Title

Organising food differently: towards a more-than-human ethics of care for the Anthropocene

Abstract

In this article, I consider how organisations within 'Alternative' Food Networks (AFNs) might help us to enact a more-than-human ethic of care in the Anthropocene. Drawing on the diverse economies framework of J.K. Gibson-Graham (2006a; 2006b) as well as readings in the feminist ethics of care literature, I explore an ethnographic study of three Community Supported Agriculture (CSA) schemes in the North West of England. Whilst there has been surprisingly little scholarly work linking food and the Anthropocene, much more has been made of the relationship between the food system and Anthropogenic processes of climate change. The orthodox responses to the problems that climate change may bring about are undergirded by Hobbesian visions and the perceived viability of instrumental, technocratic 'fixes' that are, for many reasons, worthy of critique. Broadening our viewpoint, and recognising that the Anthropocene and climate change require different responses, I argue that AFNs can provide a more hopeful perspective in how we might understand our existence within a more-than-human world. Rather than reading AFNs through analytical binaries as either reformist or radical entities merely confronting the ills of the food system, I develop an account that instead understands them as open-ended and tantalisingly different forms of organisation (Stock et al., 2015b) that can play a central role in fostering a more-than-human ethics of care for the Anthropocene.

Keywords

Anthropocene, food, diverse economies, ethics of care, agency, more-than-human

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Introduction: encounters in the forest garden

> Without being unduly negative, the outlook for food security for much of the world's population by 2050, on the face of it, is desolate. (Perry, 2016: 129)
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> So the crisis is the age. (Johnson et al., 2014: 450)
>
> [A] different human involvement in nature demands new roles, responsibilities, and practices. The stakes, however, are too high not to experiment. (Buck, 2015: 376)

On a wet, cold and windy afternoon in late 2016 I found myself at the edge of a light industrial estate in a 'forest garden' in the North West of England. Situated on formerly derelict wasteland, this space had been handed over to a charitable organisation called Green Fingers[1] to provide volunteering opportunities to local people with a range of mental health issues. That such a site existed was surprising on two fronts: firstly, for reasons that have been explored in detail elsewhere, funding for third-sector organisations in the United Kingdom has become increasingly difficult to obtain in recent years (Aiken and Harris, 2017). Despite this, Green Fingers still managed to run weekly volunteering sessions led by a trained (and remunerated) co-ordinator. Secondly, historical photographs of the site that the co-ordinator showed me revealed that up until the late 1960s the site was little more than a desolate expanse of concrete. There was not a tree in sight. That I was now stood under a luscious, if evidently young, canopy of trees and surrounded by a wide range of plants, bushes and wildlife—with small plots of food grown opportunistically in the spaces between them—was refreshing. In the Anthropocene, Buck (2015) rightly notes that we have become all too familiar with seductive "horror stories" in which the human is little more than a "rapacious earth eater" (p. 370-1). Whilst we ought not deny the many worrying ecological ills that pockmark the present, as well as their historical roots (Bonneuil and Fressoz, 2016), we might ask if Buck's horror stories are all that we can echo (see also Collard et al., 2015). Tellingly, neo-Malthusian thought has become the new vernacular across the political spectrum and that socio-ecological relations must be understood through a naturalised vocabulary of limits, barriers, overshoot, decline and collapse deserves interrogation (Sarewitz, 2000). After all, as I stood in the forest garden I found myself in a space which had undergone a profound and remarkable transformation,

[1] All participating organisations have been anonymised with a pseudonym.

spurred by the fostering of rich engagements between humans and the vibrant 'more-than-human' world (Whatmore, 2006; Latta, 2014; Gibson-Graham, 2011).

Admittedly, these more-than-human engagements did not always make the work of the volunteers easy. Speaking to one of the volunteers during a coffee break, I asked him what he had been doing in the previous session. He showed me an area of the site that he had been working on for weeks, attempting to plant shrub seedlings that would eventually grow into a bee-friendly habitat. As he reminded me, the garden was after all grounded in an ethic of producing "food for us and food for nature". Yet it was not uncommon to return to the site at the following volunteering session and find that wildlife, often deer, had decided to graze on what had previously been planted. Whilst potentially an annoyance to see these efforts go to waste, the volunteers at the forest garden tried to remain more upbeat about such occurrences. If it was, as suggested, really about *food for us and food for nature*, what authority did we—the humans—have over what should or should not be eaten? Another volunteer who overheard our conversation suggested that it was probably a sign it was enjoyable to eat and that perhaps we should be happy about our ability to care, albeit at a distance, for another being in this way. When I tentatively asked if they had considered any deterrents, chemical or otherwise, to avoid this I was quickly met with howls of protest. These attempts to exclude or discourage these beings seemed, for the volunteers, deeply arrogant.

These encounters in the forest garden are important, introductory fragments of the story that I will tell here. Today, the Anthropocene, following on from the Holocene, signals the impossibility of separating out 'natural' Earth surface processes from the geological agency of the human (Steffen, Grinevald, et al., 2011). Scholars have been keen to point out that this agency has manifested in various biophysical crises and the looming spectre of Anthropogenic climate change (Wright et al., 2013). In the world of food, policy responses to climate change have largely coalesced around the prospect of 'sustainably intensifying' (Pretty et al., 2012) food production alongside the pervasive securitisation of global food supply chains (Sommerville et al., 2014) in the face of a climate that is, *contra* the Holocene, no longer represented as a benevolent backdrop to human action but actively threatens our existential status at a species level (Head, 2016). Though not directly concerned with food, Wright and Nyberg (2015) critique the viability of such reformist approaches that scarcely question 'business as usual' logic and instead argue that we require fundamental changes in the organisation of society to address these problems. Offering a different perspective, Buck

suggests that the Hobbesian language of 'security'—barely distinct from the now ubiquitous language of 'resilience' (Walker and Cooper, 2011; Wright, 2016)—signals a grim future carrying with it a "dismal and dangerous politics" (Buck, 2015: 371). It might be argued that, as per Bauman's (1993) classic account, these policy narratives are grounded in an ambivalent, anxious politics haunted by attempts to articulate human control over irrational and seemingly threatening dimensions of our contemporary existence, thus negating them (Robbins and Moore, 2013). With the circulation of such pessimistic diagnoses, Buck (2015) is correct to ponder if we can envisage nothing better than this for the Anthropocene age.

This being said, the danger of reading too heavily into the dominance and power of these narratives and their articulations of potential futures risks an analysis that belies the diversity of social and economic worlds, which J.K. Gibson-Graham's (2006a; 2006b; 2011; see also Gibson-Graham and Roelvink, 2010) feminist economic geography has aimed to highlight. As the forest garden powerfully articulates, binary distinctions (sustainable—unsustainable, secure—insecure) marking out current and future potentials for the food system hide many complexities in already divergent forms of organisation (Carolan, 2016). As Denham, Fullagar and Head (2009) suggest, agriculture as we know it is not a fixed 'Thing' operating through binary modes but a set of "constituent practices" which are 'bundled' "in different ways […] through time" (p. 38). Recognising this contingency, as well as the diversity of social and economic life, helps us to consider how we might instead organise food production for the better (Carlisle, 2015). In recent years, a wealth of sociological and geographical perspectives have aimed to draw attention to Alternative Food Networks (AFNs) and their various attempts to organise in this way, attempting to mitigate the ills of problematic 'mainstream' ways of 'doing' (Dowler et al., 2010) food around the world.

