Working Lives: More-than-human use-relations on a UK organic dairy farm

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Abstract

In spite of hardships, and encroaching systems of intensive capital-oriented farming, many livestock rearers in the Northwest of England choose to produce organically. When maximal productivity isn't at the forefront of decision-making, it opens up cosmological questions of how and why they choose to farm this way, and poses ambiguities regarding how species relate to one another in a context that still demands the instrumentalisation of life. Research took place over a month spent living and working on an organic dairy farm. In this space of mitigated discipline, where long-standing use-relations have rendered cattle dependent on the sovereignty of human dominion, organic production gives rise to a number of co-dependencies that see power and control reoriented through modalities of care. What emerges is a site where conscious acts of 'working with' subvert the most acute modes of extraction and objectification, and aid the formation of a common, coeval world. Care, intimacy, conviviality, all of these exist within the organic ideology as a way of resisting capitalism, and yet they are also the means through which extraction operates. Incorporation into nonhuman social orders, affective communication, the nurturing of idiosyncratic selves into 'good workers'; these are all formed from, and conducive to kinship, but they are also vital in-roads to cooperation and commercial output. What at first appears as tension, between companionship and instrumentality, largely coheres both practically and cosmologically. It's a mode of production that positions itself in radical defiance to capitalism, striving to function beyond its homogenising reach, but ultimately finds itself rendered as a peri-capitalist entity succumbing to the edicts of the free market.

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Introduction

A shrill, penetrating shout ruptures the thick quiet of night. It returns every thirty seconds or so, followed by a low murmur of concerned voices. The commotion doesn't last long, and within a matter of minutes the heavy silence of the night is restored and I go back to sleep.

In the morning Alan informs me that a calf was born. He also heard the commotion in the night, but recognising the stages of this procedure, the calls and comings and goings of the process, he saw no need to intervene, safely monitoring the situation from the comfort of his bed. He tells me he knows this cow, it's no heifer; it's calved many times before, it's reliable, experienced, a good worker. He tells me the process is natural and familiar, and the cow will make it known if human intervention is necessary. Within a few hours I meet Alan returning from the calving pen, his brow furrowed with concern, carrying a feeder full of milk. He explains that the calf isn't taking to its mother: *"If they don't feed within the first few hours they're as good as dead".* But there's a flipside to this act of care, and he has to be careful not to mistakenly install himself as a surrogate. Before long the scare is abated and the calf is nursing well. Alan's confident that it's well, and set to develop healthily; it will grow to be a reliable, competent producer like the rest of the herd.

This encounter speaks to a number of tensions that first informed the course of this research. The calf is inducted into the world as a productive entity. Ensuring its survival is not just a question of kinship but of economic necessity, and the emotional burdens of farming have both commercial and socio-affective implications. Through modalities of care, empathy, affective communication, farmers enter into a more-than-human worldview conducive to both functional cooperation and meaningful connection. In this space, work penetrates every corner of life, and the comfort of the night is not a refuge from the flowing nonhuman processes of life and growth. Processes that simultaneously govern this space, whilst offering unique extractive potential. But

despite an inherent extractivism, the organic dairy farm consciously positions itself away from the efficiency-driven techniques of the capitalist megafarm.

The questions posed here are both why, and in what ways these farmers' practices contend with prevailing norms in capitalist systems of production; coursing the numerous ambiguities of biocapital that comprise this site. There's a tension here, between utility and kinship, between the affordance of natural freedoms, and the need to control and produce. How are instrumentality and companionship reconciled in a coherent worldview? And what do the cracks in this cosmology tell us about capital, about farming, about the potential for different species to coexist and thrive in the pursuit of production?

Starting with analysis of the processes of biocapital, discipline and power, the first chapter aims to give a broad overview of some of the structures of life on the farm and the tensions that emerge between care and control. Following on, chapter two courses the meaning of 'work' in this context; probing the potential of thinking through nonhuman labour, the co-constituted nature of the site, capacities for collaboration, and the limits of conviviality. The final chapter follows production to its material and ideological limits; investigating the farm's place in the market, and mounting concerns for the future.

Context

Humans and other animals have been existing together in states of mutual becoming for tens of thousands of years. Since the advent of animal agriculture many beings have found themselves instrumentalised to feed, clothe, protect, or work for us, fostering complex interpersonal connections of companionship, reverence and exploitation in the process (Porcher, 2015, 3).

