systems. Meike, a farmer at the Urban Farm paralleled these sentiments when she explained her motivations for starting her small farm, which was, in large part, to prove that it can be done, despite the odds, as much of the system has fallen deaf and blind to the possibility and viability of small-scale and locally integrated farming. She explained:

I wanted to prove that it could be done. And the only way to prove that it is working, is doing it [...] Food is only food when you can use it as food. [...] And we have real big farms, just far away and if you harvest that it’s going to a barn and it just waits for the good prices. It’s not food in the barn, it’s just an [investment object]. [...] If you read the book of Vandana Shiva about who is feeding the world,¹⁰ it’s small-scale [farmers], women, and not the big [farms]. It’s even with normal ordinary seeds instead of the GMOs and the ‘high-quality’, ‘high-tech’ expensive seeds.

Within the axioms of the conventional system, farms like Meike’s should be in the process of being phased out, not beginning anew or even proliferating. Her motivations stemmed from a desire to demonstrate in practice that the conventional belief in ‘get big or get out’ was not the only way and that other farming styles were not only possible but provided a path forward for creating food systems that are both regenerative and economically viable. She also highlights the inspiration of scholar and food sovereignty activist Vandana Shiva, who challenges popular notions that industrial agri-business feeds the world. Furthermore, in touching on the role of women, she transcends the historically masculinised understanding (at least in Europe; Brandth, 2003) of farmers.

Alena from Soil Vision described the regenerative imaginary that led to the creation of her farm:

What I’m looking into is how you can combine cutting-edge ecological innovative insights, and this self-reflective process we need as human beings of asking, ‘[w]hat’ does it mean to be a human being in the Anthropocene?’ with the farm practice itself. [...]

What we need is a fundamental thinking of who we are and what our position is in the world. And from there the question becomes, what kinds of institutions do we need then? What kind of farming do we need? What kind of health care do we need then? And what could it look like? And then the idea of [our farm] is, like I said, it’s a place to rethink this from the very fundamentals. And then to also start to build prototypes with artists, scientists, policymakers, thinkers, doers, to see what we can come up with.

Her farm is not only a place to grow food, but a place to build a community of co-creation, a living lab where regenerative practices can be discovered, tested and prototyped for application in other contexts. Alena particularly challenges the modernist way of thinking about ‘getting big’ when she challenges the conventional way of thinking about ‘scaling up’ a regenerative operation, ‘You

cannot scale a 5 hectare regenerative farm to be a 500-hectare farm. You just need 100 more farms and farmers.

Jan and Bram, a team of aspiring new entrant farmers who currently host a podcast about regenerative agriculture and have recently acquired land to begin a CSA near Appeldoorn, after they recently left their jobs in the tech sector. They described how their path towards farming was inspired by radical systems change:

We were designing solutions, or small apps if you like, on a system that is malfunctioning. So we can try and fix it and put bandages everywhere, but in the end, we will lose this game. So we need to change the system. And when the term regenerative came, it sprouted, it opened a world. And not long after we decided to become farmers ourselves.

We need to look holistically—not just at the ecosystem in the garden, so you put the right plants together—but it's also about society, and it's also about inequality, and it's also about the economy.

All of these interview excerpts demonstrate how farming is seen as a starting point to not only begin re-imagining the fundamental ways that humans relate to nature but to begin implementing them as a practice of discovery. The farmer and farm are not seen as a means of producing financial profit for investors but as means of care and repair, which go towards regenerating socioecological wellbeing. Next, we show the various strategies that have allowed these proto-regenerative farmers to bring these practices into being, despite seemingly all odds being stacked against them.

De-commodification with solidarity payments

Farmers who use a CSA business model, like farmers in general, often work for below the minimum wage if their hours are accounted for in a traditional model of full-time equivalence (Paul, 2019). Eva, a new entrant farmer working at Garden, quoted above have quoted above, shared that she and her colleague were, in the past, earning about half of the minimum wage when all of their hours were added up. The concept of 'solidarity payments' is a strategy she developed in partnership with students from WUR's rural sociology group to address this issue. Solidarity payments begin with the premise that food is free. Instead of paying for the product, Eva asks customers to set the wage of farm workers. She explained:

We are not selling product anymore because then you target the consumer inside of us who wants to go for cheap. But in asking for a fair wage, we are targeting more of the citizen inside us—the human side—that wants that it should be fair and equal.