This article employs the 'diverse economies' approach of Gibson-Graham as well as the scholarly AFN literature in arguing, following Buck, that as critical organisational theorists we must do more to imagine a better Anthropocene. In considering three distinct, though admittedly similar CSA schemes, I argue for the ways in which these organisations might help us to read the present as offering examples of food producing spaces that do not simply reaffirm the anxious, pessimistic politics of the Anthropocene but instead help to foster a new, hopeful, more-than-human ethics of care. As I will show, this ethics of care is based upon the recognition of the interdependency of all beings, and uses the case study of these CSAs to consider how organisations can spur the recognition of the agential capacities of matter that

within the history of Western thought otherwise have little (Roe and Buser, 2016). This recognition is crucial if we are to formulate a more positive path through the Anthropocene versus viewing it as a mere 'ecology of problems' (Larsen, 2016) to be solved. To chart this account, I first begin by further unpicking some of the important threads which link together food, 'alternatives', care and the Anthropocene. From then on, I offer a brief methodological note before considering how AFNs help us to enact a more-than-human ethics of care for the Anthropocene.

Situating food in the Anthropocene

Given the diversity of responses to, and analyses of, the Anthropocene—our geological 'epoch-in-the-making' (Szerszynski, 2017)—it is surprising that relatively few links have been made to food. From the Earth and geosciences (Crutzen, 2002; Steffen et al., 2007; Steffen, Persson, et al., 2011; Zalasiewicz et al., 2014) to the environmental humanities (Davies, 2016; Gillen, 2016; Haraway, 2015), social sciences (Clark, 2014; Knight, 2015; Chernilo, 2016) and beyond (Rickards, 2015; Lorimer and Driessen, 2014), markedly differing approaches have found common ground in recognising the geological agency of the human and the analytical inseparability of the 'natural' (Clark and Yusoff, 2017).

In her insightful account of the Anthropocene, Head (2016) notes that the failure to confront questions around agriculture and food production in the Anthropocene literature seems particularly odd when we consider the profound effects it has had on the working of the planet. The Haber-Bosch process, for example, was developed in the early 20th Century to 'fix' nitrogen into ammonia in the soil with the advent of cheap, industrially-produced synthetic fertilisers. The wide uptake of these chemical fertilisers has so distinctly shifted biogeochemical flows that, as Lewis and Maslin (2015) note, one would now have to look back approximately 2.5 billion years to find an equivalent geological state for the atmospheric presence of nitrogen. It is unsurprising, therefore, that debate continues around not only where to place the 'golden spike' (Hamilton, 2015) that symbolically marks the shift from the Holocene to the Anthropocene but with reference to what forms of human activities. Evoking cataclysmic imaginaries, scientists has argued that radionuclides from the testing of atomic bombs ought to mark the transition to the Anthropocene in the 1950s (Waters et al., 2015). On a more modest level, it is no great underestimation that it is agriculture, of all domains of human activity, that has most profoundly impacted both biogeochemical flows and geophysical strata.

The Earth readily bears the scars of our agricultural heritage, and if the Anthropocene is anything at all, it is steadfastly agricultural (Head, 2016; Haraway, 2015).

Though deeply interrelated with the Anthropocene literature, if not entirely equivalent, much more substantial links have been made between agriculture and Anthropogenic climate change, with suitably dire predictions abounding. Predicted rises in the global temperature of 4°c—a possible outcome of current trends in carbon outputs—has the potential to severely limit our ability to produce food around the world (Wheeler and von Braun, 2013). These neo-Malthusian visions of eco-catastrophe dominate expected futures in which we come up against palpable 'planetary boundaries'. Such boundaries are here understood as the "safe limits outside of which the Earth system cannot continue to function in a stable, Holocene-like state" (Whiteman et al., 2013: 313). Though we might immediately take issue with the idea of the Holocene as notionally 'stable'—humans have long been adapting to a variable and malignant climate (Head, 2000; 2016)—Anthropogenic climate change has led to policy prognoses in the world of food that primarily reassert the dominance of productivism, favouring increasing yields within the language of efficiency (Lawrence et al., 2013).

Against this backdrop, Marxian perspectives have also drawn significant attention to the serious inequities that afflict the political—economic landscape of food production around the world and the need to confront capitalistic forms of agriculture with a wide range of negative social, economic and ecological impacts (Moore, 2011). As Marx himself argued in Capital, Volume III, "all progress in capitalist agriculture is a progress in the art, not only of robbing the worker, but of robbing the soil" (Marx, 1976: 638). Robbing the soil of its fertility through the geographical displacement of energy flows across urban and rural contexts—what Foster terms a 'metabolic rift' (Foster, 1999; see also White et al., 2017)—shows how these problems are intricately related to the political and economic organisation of society. In the 21st Century, McMichael (2009), again writing from a Marxian perspective, has argued that the monopolising tendencies of capital have manifested in a 'corporate food regime'. This regime is not only characterised by the concentration of power in ever fewer (corporate) hands, but it also carries an associated baggage of highly industrialised production processes, carbon-intensive logistics chains and nascent biotechnology such as genetic modification (Scrinis, 2007). Moore (2015) conversely quips that perhaps there is no such regime, suggesting that there is only one food regime for 'developed' countries in the West, whilst the others suffer a *hunger* regime and bear the ecological costs resulting from this modality of food production.

However we characterise today's regime, these eco-socialist and eco-Marxist accounts focus on the uneven and combined development fostered by capitalism and argue for the need to find ways of valuing the natural world beyond the endless accumulation of surplus value (Moore, 2011). Taking it further, Moore so seriously insists on the power of capital to historically influence our relations with nature that he deems our age not the Anthropocene but the Capitalocene (Moore, 2015). For Moore, the logic of capital has successfully portrayed the world as a mere series of 'resources' such that the possibility of thinking about (or caring for) the natural world differently—purified and analytically distinct from the realm of the cultural (Latour, 2002)—appears near impossible. Nyberg and Wright (2016; 2013; see also Wright and Nyberg, 2012), focusing on the tactics of 'corporate environmentalism', have powerfully argued against the ability for corporations within the capitalist system to enact these changes, with little convincing evidence to suggest that their tactics aiming towards ecological sustainability have any positive impact at all (Whiteman et al., 2013).

Diverse economies and the search for alternatives

This collection of problems—climate change, a potentially disastrous collapse in the food supply and the totalising power of (corporate) capitalism—taken together seems dire. Yet framing this situation as an inevitability is not particularly helpful. Imagining the future organisation of society in light of climate change ought not to preclude any possibility (Wright et al., 2013) and may well be more positive. Likewise, treating capital as an actor which mediates our relationship with nature in negative ways perhaps gives it too much agency (Gibson-Graham, 2006a), and we ought to question the sheer power that certain economic logic seemingly has in colonising our mental 'lifeworlds' (Schutz, 1967). Considering those organisations that do not neatly fit into these pre-determined explanations and perhaps attempt offer something different—the forest garden as but one example—is itself part of a wider project that recognises the diversity of social and economic worlds. Gibson-Graham's feminist economic geography has been of central importance on this front, helping to spur a significant academic interest in the role that 'alternative' economic spaces can play in bringing more positive futures into being for the Anthropocene (Hill, 2015; Harris, 2009; Lee, 2000; Leyshon et al., 2003).