The word *capital* in the contemporary sense of wealth and accumulation shares an etymological root with *cattle*; once used in reference to their cultural significance as fecund sources of affluence (ibid, 53). Cattle were first domesticated as many as 10,500 years ago; considerably later than many other animals (Schwabe, 1994, 38). But where earlier domesticated species like dogs, goats and sheep are thought to have essentially domesticated themselves, cattle were likely domesticated by humans with more intention; motivated by a complex cosmology that was simultaneously pragmatic, instrumental, spiritual and affectionate in its rationale (ibid). To this day many people carry a trace of this relationship in the form of lactase persistence; imprinted permanently in their genome. And in a similar fashion, the bodies of cattle, their morphologies and varying capacities to grow, produce and work have been sculpted through time by human designs in a relation of mutual dependence (Ingold, 2000, 63).[1]

Over the past two centuries a truly industrialised relation of production with cattle has risen to the fore where most traditional forms of animal husbandry have been entirely supplanted by, or become synonymous with, intensive modes of production (Porcher, 2015, 3). Throughout the UK, international corporations and independent farmers alike have submitted to this technified factory-like transformation of relations with cattle. In such a context, little value is placed on the lives and roles of other animals in society, regarding them as mere machinations; hidden, silent modes of protein-production (ibid, 4). Many blame industrial technologies for this transformation, as with the phrasings 'factory farming', or 'industrial agriculture'. But the 'why' in this equation is capitalism; why have these modes of farming superseded others? The dynamism of technology

[1] Across the ancient world cattle occupied significant roles as beasts of burden; and their powerful potential to exceed human capabilities led to the rise of surpluses of grains and crops to be used for exchange, subsequently resulting in some of the earliest social divisions of labour (Schwabe, 1994, 40-1). Sovereigns, states and iconic displays of supremacy were founded on the cow's various capacities to achieve things far beyond the scope of human potential (ibid, 42).

and innovation is not an external force unto itself; its drive is embedded in society (Gunderson, 2011, 260).

In pre-capitalist societies of Britain, livestock were generally reared for subsistence, where some surplus foodstuffs might be taken to local markets for exchange. In this context however, markets were not driven solely by competition, and the most formidable commercial commodities tended to be luxury non-essential goods (Wood, 2002, 78). The emergence of capitalism was signalled by the appropriation of the means of production by the bourgeoisie, where use value became entirely supplanted by exchange value, with money becoming the means and motivation of exchange, and time, through labour power, becoming saleable (Marx, 1964, [1844], 168, cited in Gunderson, 2011, 262). Rural capitalist relations were exacerbated by land enclosures, and it's been contended that the conversion of land into more profitable pasturage throughout Europe was possibly the "most vivid expression of the relentless process that was changing not only the English countryside but also the world: the birth of capitalism" (Wood, 2002, 109).

Industrial biocapitalism necessarily engenders certain divisions of labour, evident across farming practices, and entering into a purely instrumentalised relationship with other natural life requires particular specialisations (Deleage, 2019, 149-50). This generally comes in the form of a technification of farming; whether it be biotechnological advances in genetics, mechanisation of processes, the use of chemical fertilisers and pesticides, or the processual social division of work across different demographics of farmers and specialists, and the production of distinct specialised products between places (ibid, 150). All of this has profound implications for the relationship between people and cattle. With exchange-value ruling supreme, profit margins rely on keeping the passage of life from birth to death to as short a timespan as possible (Gunderson, 2011, 262). To ensure profitability, or to meet the demands of a highly devalued free-market, 'productivity'

comes in the form of efficiency-driven, labour-saving techniques and specialisations that often see nonhuman animals confined, disciplined and objectified (ibid, 264; Novek, 2005). The 20th century has seen an increasing upheaval of traditionally pasture-fed dairy farming for intensive indoor dairy farms, housing hundreds of cattle, that are kept in confinement, fed environmentally costly high-protein grain-based diets, and bred to produce the highest yields possible, often to the detriment of their comfort and health (Clay et al, 2020).