Payments are not only made in solidarity with producers but with others in the community who are getting their food from the Walled Garden. 'Quality' or organic food is often perceived as more expensive and out of reach for those who are not rich. Eva explained further:

I don't want to grow food only for rich people. I want to grow organic food for everyone. If you want to give me a one euro wage because you have a really, really, really low income, and you're a single mom, for example, and you really don't have a lot of

money, it's fine. And if you want to give me a hundred euros for a veggie box, that's also fine.

As the costs are covered by pooling the resources of a community as a whole, each can carry their share and allow the farmers to produce in a way that both regenerates land for future generations and better integrates farming within the constraints of natural systems. Solidarity payments represent a 'partial de-commodification' (Matacena & Corvo, 2020), as they still operate within a market-based paradigm of production and exchange. However, they also work to shift customer subjectivities and bring the use value of food to the fore for those involved. The appeal for customers to determine farmer wages has been successful, as even those who are economically precarious (e.g., on government benefits) have offered the minimum wage for their vegetable boxes. Despite an instinct to spend as little as possible on food, these customers have also joined in reciprocal solidarity to pay the minimum wage—as Eva explained, '[t]hey start to think differently' about the price and value of food, thereby allowing her and her colleague to earn a living wage.

Reciprocal relations: 'We are colleagues, we are not competitors'

Working together as a farming community is a strategy that is important in several regards. One of these points of support is labour. As achieving a living is a struggle for many proto-regenerative farmers, paying for extra labour is often unfeasible. This presents a problem to solve, as small-scale organic farming requires more human labour farming at an industrial scale (which makes up for the difference using, e.g., debt, fossil fuels, herbicides, etc.). Several strategies are implemented by proto-regenerative farmers in this regard, but, like solidarity payments, all contain elements of pooling efforts and resources.

One strategy for labour support is trainee or internships, namely, for students attending the Warmonderhof. The Warmonderhof is a vocational school for bio-dynamic farming and gardening based in Dronten, with current and former students forming a network across The Netherlands. Most of the proto-regenerative farmers we spoke with were former or current students at the school. It is especially an important network for new entrants who do not acquire farming knowledge passed down from older family generations. After students learn the practical basics of planting, weed control, milking and feeding animals, they undertake short- and long-term placements at bio-dynamic farms across The Netherlands and sometimes abroad. The farms in turn receive a small government subsidy for hosting these students, which for most small farmers is the only subsidy they get (the EU's Common Agricultural Policy supports only applying to farms larger than 5 hectares). Host farms also get labour support throughout the season from traineeships (some of which are paid, some of which are in exchange, e.g., for vegetables) and build their network of farmer-to-farmer support afterwards. Meike from the Urban Farm described the exchange that is maintained beyond traineeships:

We have contact with all kinds of small-scale farmers on the [WhatsApp group], and on email, and we are having soup together [...] We help each other, we are colleagues, we are not competitors.

With the goal of proving that small-scale organic farming is still possible, Meike has been especially proud of the success her trainees have achieved after completing their work experience at the Urban Farm. In six years of participating in the trainee program, she has had five students

start successful farms. I'm really proud about the fact that a couple of my trainees started farms for themselves', she explained. 'Because that's one of our goals as well. We grow veggies and we grow farmers'. As they go on to begin their own farming enterprises, these farmers remain part of the community that also includes practices like sharing farm equipment, helping each other out through big jobs or busy work periods and trading surplus crops for vegetable boxes.

Many, but not all, members of these networks are also active and formally organised in the association called Toekomstboeren (Farmers for the Future).¹¹ According to their website, Toekomstboeren is:

an initiative that wants to make visible and strengthen the growing and flourishing movement of sustainable and socially responsible agriculture and food production. Our goal is to bring closer the future of a broadly supported ecological and social agriculture. That is why we have set up our association: for and by Toekomstboeren.

Many of Toekomstboeren members are new entrants with little to no background in farming, and much effort is focused on helping them share knowledge and get started. Regular conferences and farmer campfires ('*burenvuren*' in Dutch) connect farmers to each other for knowledge exchange, peer-to-peer support, help with finding land, joint political advocacy and sharing success stories.