If we follow Gibson-Graham's important semiotic tactic (adopted from queer theory) of performatively *reading for difference* within the terrain of food production—contrasted, as they suggest, by reading for sameness—we reveal a rich diversity of approaches, aims and organisational models. Reading for difference, recognising diversity and acting "as subjects who can imagine and enact a new economic politics" (Gibson-Graham, 2006a: xxviii) helps us to avoid the risk of explanations that descend into what they term a form of *capitalocentrism.* Analyses that suffer from this erroneously represent all social and economic forms through their relation to capitalism, in doing so treating 'the economy' as something external to the social world. Capitalocentric "tendenc[ies] [serve] to represent economy as a space of invariant logics and automatic unfolding that offered no field for intervention", when their diverse framework encourages us to see not a "singular capitalist system or space [but] rather […] a zone of cohabitation and contestation among multiple economic forms" (Gibson-Graham, 2006a: xi).

AFNs are a key example of these multiple economic forms, and have received significant critical attention, particularly from human geographers (Venn et al., 2006; Lockie, 2008; Guthman, 2008; Stock et al., 2015b). Whilst the 'alternative' label has proven contentious—Wilson (2013) suggests that they are always destined to remain subservient to a hegemonic mainstream—it is analytically useful for its ability to draw our attention to the attempts around us to enact and articulate spaces of difference and heterogeneity in the food system. Current research has unreflexively prioritised European and North American perspectives, though it ought to be recognised that the liminal sense of 'alternativeness' upon which AFNs are founded varies across different spatial contexts (Whatmore et al., 2003). For example, whilst European networks have typically prioritised regional economic development (Goodman, 2004), Chinese AFNs prioritise traceability and the safety of food in a context of chronic food fraud (Si et al., 2015). Though a generalisation, both North and South American AFNs instead serve to disrupt the increasing concentration of power over the food supply and are more readily considered as oppositional social movements (Ilbery et al., 2005).

Working from a diverse economies perspective, it is not enough to say (even in the North and South American contexts) that the organisation of AFNs around the world are in grand opposition against a totalising and unified capitalism. Whilst it is important to recognise the intersections between variegated forms of capitalism (Peck and Theodore, 2007) and food production—of which there are certainly many—we might here evoke Gibson-Graham's

(2006a) image of seeing capitalist practices as existing in a 'sea' of other economic logics, capitalist or otherwise. Whilst McMichael argues that AFNs are "counter-movements" attempting to expand their "social base on the grounds of democracy, ecology and quality" (McMichael, 2009: 142), such an understanding risks reducing a wide variety of organisational models to offering little more than an anti or counter-politics. Goodman, DuPuis and Goodman (2011) avoid this reductionist account by arguing that AFNs around the world are more open ended efforts to "seek to *reconfigure the 'orderings' of the socio-ecological* engendered by conventional agro-food provisioning" (p. 51, emphasis mine). What they critically recognise is not simply the complex relationship that AFNs have towards capitalist formations (risking capitalocentrism), but that they might help us to imagine quite different socio-ecological relationships. A feminist ethics of care framework is prescient in helping us to develop our conceptualisation, and understanding, of these new orderings.

Understanding care in AFNs

Care is central to our social existences, yet has been marginalised in other normative ethical frameworks (consequentialism, deontology et cetera) that dominate Western thought. An ethics of care framework seeks to explain the fundamental role that care plays in reproducing 'the social', whilst recognising that it is *the* central tenet without which it is impossible to imagine those other normative frameworks gaining any traction whatsoever (Katz, 2001). Carol Gilligan's (1993) pioneering account in this field nonetheless fully recognises the gendered inflections of care, which has long been cast out as a feminine activity. Women are burdened with the vast majority of 'care work' (Hochschild, 2003) that is poorly remunerated if at all. Though care often appears conceptually slippery by comparison to the abstract and often rigid principles of other normative ethical theories, Liedtka (1996) helpfully narrows down the central tenets of the ethics of care approach. As she suggests, this approach focuses on how we treat particular—as opposed to abstract—Others; it draws our attention not to the rational self-interest of Others but their need; and it is grounded on a deliberative dialogue with these Others. It is therefore irreducible to a set of universalisable guiding principles but instead concentrates on our capacity to respond to and enact responsibility towards Others (Mol et al., 2010; see also Harbers et al., 2002).

The links between this care and food are substantive, though too many accounts have taken eating as the primary domain through which questions of care arise (e.g. Abbots et al., 2016).

Yet the socio-ecological re-orderings aimed for by AFNs are fundamentally attempts to practice care (Carolan, 2014) at differing levels. After all, the Other encountered in these re-orderings is not only a human Other, nor purely an animal Other (c.f. Connolly and Cullen, 2017). Rather, the Other expands to cover the more-than-human world that we inhabit and produce food within, extending to the organismic (Tronto, 1993). This more-than-human world is full of vital difference which is itself living and not inanimate or without agency (Haraway, 2015). As a result, this does not mean that the human need be understood as a 'care giver' for all those Others in the world (Buck, 2015). Instead, as we saw in the forest garden at the start of this article, the ethic of care framework serves to problematise hierarchical normative ethical frameworks—which place the human at the top or centre—and instead proceeds with a vision of a horizontal web of interdependency between all matters. As Puig de la Bellacasa (2010) considers in her wonderful examination of permaculture, drawing attention to the diverse practices that recognise the "concrete relationalities" between interdependent "forms of life" serves to decentre "human ethical subjectivity by not considering humans as masters of, but part of earth's living beings" (p. 152). Before I bring this understanding into dialogue with my empirical research, I first outline my methodological approach and introduce the other two organisations I focus upon here.

A note on methodology and contextualising the study

This research was undertaken as part of a larger study on AFNs in a time of economic austerity in the North West of England. Although a geographical area historically better known for its pastoral farming, it is today a region well served by a wide variety of organisations that are attempting to articulate different, and more positive, developments in food production and distribution at relatively small-scales. Within the study, a variety of qualitative methods were used to make sense of these spaces, with the primary research method being 31 semi-structured interviews with those involved in different organisations. This included owners, members and volunteers at a broad range of spaces including CSA schemes, co-operatives, local food linkages and 'pay as you feel' cafés. These discussions primarily focused on the broad aims and hopes for the organisation in the future of the food system.

In addition to the interviews that I undertook, I also spent seven months undertaking volunteering in these sites which enabled me to ethnographically make sense of practices as they occurred 'on the ground' (Tracy, 2012). I collected field notes and recordings whilst

within these sites, which enabled me to analyse them alongside the transcribed interviews. The analysis that I undertook was primarily informed by the diverse economies framework, focusing on the competing forces and logics that might be experienced in ways that were not wholly amenable to representational knowledge (spoken words) in the interview process (Lorimer, 2008). In this way, these spaces were understood from the outset as not simply serving to re-establish and reproduce certain dominant subjectivities (for example, neoliberal discourses of 'consumer empowerment' and ever increasing choice) but as aiming towards more varied ends and aims (Harris, 2009).