Livestock production now factors among the top contributors to the most serious environmental problems, from local to global scales. From immense emissions production, water pollution, exhaustive land use, to the loss of biodiversity, issues of biosecurity such as food and water-borne pathogens and the proliferation of antibiotic resistance (Clay et al, 2020; Ilea, 2009). Just as this relationship with the nonhuman world underscored the iconic civilizations of the distant past, it's development into a global, mass-market, productivist industry has been integral to defining our current era and all of its associated ills; that of the Anthropocene, Capitalocene, or whatever fatalistic chthonic nomination is deemed fit.

Since the likes of Latour (1993) or Haraway (1985), and the subsequent rise of posthuman thought, countless authors have sought to renegotiate the role of nonhuman life in society and bridge a conceptual nature-culture chasm. This divide is predicated on a Cartesian logic that resists the admixture of concepts such as science and politics, body and mind, social and natural; and since the enlightenment, thinkers have upheld these dualisms; reinforcing colonial, anthropocentric, and gender-based hierarchies in the process (Latour, 1993, 10-11, 29). It's thus been proposed that contemporary thought should proceed along more 'hybrid' lines, that break down strict categorisation and engage more meaningfully with other forms of life (ibid, 96). Even the rhetoric of 'ecological' crisis or 'anthropocene' then, is a dualistic oversight that fails to

acknowledge the inseparability of the social from the ecological, or rather, the complete non-existence of these categories in any distinct form (Moore, 2016, 35). Agricultural animals then too, rather than existing in a marginal state of nature-culture ambiguity, expose the fundamentally flawed logic of such a distinction (Nimmo, 2010, 73-4).

Timothy Morton has referred to this fundamental psychic and physical separation of the human and nonhuman as *the severing*, and attributes the advent of this ontological fissure to the first agricultural revolution 12,000 years ago (2019, 89). For Morton, domestication and the emergence of quotidian use-relations with other forms of life is among the ur-moments of disjuncture currently driving this era of degradation (ibid). Other scholars in this school of thought take an equally dismissive view of the agricultural industry; advocating for posthumanism or multispecies research as a vital vector in bringing about the absolute abolition of animal agriculture (Kopnina, 2015; Morton, 2019). Much like outsourcing the ills of capitalism to the catalysing effects of technology, to predicate this dualism on millenia-spanning, and variegated interspecies relations seems somewhat of a simplification. Furthermore, whilst capitalist production has contributed to a sanitising alienation of human and nonhuman life (Hansen, 2014), it is not necessarily productive to reduce all relations of instrumentality between species simply in terms of objectification or Othering (Haraway, 2008, 75). Shared conditions of work are sites of 'intra-active' world building, where different species can become serial interactants and exist in meaningful relation with one another (ibid, 70; Knight, 2017, 2). To shy away from serious engagement with extractive practices is also to uphold a hierarchical dualism of dominated/dominator, denying other beings of their influence and co-constitutive potential with humans. There is political strategy to this, but it seems to undermine some fundamental notions of relationality, assemblage, hybridity. Further to this, to only engage with this industry in the hope

of bringing about its abolition neglects that the current productivist models are relatively novel in the grand scheme of things, and that abrupt abolition seems unrealistic, particularly within an economic system that emphasises property rights (Gunderson, 2011, 268).

For Moore (2016) the underlying logic, the catalyst of this sanitising dualism, is capitalism. This is the driver that has transformed and accelerated use-relations with other lifeforms to such a destructive degree, and capitalism relies on such splits to fully realise its extractive potential (35). Further to this, Tsing (2015) has shown how following nonhuman trajectories and seeking out interspecies contaminations can reveal more discrete, textured and far-reaching perspectives on capitalism. The crux of these interpretations is that one must probe what nature *does for* capitalism, rather than fixating on human conquest and questions of what capitalism *does to* nature (Moore, 2016, 36).

In spite of capital's relentless drive for expansion, there are many who choose to farm organically, and sit in somewhat ambiguous relation with capitalism. Standing in stark defiance of the most intensely productivist farming models, but not entirely beyond the reach of market pressures and histories of standardisation and specialisation, these sites offer an intriguing representation of both resistance to capitalism and its embeddedness in systems structured around human and nonhuman life. Opening the blackbox on agriculture doesn't just entail exposing the most overtly detrimental modes of production, but investigating how alternative multispecies sites of production can function both through, and in opposition to, this seemingly all encompassing system of extraction.