Eva, who was a member of the core initiating group of Toekomstboeren, shares what the organisation and the international connections she has made at various conferences and meetings, have meant to her:

Sometimes when you are on the farm and you feel maybe a bit isolated from the world—like what am I doing? I am working so hard and not earning any money. But when you know that there is this movement, like in my case, La Via Campesina, I feel always really, really part of it. And sometimes you read a story or you see some pictures, or you see a little video, and then yeah you feel really connected. And that's for me really important to keep up with the work.

Aside from practical and strategic help, Toekomstboeren keeps the energy and enthusiasm alive for proto-regenerative farmers.

De-commodifying land access: Public and co-operative strategies

Eva, who commutes from an urban apartment to her job at the Walled Garden told us, 'I would really love to live on a farm, but it's impossible for me to buy land. It's really impossible'. Liberalisation of the Dutch agricultural land market has seen the price of land in The Netherlands rise by 450% from 1963 to 2018 (Van Veen et al., 2019). Most recent available statistics show that the average price of land per hectare in The Netherlands is, by nearly a factor of two, the highest in Europe—hovering around 70,000 euros and up to 120,000 euros in some regions.¹² This represents a commodification of land, where exchange values are predominant, and land is used as a financial asset (Ward, 2019). Land access is a major issue for small-scale farmers as earnings are hardly enough to cover land rent or mortgage payments, and major government subsidies are still based on the number of hectares under production, which leaves many small farmers out of their scope. One may think that this forecloses possibilities for proto-regenerative farming for anyone who is not already financially well off—namely, many in the category of (especially young)

new entrant farmers. But despite these barriers, several strategies, which remain a struggle, are underway to counter these issues of access.

One such strategy is the lease of publicly owned municipal lands. Several examples display the possibilities but also the complications that are currently in place. In terms of success, Kees, an experienced bio-dynamic farmer who started the Fruit Garden near Amsterdam in 2014, shared that he has established a good working relationship with the municipality of Amsterdam in renting 6 hectares of municipally owned land. He described their interactions as positive and was pleased with the long-term lease that he was able to sign in order to make long-term investments in his extensive fruit orchards. Yet, we found that not all of these working relationships were without complications.

The Urban Farm is based in Groningen, a city which has (at least rhetorically) committed to supporting small farmers with land access and doing their part in building a more sustainable food system (see also Smaal et al., 2020). As Meike and her partner began looking for a piece of land in and around the city for their farm, they asked the municipality if there were any sites that were available. After identifying several potential sites themselves—including the ultimate location of the Urban Farm, an old football field on the outskirts of the city—they brought their proposal to the municipality. Despite this common interest in supporting local food initiatives, the process of leasing the land from the municipality took four years. Meike elaborated on the complicated relationship with the municipality.

They ask for the highest rent price they are allowed to. Once a year, the rent prices of the land are determined. And they choose the highest one. And they don't give any guarantees that you can stay longer than a year. [...] It inhibits us to truly invest in this place. One of the first things we did was to plant a tree here. And it's a nut tree that will only really get fruit in 10 years. It was a little bit of a gamble, weirdly enough. [...] [The city] just want[s] to be able to get rid of you at any moment. [...] If we were certain we could stay here, the [high] rent would be observed quite differently.

While their security to rent the land has not been guaranteed, Meike shared that the city has given them a verbal commitment that they could stay for 20 years and a written commitment that there are currently no plans for selling or developing the Urban Farm's land. However, the lack of a long-term contract leaves them feeling vulnerable. At the time of writing, Groningen is a rapidly growing city with a severe housing crisis, which puts a great deal of development pressure on peri-urban lands like the Urban Farm. This means that the market value for its land will likely continue to soar. It is perceived that the city would like to keep this land for potential urban development, and therefore will not commit to a longer-term lease.

While the complications of working with government remain stressors for many small farmers, renting municipally owned lands is still a strategy that enables land access for farmers like Meike. Many of our interviewees acknowledged that the opportunity of including more possibilities for small farmers to use public lands in the zoning plan (*'bestemmingsplan'* in Dutch) is a major need to facilitate more small farming. Meike explained that she was eager to work with the city on this in the beginning,

In Groningen, we have a city [bell ringer]—that's the one who plays the clocks in the Martini Tower. And we have a [city beekeeper] for the bees. And we have all kinds of city people. Maybe, we can [create] a city farmer who is promoting small-scale [farming] around the city. If they changed the [zoning plan], that's a big step.