Alongside Green Fingers discussed at the start, I spent time in two other sites. Whilst all three were CSA schemes, their organisational models differed slightly. Flourishing Fare, for example, was a rural growing site that had been established approximately 30 years ago, both relying upon community involvement in the scheme as well as operating a commercial side of the business to keep the operation afloat. Flourishing Fare had therefore for much of its existence relied upon the income of a small 'farm shop' on site—which sold both their own organically-certified produce and a wide range of what they deemed 'ethical' products—and weekly direct-to-door 'veg box' deliveries to nearby towns and villages. Although Flourishing Fare had once employed a regular cohort of waged workers, they had seen business collapse after the financial crisis of 2007/8 and one of the remaining members of staff succinctly told me that they had "just about, barely, survived". Community support from volunteers within the site had therefore taken on a new degree of importance in the subsequent years.

The third organisation that I will discuss here was Wood Grove, a newer CSA site which had been running for five years. The land on which it was based had been purchased by two retirees who had wanted to develop a community-run space for growing and learning about food. Space on the large site was informally leased to different projects to make use of as they deemed appropriate. The most prominent project on the site occupied much of the space viable for food growing, and relied on the volunteers that worked at weekly organised sessions. They could optionally donate a small amount of money to purchase tools, seeds and other equipment each year. In return for their labour and contribution to the site, the volunteers could take away a share of the produce harvested each week. The account that follows continues to draw upon ethnographic dimensions of my time spent at all three of these sites, and I now turn to the question of care and the more-than-human within these spaces.

Engaging the more-than-human world

As we saw in the forest garden at the beginning, the volunteers within the site had developed a way of producing food which attempted not to wholly exclude 'pests' or remove non-human actants, instead welcoming their presence on the site. Rather than further a productivist ethic (aiming for quantity), such a method of organising food production instead recognised our ability to practice care towards the more-than-human world. Their ethos of "food for us and food for nature" recognises the interdependency of all beings, and sees the task of growing food not as a rational manipulation of natural forces for solely human ends but as an engagement within a vibrant, more-than-human world. If humanity, as per the diagnosis of the Anthropocene, has so extensively manipulated the context in which wildlife exists—whether deer, bees, birds, worms or any other creature that we might imagine—the ethic of care fostered within the site was grounded in engagement with actants that Western thought has long understood as possessing little agency of their own (Bennett, 2004).

Whilst the legacy of actor-network theory has been to question agency as a specifically human quality (see, for example, Hopkinson, 2017), time spent in these spaces revealed some important dynamics around how we understand, and engage with, the more-than-human. Jane Bennett's important thought suggests that we ought to recognise the whole more-than-human world as "vital, energetic, lively" (Bennett, 2010: 112). In this way, though the discussion of the forest garden that I have so far offered considers only the fate of animals, the vernacular practices of food production serves to broaden our attention to other actants (Hayes-Conroy and Hayes-Conroy, 2010; Goodman, 2016). Here I draw upon the topic of soil during time spent at Flourishing Fare, which shows how an ethics of care for the Anthropocene must be able to extend to the level of the organismic (Haraway, 2015). After all, it is one thing to care for an animal with a face, corporeal body and evident affective states (Tester, 2015), but how might we care for something which has none of these characteristics?

Making sense of soil

During one of the volunteering sessions at Flourishing Fare, I was talking to one of the main growers who had been involved in the site since its inception and was well versed in the trials and tribulations of food production. I asked how they managed to produce such a wide variety of vegetables with soil that, from an edaphological standpoint, hardly offered excellent growing

conditions. He acknowledged that whilst the quality of the soil in the area was not ideal—again, this was not an area of the country known for its arable heritage—it was only through a lengthy and laboured process that they had managed to create a viable organic system. Without drawing distinctions between these alternative spaces and an abstracted mainstream, the grower lamented that so many in the world of food production would quickly reach for synthetic oil derived fertilisers to 'force' soil to offer good growing conditions for any given crop. Indeed, even the previously discussed anomalous presence of nitrogen in the atmosphere today is the result of these drives to master, replicate and accelerate what were seemingly 'natural' processes through what this grower described as "chemical farming". As it happened, the fixing of nitrogen was central to this grower's attempts to produce food in ways that engaged with the more-than-human world down to the smallest possible scale.

As the grower detailed, the humble clover covers a wide genus of legumes that perform this important role of fixing nitrogen into ammonia in soil. It is commonly grown by many farmers on fallow land to let it recover, yet often this is done in what the grower deemed to be an indiscriminate way. Growing clover in a more precise, and targeted, way brought with it a variety of benefits. As my field notes from this discussion show:

> Clover: fix nitrogen. Grow → till soil. What kind grown? Green/white/red [clover]. But depends on what grown before. Timing. What grows next? No hard and fast rule: look at and feel the soil. Work with it, <u>NOT against it!</u>

As I stood with a handful of soil at the grower's request, my own lack of knowledge became evident. Whilst I had very little idea as to how one might judge soil health, the grower read it as a rich source of information, with various 'hints' that might suggest other happenings in the soil on the site. Without fetishising the grower's relationship to the soil, what was important was this sense of always working with it. Much of this had been completed in the grower's early years at the site, and he told me of the need to learn from the soil as to what it might want. Early on, the grower favoured strains of clover that would root deep into the ground, pulling up nutrients that most crops would otherwise not be able to reach: "I've all the potassium and all the phosphate that were on all the hills […] but it's all down deep in my subsoil. […] [I]f I grow a clover that mines my subsoil, not only does it aid drainage, it pulls that nutrition up and then I incorporate it into the top four inches *where all the life is*" (emphasis mine). Over time, this practice of growing clover that would reach different strata within the soil served to

transform the site into one that, by comparison to the surrounding area, offered significantly better growing conditions. Despite soil bringing with it a variety of negative connotations—death, decay and waste—recognising it as something full of diverse lifeforms and a sense of its own living agency shows how AFNs might prompt us to extend an ethics of care to the level of the organismic.

Using clover to nurture the soil was, however, something that took time. Though hard to accurately estimate—in a way growing food necessitated an ongoing, and forever experimental, co-operation with the more-than-human (Carolan, 2013)—the grower suggested that it took approximately seven years to transform the site from when he first began. Of course, food could be grown in the meantime, but it was more difficult and the yields were significantly worse: everything that purveyors of productivist agriculture would find unsatisfactory. These discontinuities bring to the fore the asynchronous temporalities between the human and more-than-human worlds in establishing an ethic of care for the Anthropocene (Szerszynski, 2017; Puig de la Bellacasa, 2015). In the domain of soil systems and Earth surface processes, seven years is an instant, whilst in the (much shorter) timespans of the human this is a significant period. Recognising our dependency on soil and all the vibrant life it contains is prescient, especially that now that the prognosis of 'peak soil', much like 'peak oil', has been proclaimed and is "heading towards exhaustion without equivalent efforts to renew it" (Puig de la Bellacasa, 2015: 693). Given the ills of the Anthropocene, part of establishing the ethic of care that I have been arguing for here is about decentering human subjectivity and the immediacy of normative ethical frameworks, instead attempting to work at the (various) timescales of the more-than-human world (Collard et al., 2015). The urgency and rapidity that partly characterises productivist logics behind food production ought to be understood as an attempt to enforce human timescales on a planet offering little more than a disparate series of 'resources' to be exploited, which this ethic of care discourages us from.

The limits of non-human agency

Engaging in care for the more-than-human world in the processes of food production was, however, fraught with tensions that recurred throughout the time I spent on these sites. In this way, whilst we ought to recognise the positive lessons that we can take from these sites in addressing the Anthropocene, it is worth being wary of offering an account that descends into an uncritical eco-maternalism (Buck, 2015). This perspective risks romanticising 'nature' as

purely benevolent and failing to pay significant attention to the dynamics of the vernacular practices within these spaces. Drawing on a situation that occurred later in the time I spent at Flourishing Fare, I will show how differing organisational dynamics come into tension with the ethic of care that I have so far outlined, highlighting for the need to crucially situate these understandings within complex organisational contexts.

With the weather warming, my return to the site coincided with the height of the summer harvesting season. The sheer glut of produce on site now meant that the work of the volunteers took on an extra degree of importance, and as I arrived early on a Saturday morning for another session, I checked in with one of the growers on the site who told me about a challenging problem that had faced in the week previously.

With the financial status of the site continuously precarious, the harvesting season signalled the important arrival of a wide range of salad leaves with short growing windows. Though seemingly insignificant, the salad leaves provided a valuable source of income, with links made to temporarily supply local restaurants and cafés. Despite growing the salad leaves within a fully organic system, as well as in a greenhouse with a pond in it—quite unlike overly familiar images of industrial monocultures—they had developed a problem with dock beetle. Though refusing to cast them out simply as 'pests' worthy of eradication, the dock beetle had damaged the salad leaves which meant that much of the crop could not be sold. In any other circumstances, this would be a minor inconvenience, yet the financial significance of the salad leaves meant action had to be taken. The grower had made use of every permitted spray under the organic certification to deter the beetle and had even gone as far as digging up the crop and moving it out of the greenhouse, yet none of these tactics had any success.

After much deliberation with others at the site, the grower had regrettably decided to apply for an exemption from the strict rules of the organic certification board. Though temporary, this exemption would permit the grower to use a class of pesticide (a pyrethroid) on the salad leaves to rid them of the dock beetle. I asked her to explain how this process works:

> [T]o be allowed to use it in an organic system you need to explain how you're going to minimise its use, explain that you've done everything else that you could possibly do, explain that the economic impact on your business will be significant and you will be checked on that […] because it kills insects indiscriminately. […] So I'm saying I'm

> only going to use it on a crop that's very economically important to us and which can't be sold when it's full of holes [and] like I'm not going to take a great big sprayer and spray it [everywhere]. If I was a non-organic farmer I could do what I liked with that and no-one would mind or ask me about it.

The grower's evident unease with the decision to use the pyrethroid pesticide shows that such decisions were not arrived at in a trivial way. That this space was grounded in an ethic to co-operate with the more-than-human world, as opposed to control it, seems antithetical to their usage of the pesticide. As the grower later told me, for her "the betterness of the vegetable is [in] the ethics of the organisation" and her preference would have been to say "okay, that's life, just compost it all" until the next opportunity to grow it. Whilst it seems reductionist (and arguably capitalocentric, to borrow Gibson-Graham's terminology) to suggest that it was simply a case of economic imperatives forcing, or determining, this response to the dock beetle, clearly to some degree the financial importance of the salad leaves served to rearticulate their practices.

In this way, it is not enough to posit that we might envisage food production in the Anthropocene as occurring within "site[s] of relationship" (Buck, 2015: 374) as opposed to sites of control grounded, as Ingold puts it, in the masculinised "colonial image of the conquest of nature" (Ingold, 2000: 82). 'Relationship' here remains undertheorised, and sees the human as a passive receptor to the various agencies of the more-than-human world. As the case of the pyrethroid shows, the recognition of these agencies occurs within organisational contexts and under the pressures of competing logics which are not necessarily reconcilable. Whilst partly economic, the decision to use the pesticide is bound up with aesthetic judgements around what a 'good' salad leaf must look like from a human perspective, and shows the ways in which more-than-human agency comes to be constrained. Of course, such an instance of pesticide usage does not make it all that surprising that Anthropocene is haunted by dystopian visions of industrial monocultures: acres of palm oil and soy where virgin rainforest once stood. These monocultures, as Buck fairly argues, are merely 'sites of control' writ large, and legitimated through the domination of more-than-human agency under the rubric of the human. By comparison, a feminine ethic of care for the more-than-human world must be understood as providing something of an antidote to the ills of the Anthropocene, though it is important to recognise its limits. As the discussion so far shows, the undergirding of these spaces with this

ethic can help us, over time, to recognise the commonality underlying all our existences in the Anthropocene.

Feeling and recognising commonality

The commonality I refer to here does not aim to entirely erase ontological difference between the human and more-than-human worlds, but instead to recognise the interdependency joining us all together. Though the pyrethroid shows how this presents us with some difficult, sometimes contradictory decisions, other cases such as the discussion of soil shows how we might grow food in co-operation with the more-than-human world. Drawing on Jean-Luc Nancy (2000), Gibson-Graham suggest that we all share an "inessential commonality of negotiating our own implication in the existence of others" (Gibson-Graham, 2006a: 88). The existence of others must here be understood as not simply human others, but an expanded remit covering the more-than-human world.

AFNs, I argue, with their attempts to organise food production differently, can enable us to "share meaning and find ways of being together in the world" (Gibson-Graham, 2006a: 82) in ways that are not engendered by more 'mainstream' socio-ecological relations. By way of example, FairTrade schemes initially heralded the possibility of connecting distant actors in food supply chains through what Dolan (2010) understands as a 'virtual morality' operating at a distance, perhaps allowing us to care for others who would have otherwise been invisible. In doing so, such a scheme was hoped to break down commodity fetishism and make more tangible links across food supply chains. The many critical appraisals of FairTrade that have been offered, notably Berlan and Dolan (2014), however suggest that this initial promise has instead manifested in an ever-growing responsibilisation of the discursively-constructed figure of 'the consumer' (Evans et al., 2017). In making (Western) consumers ever more responsible for mitigating the externalities of their own, singular consumption practices, a now conventionalised FairTrade remains stuck at the level of normative decision-making and the narrowed sense agency that it confers. In the final empirical fragment, I turn our attention to Wood Grove to show how AFNs can enable a wider recognition of pluralised agency, and with it a commonality, that Gibson-Graham and Roelvink (2010) identify as crucial to their 'economic ethics' for the Anthropocene.

Though Wood Grove had been running for a much shorter timespan than the other sites, the sheer level of enthusiasm of the volunteers who regularly attended to contribute meant that they had transformed this site from a sodden field into a mixed space for growing food, with grand ambitions for the future. Not only did the volunteers wish to continue diversifying the range of food that they grew on the site, but many told me of their desire to host educational workshops on the site and continue to open the space to the wider community. Given the truly varied backgrounds of the volunteers that were already involved in the site, the critique that CSA schemes reproduce exclusionary identity politics on raced and classed lines (Slocum, 2006) found little traction here. On a particularly inclement Sunday afternoon, I asked one of the founding members of the site as to what she thought motivated the volunteers to return week after week in these unpleasant conditions.