However, her efforts to collaborate with the city led to frustration. For example, Meike explained that some years back, the city of Groningen had received a European subsidy to ‘figure out what the government should do to grow all kinds of [initiatives like hers]’. She participated in several consultations in which city employees inquired about how there could be more projects like the Urban Farm in Groningen, for which she received no remuneration. In the consultations, she told them about the need for access to land and identified several potential sites on the map, explaining that she had a network of young farmers from the Warmonderhof just waiting for a piece of land. As time went by, Meike lamented:

I [didn’t] see any more farms. So now I thought that I needed to ask money for the hours that I spent consulting with them. Well that was the last time that I ever heard from them [...] they didn’t even come back with the results of their investigation.

‘Basically’, she said of working with the city, ‘it was a completely one-sided activity’. This example highlights the separation between promise and practice that is often observable in urban food strategies across Europe (Cretella, 2019) and also opens discussions on what terms research (whether academic or governmental) with initiatives should be conducted, as it can often tend towards an extractive relationship (Kouritzin & Nakagawa, 2018; Leitheiser et al., 2022a). Despite previous frustrations, Meike’s efforts to help her trainees find land continues, and at the time of writing, she is in the process of setting up one of her former trainees on a small piece of land at the University of Groningen’s Zernike Campus.

Another strategy that is more developed elsewhere, but beginning to proliferate in The Netherlands, is the land co-operative (cf. Burjorjee et al., 2017). Land co-operatives are seen as a major opportunity for new entrants. The concept is associated with commoning governance (Leitheiser et al., 2022a) and a new form of the commons by many of those involved. Eva explained,

I’m really interested in the idea of commons to access land. There are all kinds of initiatives. Land van Ons, Stichting Aardpeer, which is new. The idea of Aardpeer is like that it’s an old vegetable, but it’s also ‘aard’, meaning earth, and ‘peer’ from the English word. There is also of course Herenboeren.

All of the initiatives Eva mentions above function somewhat differently. Yet, they all mobilise the resource pooling power of communities—not only of capital but of labour, time and knowledge—in order to achieve the goal of building regenerative food systems.

DISCUSSION

In this article, we have combined a zoomed-out, political-economic analysis of a Dutch agricultural system increasingly confronted with contradictions, with a zoomed-in analysis of individual farmers who are busy navigating towards their own solutions on the ground. We have argued that the mainstream debate about modern industrial agriculture’s environmental contradictions is still pursued within a modernist paradigm, however, with a new ‘eco-twist’. Many of the proposals and actions taken to counteract negative effects of industrial agriculture remain blind to political possibilities that address root causes, including a modernist social imaginary, commodification and dis-embeddedness. Yet, a diversity of strategies allow proto-regenerative farmers to address these root causes themselves, as they carve out spaces of regeneration in practice. These strategies

are, at the moment, mostly operating at a distance from the state. That is, they exist outside of the mainstream agricultural discourse in The Netherlands and are thus largely invisible and illegible to a configuration of regulatory and subsidy frameworks, which are still designed to support an industrial agricultural paradigm (Poppe, 2020). Ironically, even as it acknowledges environmental harms, this reductionist paradigm continues to incentivise extractive activities that undermine common goods, while penalising or ignoring regenerative activities that create and repair them (cf. Bauwens et al., 2019).

Eva's sentiments that she is 'not so focused on the government' because 'in the back there is always a lot of lobby[ing]', is common amongst proto-regenerative farmers, many of whom perceive the state as a road-blocker to pursuing socioecological wellbeing. Empirically, we also saw examples of the state being a road blocker, rather than a road paver, for those wishing to carve out spaces of regeneration. As many are disillusioned by state bureaucracy and perceived incompetence and/or corruption, regenerative strategies mostly evolve at a distance from the state in civil society. Moreover, as Van der Ploeg (2022) points out in a recent analysis of the newly intensifying farmers' protests, the state's response is 'enlarging the ranks of its opponents' to include many of the regenerative farmers who are actually creating proto-types for a wider solution to the nitrogen problem in practice by de-commodifying food and land and re-embedding agriculture into local ecology and community. This stems from a failure to articulate a vision for a sustainable agro-ecological future.