Whilst a share of the weekly harvest may seem like an obvious motivation, the founder told me of their challenges in the early stages to regularly gather together enough volunteers to undertake the sheer level of work that the site required. To talk of the food alone was not enough to get people to regularly return. Instead, they needed something that would *connect* the volunteers to site and the wider project that they were trying to enact. The founder drew my attention to a wooded area on the edge of the (large) site which was gradually being expanded as a conservation area. Collectively they decided that on their first visit to the site, new volunteers would be asked to plant a tree sapling in this area which would become 'their' tree. This was felt to give a sense of permanence within the site and some of the long-standing volunteers could even point 'their' trees out to me. As a small group of us were walking through the conservation area to see the trees, an oddly existential feeling emerged: even though we (the humans) were responsible for planting these trees, they would likely long outlive our short existences on this planet. This ought not lead to nihilism or a sense of futility. After all, who knows what brief warmth this canopy might provide to some other being in this otherwise 'cold cosmos' (Clark, 2010) long into the future?

An ethics of care approach for the Anthropocene requires a recognition of the shared commonality of being. Too many ills of this age are derived from the dominance of the individual Western subject and its inalienable sovereignty. It is only through this singularity and bounded sense of being that the ability to act *over* a world it dominates comes to be possible. By instead recognising care for the more-than-human, we can recognise how we do not act over a world but exist within it together. 'Being-in-common' within the world in this

way is therefore as much a 'praxis' as it is a call for inventive and generative organisation. The AFNs that I have discussed here are embryonic and can help us to recognise the potentiality of the present in organising differently beyond the ills of the here-and-now (Carolan, 2016), prompting us to consider how else might we organise-in-common as we rush headlong into the Anthropocene.

Conclusion: a caring Anthropocene

By drawing on ethnographic reflections of time that I spent in three CSA schemes, here I have argued that alternative spaces in the world of food can serve to foster a more-than-human ethics of care for the Anthropocene. Undoubtedly, debate will continue as to how we best describe or name this age following on from the Holocene, and the search for culpability continues (e.g. Bonneuil and Fressoz, 2016). Yet beyond the question of who (or what) we might blame, there is a more positive way out of this mess. The account that I have offered here is an attempt to articulate such a path. In the face of overbearing and totalised capitalism, in which the future can only be imagined as a worse, more Hobbesian version of the present, we must always remember to read for difference. Recognising the present "as active, a process, a series of becomings" (Stock et al., 2015a: 219) forces us to take notice of the potentiality of the here-and-now, and of heterogeneous relationships within our social and economic worlds that might be articulated on markedly different terms. Though positive change may sometimes seem far away, it is not arrived at via distant horizons but instead in the immanence of the present.

The case of AFNs, as I have suggested, are such instances of potentially positive change, striving towards these new becomings. These are spaces which exist despite the seeming totality of capitalism, and can point towards different, hopeful ways of mattering and existing within the more-than-human world. This more-than-human engagement involves "actively *connecting* with the more than human, rather than simply *seeing* connection" (Gibson-Graham, 2011: 2, emphasis in original). In this way, we must be open "to what can be learned from what is happening on the ground" (Gibson-Graham and Roelvink, 2010: 342) and "read the potentially positive futures barely visible in the order of things, […] [in] imagin[ing] how to strengthen and move them along" (Gibson-Graham and Roelvink, 2010: 342). Though Buck (2015) is correct in saying that we ought not see these glimpses of potentially positive futures as sufficient replacements for wider social, political and economic change, they may instead

offer a glimpses of ways in which we can all organise in articulating more caring futures for the world which sustains our collective existence.

References

Abbots, E.-J., Lavis, A. and Attala, L. (eds.). 2016. *Careful Eating: Bodies, Food and Care*. New York, NY: Routledge.

Aiken, M. and Harris, M. 2017. The 'hollowing out' of smaller third sector organisations? *Voluntary Sector Review*. **8**(3),pp.333–342.

Bauman, Z. 1993. *Modernity and ambivalence*. New York, NY: Polity Press.

Bennett, J. 2004. The Force of Things: Steps toward an Ecology of Matter. *Political Theory*. **32**(3),pp.347–372.

Bennett, J. 2010. *Vibrant matter: a political ecology of things*. Durham: Duke University Press.

Berlan, A. and Dolan, C. 2014. Of Red Herrings and Immutabilities: Rethinking Fairtrade's Ethic of Relationality among Cocoa Producers *In*: M. K. Goodman and C. Sage, eds. *Food Transgressions: Making Sense of Contemporary Food Politics*. Farnham: Ashgate, pp. 39–60.

Bonneuil, C. and Fressoz, J.-B. 2016. *The shock of the Anthropocene*. London: Verso.

Buck, H.J. 2015. On the Possibilities of a Charming Anthropocene. *Annals of the Association of American Geographers*. **105**(2),pp.369–377.

Carlisle, L. 2015. Audits and agrarianism: The moral economy of an alternative food network. *Elementa: Science of the Anthropocene*. **3**(1),pp.1–16.

Carolan, M. 2016. Adventurous food futures: knowing about alternatives is not enough, we need to feel them. *Agriculture and Human Values*. **33**(1),pp.141–152.

Carolan, M. 2014. Affective sustainable landscapes and care ecologies: getting a real feel for alternative food communities. *Sustainability Science*. **10**(2),pp.317–329.

Carolan, M.S. 2013. The Wild Side of Agro-food Studies: On Co-experimentation, Politics, Change, and Hope. *Sociologia Ruralis*. **53**(4),pp.413–431.

Chernilo, D. 2016. The question of the human in the Anthropocene debate. *European Journal of Social Theory*. **20**(1),pp.44–60.

Clark, N. 2010. Ex-orbitant Generosity: Gifts of Love in a Cold Cosmos. *Parallax*. **16**(1),pp.80–95.

Clark, N. 2014. Geo-politics and the disaster of the Anthropocene. *The Sociological Review*. **62**(S1),pp.19–37.

Clark, N. and Yusoff, K. 2017. Geosocial Formations and the Anthropocene. *Theory, Culture & Society*. **34**(2–3),pp.3–23.

Collard, R.-C., Dempsey, J. and Sundberg, J. 2015. A Manifesto for Abundant Futures. *Annals of the Association of American Geographers*. **105**(2),pp.322–330.

Connolly, L. and Cullen, J. 2017. Animals and Organisations: An Ethic of Care Framework. *Organization & Environment*.,pp.1–19.

Crutzen, P.J. 2002. Geology of mankind. *Nature*. **415**(23),pp.23–23.

Davies, J. 2016. *The birth of the Anthropocene*. Oakland, CA: University of California Press.

Denham, T., Fullagar, R. and Head, L. 2009. Plant exploitation on Sahul: From colonisation to the emergence of regional specialisation during the Holocene. *Quaternary International*. **202**(1),pp.29–40.

Dolan, C.S. 2010. Virtual moralities: The mainstreaming of Fairtrade in Kenyan tea fields. *Geoforum*. **41**(1),pp.33–43.