While we understand these frustrations of attempting to work with the state in this context, we also see the need for more collective organisation and processes for determining and pursuing the representation of common interests in the public sphere (cf. Van der Ploeg, 2020). Such collective organisation is beginning to take shape in the form of the Federation of Agroecological Farmers (in Dutch, the *Federatie van Agro-ecologische Boeren*), which unites several farmer-led organisations including among others, Toekomstboeren. At the time of writing, the Federation has made a meaningful intervention in the public debate over the nitrogen problem by putting out a 10-point 'Green Farmers Plan' (Federatie van Agro-ecologische; Boeren, 2022), which was signed by more than 2500 farmers and nine farmers organisations, and supported by 11 social enterprises, institutes and foundations, some of which we have mentioned in this article.

We have seen that specific roadblocks vary across different contexts and places, yet general and overarching problems that frame all roadblocks remain. If we understand the state as 'the organisation of the public, effected by officials, for the protection of the shared interests of the members' (Wolin, 2004, p. 510), or an assemblage of heterogeneous organisations and individuals, we can begin to identify opportunities for strategic collective action that may take the first steps in generating more comprehensive effects. As an overarching framework, regenerative imaginaries could inspire a political economy in line with a pluralistic Chayanovian model (Bernstein, 2009; Clark, 2016), and the La Via Campesina slogan 'more farmers, better food'. This can be envisioned as state support for a wide variety of bottom-up alternative food networks and practices: from assisting conventional farmers with transitioning towards agro-ecological practices through education and financial support to enabling land access for co-operatives, independent small farmers, neo-peasants, and those building de-commodified economic relationships and aligned with the food sovereignty movement and encouraging prosumers (Veen et al., 2021). This would also include facilitating the co-creation of a comprehensive infrastructure to support these practices, including small-scale abattoirs, processing facilities and transportation connecting farmers to urban markets and education, among other things. While a diversity of strategies and approaches are necessary to support such a transition, a major strategic lever of intervention is knowledge and engaged scholarship (Anderson et al., 2021). All of the proto-regenerative farmers that we interviewed were in some way connected to universities or other knowledge institutes—including

WUR's rural sociology department, Het Nieuwe Instituut (an art and design museum in Rotterdam), the Warmonderhof and the Nuffield International Farming Scholarships Trust. A common thread in these institutes is a deviation from the worldview put forth by modernist agriculture and a re-imagining of socio-natural relations. A major challenge for academics (along with civic leaders, farming organisations and sympathetic politicians, among others) is to narrate these radical imaginaries as not just anecdotes but as the raw materials of a systemic alternative, which can inspire a new intellectual project for agriculture and rural development.

One major barrier that remains is a regulatory and administrative regime organised around measurable, quantitative and legible criteria—what Scott (1998) has called, 'seeing like a state'. Regulators are used to dealing with standardised and specialised farms that operate on economies of scale, which as we have mentioned earlier eschew qualitative and tacit knowledge about, for example, soil biology. Regenerative farmers who work closely and carefully with a complex system—polycultures with many species and varieties of fruits, vegetables and animals—are simultaneously subject to nearly all agricultural rules and regulations (which are applied by sector) and excluded from subsidies for their practices that generate public goods like social and environmental wellbeing. This can be explained by what Muller (2018) has called a tyranny of metrics—a belief in the supremacy of objective and quantifiable measurement, and an inability to grapple with the complexities of qualitative analysis and human judgement. The tyranny of metrics also lends itself to a coercive environment based on institutionalised distrust, the opposite of co-creation, which restricts room for autonomy and improvisation (Adler & Borys, 1996). Escaping the reductionism of the modernist imaginary is key in this regard. How could other values beyond the commodity form of food be institutionally supported? What would a framework of public administration that does seek to not eliminate complexity and local difference look like? And how could scholars, and perhaps more importantly, public universities, engage with and support regenerative practices in a process of co-creating a new institutional framework?

Such questions will undoubtedly require a diversity of strategies to answer, and knowledge will play a central role. Doing as we have attempted to do in this article, which is again, narrating, and adding symbolic weight to radical imaginaries in Dutch farming, can be useful in this regard (Gibson-Graham, 2008; Kaika, 2018). Yet, this scholarly work remains limited in its scope and too detached from the practice of experimenting with various alternative strategies. At the individual level, most (early stage) researchers remain economically precarious and too tied to the standardised outputs expected from their funding institutions (again, under the tyranny of metrics) to be able to carry out such extended, in-depth and action-oriented projects in practice (Anderson, 2020; Leitheiser et al., 2022b). Scaling this task up from the work of individual researchers to the level of public university research programs and insulating both from distorting influences of the market is crucial in this regard.

A starting point is for academics to search out radical imaginaries in practice; begin building networks of community solidarity, collaboration and mutual support; and join in battles against commodification and managerialism in universities (Leitheiser et al., 2022b). Such interventions could, in turn, serve as an overarching framework for creating new knowledge paradigms, which could in turn make space for more particular strategies in regard to issues like land access and collective organisation for proto-regenerative farmers.

CONCLUSION

We have argued that the mainstream debate about modern industrial agriculture's environmental contradictions is still pursued within a modernist paradigm, however, with a new 'eco-twist'.

Many of the proposals and actions taken to counteract negative effects of industrial agriculture remain blind to political possibilities that address root causes, including a modernist social imaginary, commodification and dis-embeddedness. We have empirically demonstrated that, despite a great deal of barriers, proto-regenerative farmers are finding various ways to carve out strategies of regeneration in practice. We have outlined several such strategies pursued by proto-regenerative farmers to address the root causes of unsustainability in the industrial modernisation paradigm of agriculture. These include the building of regenerative imaginaries, working to de-commodify land, labour and food, reciprocal relations through the co-operative pooling of resources and farmer-to-farmer exchange. These particular strategies can serve as prototypes—building blocks, or ‘seeds of change’ (Horlings, 2016)—for more universal application, for example, by partnering with the state or public universities. Crucially, a universal application should not be understood as eliminating difference and particularity but as creating a framework that enables experimentation with prototypes (e.g., the land co-operative) that can be translated and adjusted into particular contexts. Further work is needed in connecting and building reciprocal and pedagogical collaborations, not only with proto-regenerative or agro-ecological farmers but also with conventional farmers. Developing a means by which in-depth, extended and collaborative experiments can be universally enabled is a priority going forward. Navigating towards an emancipatory socioecological future in the 21st century cannot be done with 20th-century tools, methods and questions alone. Repurposing, or ‘commoning’ (Leitheiser et al., 2022a), such tools by integrating with a more localised, democratised and civic approach offers a path forward in connecting horizontal and vertical approaches and proceeding with a diversity of strategies (Nunes, 2021). New methods, tools, questions and interlocutors can in turn build on and augment more traditional approaches like we have attempted to do with political economy in this article. Support of transdisciplinary and participatory action research—which allow for space complexity, social and political difference, uncertain outcomes, plasticity and experimentation in the research process—by public universities, is a key terrain of struggle for further work in this regard.

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CONFLICT OF INTEREST

The authors declare that there is no conflict of interest that could be perceived as prejudicing the impartiality of the research reported.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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ENDNOTES

- ¹This notion is inspired by Van der Ploeg et al. (2019) who use the concept of 'proto-agro-ecological' farmers.
- ²<https://www.solidarische-landwirtschaft.org/solawis-finden/auflistung/solawis> [Accessed 12th July 2022].
- ³See: <https://csanetwerk.nl/over-csa-netwerk/>; <https://www.devoedselwerkplaats.nl/2021/05/17/webinar-hoe-start-ik-een-buurtmarkt/> [Accessed 9th July 2022].
- ⁴See: <https://www.toukomst.nl/projecten/oogst/> [Accessed 19th January 2022].
- ⁵<https://www.wur.nl/en/news-wur/Show/Value-of-agricultural-exports-increases-slightly.htm> [Accessed 19th January 2022].
- ⁶For the collective response, see <https://foodgovernance.com/eu-farm-to-fork-strategy-collective-response-from-food-sovereignty-scholars/> [Accessed 19th January 2022].
- ⁷<https://www.rtlnieuws.nl/nieuws/nederland/artikel/4841766/veestapel-d66-stikstofuitstoot-woningbouw> [Accessed 28th February 2022].
- ⁸See: <https://farmersdefenceforce.nl/> [Accessed 28th February 2022].
- ⁹<https://www.latelierpaysan.org/English> [Accessed 19th January 2022].
- ¹⁰See Shiva (2016)
- ¹¹<https://toekomstboeren.nl/> [Accessed 28th February 2022].
- ¹²https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=apri_lprc&lang=en [Accessed 19th January 2022].

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