Dowler, E., Kneafsey, M., Cox, R. and Holloway, L. 2010. 'Doing food differently': reconnecting biological and social relationships through care for food. *The Sociological Review*. **57**(S2),pp.200–221.

Evans, D., Welch, D. and Swaffield, J. 2017. Constructing and mobilizing 'the consumer': Responsibility, consumption and the politics of sustainability. *Environment and Planning A*.,pp.1–17.

Foster, J.B. 1999. Marx's Theory of Metabolic Rift: Classical Foundations for Environmental Sociology. *American Journal of Sociology*. **105**(2),pp.366–405.

Gibson-Graham, J.K. 2011. A feminist project of belonging for the Anthropocene. *Gender, Place & Culture*. **18**(1),pp.1–21.
Gibson-Graham, J.K. 2006a. *A postcapitalist politics*. London: University of Minnesota Press.
Gibson-Graham, J.K. 2006b. *The end of capitalism (as we knew it): a feminist critique of political economy*. London: University of Minnesota Press.
Gibson-Graham, J.K. and Roelvink, G. 2010. An Economic Ethics for the Anthropocene. *Antipode*. **41**(S1),pp.320–346.
Gillen, P. 2016. Notes on Mineral Evolution. *Environmental Humanities*. **8**(2),pp.215–234.
Gilligan, C. 1993. *In a different voice: psychological theory and women's development*. Cambridge, MA: Harvard University Press.
Goodman, D. 2004. Rural Europe Redux? Reflections on Alternative Agro-Food Networks and Paradigm Change. *Sociologia Ruralis*. **44**(1),pp.3–16.
Goodman, D., DuPuis, E.M. and Goodman, M.K. 2011. *Alternative food networks: knowledge, place and politics*. New York, NY: Routledge.
Goodman, M.K. 2016. Food geographies I: Relational foodscapes and the busy-ness of being more-than-food. *Progress in Human Geography*. **40**(2),pp.257–266.
Guthman, J. 2008. Bringing good food to others: investigating the subjects of alternative food practice. *Cultural Geographies*. **15**(4),pp.431–447.
Hamilton, C. 2015. Getting the Anthropocene so wrong. *The Anthropocene Review*. **2**(2),pp.102–107.
Haraway, D. 2015. Anthropocene, Capitalocene, Plantationocene, Chthulucene: Making Kin. *Environmental Humanities*. **6**(1),pp.159–165.
Harbers, H., Mol, A. and Stollmeyer, A. 2002. Food Matters: Arguments for an Ethnography of Daily Care. *Theory, Culture & Society*. **19**(5–6),pp.207–226.
Harris, E. 2009. Neoliberal subjectivities or a politics of the possible? Reading for difference in alternative food networks. *Area*. **41**(1),pp.55–63.
Hayes-Conroy, J. and Hayes-Conroy, A. 2010. Visceral Geographies: Mattering, Relating, and Defying. *Geography Compass*. **4**(9),pp.1273–1283.
Head, L. 2000. *Cultural landscapes and environmental change*. London: Arnold.
Head, L. 2016. *Hope and Grief in the Anthropocene*. London: Routledge.
Hill, A. 2015. Moving from 'matters of fact' to 'matters of concern' in order to grow economic food futures in the Anthropocene. *Agriculture and Human Values*. **32**(3),pp.551–563.
Hochschild, A.R. 2003. *The Managed Heart: Commercialization of Human Feeling*. Berkeley, CA: University of California Press.
Hopkinson, G.C. 2017. Making a market for male dairy calves: alternative and mainstream relationality. *Journal of Marketing Management*. **33**(7–8),pp.556–579.
Ilbery, B., Morris, C., Buller, H., Maye, D. and Kneafsey, M. 2005. Product, Process and Place: An Examination of Food Marketing and Labelling Schemes in Europe and North America. *European Urban and Regional Studies*. **12**(2),pp.116–132.
Ingold, T. 2000. *The perception of the environment: essays on livelihood, dwelling and skill*. London: Routledge.
Johnson, E., Morehouse, H., Dalby, S., Lehman, J., Nelson, S., Rowan, R., Wakefield, S. and Yusoff, K. 2014. After the Anthropocene: Politics and geographic inquiry for a new epoch. *Progress in Human Geography*. **38**(3),pp.439–456.
Katz, C. 2001. Vagabond Capitalism and the Necessity of Social Reproduction. *Antipode*. **33**(4),pp.709–728.
Knight, J. 2015. Anthropocene futures: People, resources and sustainability. *The Anthropocene Review*. **2**(2),pp.152–158.
Larsen, S.C. 2016. Regions of care: a political ecology of reciprocal materialities. *Journal of Political Ecology*. **23**,pp.159–166.
Latour, B. 2002. *We Have Never Been Modern*. Cambridge, MA: Harvard University Press.
Latta, A. 2014. Matter, politics and the sacred: insurgent ecologies of citizenship. *Cultural Geographies*. **21**(3),pp.323–341.
Lawrence, G., Richards, C. and Lyons, K. 2013. Food security in Australia in an era of neoliberalism, productivism and climate change. *Journal of Rural Studies*. **29**,pp.30–39.
Lee, R. 2000. Shelter from the storm? Geographies of regard in the worlds of horticultural

consumption and production. *Geoforum*. **31**(2),pp.137–157.
Lewis, S.L. and Maslin, M.A. 2015. Defining the Anthropocene. *Nature*. **519**(7542),pp.171–180.
Leyshon, A., Lee, R. and Williams, C.C. (eds.). 2003. *Alternative economic spaces*. London: Sage.
Liedtka, J.M. 1996. Feminist Morality and Competitive Reality: A Role for an Ethic of Care? *Business Ethics Quarterly*. **6**(2),pp.179–200.
Lockie, S. 2008. Responsibility and agency within alternative food networks: assembling the 'citizen consumer'. *Agriculture and Human Values*. **26**(3),pp.193–201.
Lorimer, H. 2008. Cultural geography: non-representational conditions and concerns. *Progress in Human Geography*. **32**(4),pp.551–559.
Lorimer, J. and Driessen, C. 2014. Wild experiments at the Oostvaardersplassen: rethinking environmentalism in the Anthropocene. *Transactions of the Institute of British Geographers*. **39**(2),pp.169–181.
Marx, K. 1976. *Capital: a critique of political economy, Volume III*. London: Penguin.
McMichael, P. 2009. A food regime genealogy. *The Journal of Peasant Studies*. **36**(1),pp.139–169.
Mol, A., Moser, I. and Pols, J. (eds.). 2010. *Care in practice: on tinkering in clinics, homes and farms*. Bielefeld: transcript.
Moore, J.W. 2015. *Capitalism in the web of life: ecology and the accumulation of capital*. New York, NY: Verso.
Moore, J.W. 2011. Ecology, Capital, and the Nature of Our Times: Accumulation & Crisis in the Capitalist World-Ecology. *Journal of World-Systems Research*. **17**(1),pp.107–146.
Nancy, J.-L. 2000. *Being singular plural*. Stanford, CA: Stanford University Press.
Nyberg, D. and Wright, C. 2013. Corporate corruption of the environment: sustainability as a process of compromise. *The British Journal of Sociology*. **64**(3),pp.405–424.
Nyberg, D. and Wright, C. 2016. Performative and political: Corporate constructions of climate change risk. *Organization*. **23**(5),pp.617–638.
Peck, J. and Theodore, N. 2007. Variegated capitalism. *Progress in Human Geography*. **31**(6),pp.731–772.
Perry, M. 2016. Sustaining food production in the Anthropocene: influences by regulation of crop biotechnology *In*: A. Kennedy and J. Liljeblad, eds. *Food Systems Governance: Challenges for Justice, Equality and Human Rights*. New York, NY: Routledge, pp. 127–142.
Pretty, J., Toulmin, C. and Williams, S. 2012. *Sustainable Intensification: Increasing Productivity in African Food and Agricultural Systems*. Hoboken, NJ: Taylor and Francis.
Puig de la Bellacasa, M. 2010. Ethical doings in naturecultures. *Ethics, Place & Environment*. **13**(2),pp.151–169.
Puig de la Bellacasa, M. 2015. Making time for soil: Technoscientific futurity and the pace of care. *Social Studies of Science*. **45**(5),pp.691–716.
Rickards, L. 2015. Critiquing, mining and engaging Anthropocene science. *Dialogues in Human Geography*. **5**(3),pp.337–342.
Robbins, P. and Moore, S.A. 2013. Ecological anxiety disorder: diagnosing the politics of the Anthropocene. *Cultural Geographies*. **20**(1),pp.3–19.
Roe, E. and Buser, M. 2016. Becoming ecological citizens: connecting people through performance art, food matter and practices. *Cultural Geographies*. **23**(4),pp.581–598.
Sarewitz, D. 2000. Science and environmental policy: an excess of objectivity *In*: R. Frodeman, ed. *Earth matters: the earth sciences, philosophy, and the claims of community*. Upper Saddle River, NJ: Prentice Hall, pp. 79–98.
Schutz, A. 1967. *The phenomenology of the social world*. Evanston, IL: Northwestern University Press.
Scrinis, G. 2007. From Techno-Corporate Food to Alternative Agri-Food Movements. *Local-Global*. **4**,pp.112–140.
Si, Z., Schumilas, T. and Scott, S. 2015. Characterizing alternative food networks in China. *Agriculture and Human Values*. **32**(2),pp.299–313.
Slocum, R. 2006. Anti-racist Practice and the Work of Community Food Organizations. *Antipode*. **38**(2),pp.327–349.
Sommerville, M., Essex, J. and Le Billon, P. 2014. The 'Global Food Crisis' and the Geopolitics of Food Security. *Geopolitics*. **19**(2),pp.239–265.

Steffen, W., Crutzen, P.J. and McNeill, J.R. 2007. The Anthropocene: Are Humans Now Overwhelming the Great Forces of Nature. *AMBIO: A Journal of the Human Environment*. **36**(8),pp.614–621.
Steffen, W., Grinevald, J., Crutzen, P. and McNeill, J. 2011. The Anthropocene: conceptual and historical perspectives. *Philosophical Transactions of the Royal Society of London A: Mathematical, Physical and Engineering Sciences*. **369**(1938),pp.842–867.
Steffen, W., Persson, Å., Deutsch, L., Zalasiewicz, J., Williams, M., Richardson, K., Crumley, C., Crutzen, P., Folke, C., Gordon, L., Molina, M., Ramanathan, V., Rockström, J., Scheffer, M., Schellnhuber, H.J. and Svedin, U. 2011. The Anthropocene: From Global Change to Planetary Stewardship. *AMBIO*. **40**(7),pp.739–761.
Stock, P. V, Carolan, M.S. and Rosin, C.J. 2015a. Food as mediator: opening the dialogue around food *In*: P. V Stock, M. S. Carolan and C. J. Rosin, eds. *Food utopias: reimagining citizenship, ethics and community*. London: Routledge, pp. 219–225.
Stock, P. V, Carolan, M.S. and Rosin, C.J. (eds.). 2015b. *Food utopias: reimagining citizenship, ethics and community*. London: Routledge.
Szerszynski, B. 2017. The Anthropocene monument. *European Journal of Social Theory*. **20**(1),pp.111–131.
Tester, K. 2015. *Animals and society: the humanity of animal rights*. New York, NY: Routledge.
Tracy, S.J. 2012. *Qualitative Research Methods: Collecting Evidence, Crafting Analysis, Communicating Impact*. Chicester: Wiley.
Tronto, J.C. 1993. *Moral boundaries: a political argument for an ethic of care*. New York, NY: Routledge.
Venn, L., Kneafsey, M., Holloway, L., Cox, R., Dowler, E. and Tuomainen, H. 2006. Researching European 'alternative' food networks: some methodological considerations. *Area*. **38**(3),pp.248–258.
Walker, J. and Cooper, M. 2011. Genealogies of resilience: From systems ecology to the political economy of crisis adaptation. *Security Dialogue*. **42**(2),pp.143–160.
Waters, C.N., Syvitski, J.P.M., Gałuszka, A., Hancock, G.J., Zalasiewicz, J., Cearreta, A., Grinevald, J., Jeandel, C., McNeill, J.R., Summerhayes, C. and Barnosky, A. 2015. Can nuclear weapons fallout mark the beginning of the Anthropocene Epoch? *Bulletin of the Atomic Scientists*. **71**(3),pp.46–57.
Whatmore, S. 2006. Materialist returns: practising cultural geography in and for a more-than-human world. *Cultural Geographies*. **13**(4),pp.600–609.
Whatmore, S., Stassart, P. and Renting, H. 2003. Editorial: What's alternative about alternative food networks? *Environment and Planning A*. **35**(3),pp.389–391.
Wheeler, T. and von Braun, J. 2013. Climate Change Impacts on Global Food Security. *Science*. **341**(6145),pp.508–513.
White, D.F., Gareau, B.J. and Rudy, A.P. 2017. Ecosocialisms, Past, Present and Future: From the Metabolic Rift to a Reconstructive, Dynamic and Hybrid Ecosocialism. *Capitalism Nature Socialism*. **28**(2),pp.22–40.
Whiteman, G., Walker, B. and Perego, P. 2013. Planetary Boundaries: Ecological Foundations for Corporate Sustainability. *Journal of Management Studies*. **50**(2),pp.307–336.
Wilson, A.D. 2013. Beyond Alternative: Exploring the Potential for Autonomous Food Spaces. *Antipode*. **45**(3),pp.719–737.
Wright, C. and Nyberg, D. 2015. *Climate change, capitalism, and corporations*. Cambridge: Cambridge University Press.
Wright, C. and Nyberg, D. 2012. Working with passion: Emotionology, corporate environmentalism and climate change. *Human Relations*. **65**(12),pp.1561–1587.
Wright, C., Nyberg, D., De Cock, C. and Whiteman, G. 2013. Future imaginings: organizing in response to climate change. *Organization*. **20**(5),pp.647–658.
Wright, K. 2016. Resilient communities? Experiences of risk and resilience in a time of austerity. *International Journal of Disaster Risk Reduction*. **18**,pp.154–161.
Zalasiewicz, J., Kryza, R. and Williams, M. 2014. The mineral signature of the Anthropocene in its deep-time context. *Geological Society, London, Special Publications*. **395**(1),pp.109–117.