Methodology

It's common for researchers to observe nonhuman lives, but marginalise them in their write-ups, or simply resign them to the symbolic (Hamilton & Taylor, 2017, 56). Regardless, the standard ethnographic toolkit continues to be useful in ascertaining how people operate relationally in the world, and despite its multispecies bent, this project is not shy of traditional qualitative methods. Resisting human-nonhuman dualism does not necessarily mean privileging one category over another, but rooting out and observing the spaces where they mingle, coalesce and compare (Wels, 2020, 1). This is not the flattening of agencies that comes with Actor Network Theory or other monistic theories of ontology; the hope is to understand direct relations between two species, and this moment of inter- or intra-action is the project's attachment-site (Haraway, 2010, 53); an entry point from which broader structural implications might be gleaned, revealing how capital operates at a number of scales.

Cragg House regularly takes on a long-term volunteer to whom they provide room and board in exchange for their labour, a setup common among organic farms. These were the conditions of my own entry to the site, and I subsequently spent the month of April living and working on the farm, experiencing the ebbs and flows of life here and observing through active, practically engaged participation. The intention behind using volunteers is not just a matter of labour power; it's regarded as a chance to educate, and Alan and Dianna generally use this as an opportunity to engage young people with the virtues and realities of organic food production. My role on the farm then, was one of labourer and pupil, giving me unbridled access to both the joys and morbidities of everyday life. For the sake of preserving the privacy and enterprise of the farm, the names of people, locations and products have been changed.

The Field Site

Nestled in the verdant hills of north west England, is Cragg House farm, a dairy producer with full organic status. Alan and Dianna have lived here since 1996, caring for a herd of around 40 Ayrshire dairy cattle and 27 chickens, tending to around 30 hectares of biodiverse pasture, as well as growing their own crops for subsistence. They moved here from a small plot in Yorkshire with their herd of traditional Ayrshire dairy cows that they've been rearing since 1978. What was once regarded as quite a large farm - generally with between 20 and 30 active dairying cows - now seems modest, verging on categorisation as a small-holding. But this is not a 'lifestyle farm' or a smallholding in the strict sense - it is an overtly commercial, productive space (Riley, 2011, 19).

Alan and Dianna are the lone human arbiters of this space. Alan, now in his early seventies, has been working with dairy cattle since his youth. He's stoic, reserved and generally speaks of

farming, and how it should be done in a placid matter of fact tone. Though they broadly share the same sentiments, Dianna is more forthright and impassioned in her outlook. There's often the distinct impression that she wants to rouse, to impassion. She lambasts the ills of other farming methods, of local politics and global climate change, and in the same strokes, fawns fluently over her fondness of animals. Having grown up on a smallholding, she's always lived with nonhuman companions, and this resultant fondness carried over into much of her adult work in the education sector. Despite a long career in education, battling with the edicts of national curriculum, duties of the farm have always been shared. However, these days, owed to ill health, a more pronounced gendered division of labour has emerged on the farm, with Alan being the primary care-giver to the cattle, and Dianna largely working with subsistence crops, though the division is always somewhat fluid and pragmatic. Despite both coming from farming backgrounds, neither were privy to any kind of inheritance, and the establishment and maintenance of Cragg House is the culmination of a lifetime of work.

The land at Cragg House has been farmed for at least 200 years, but likely many more. Before Alan and Dianna, it was used to rear beef and poultry, and up until the 1940s, dairy. The structure of the old milking parlour, restored and converted by Alan, now houses a number of alternative, diversified means of income and value-added produce. At one end, a hostel accommodates volunteers, and backpackers, at the other is the dairy, where live cheese and yoghurt are processed from raw milk. In between sits an organic farm shop, providing local produce to residents and tourists, though rarely open to the public these days due to a deficit of spare time in favour of farm duties and a shortfall of young labourers in the area willing to take on work.

The climate, not so much harsh, but unpredictable, makes the region too precarious for crop farming, and thus rearing livestock has been the dominant practice for centuries. The

landscape, verdant and dramatic, sheathed in a patchwork of pastureland, dappled by herds of sheep and cattle, has been sculpted through time by the activity of human and nonhuman forces. The rolling grass-topped hills, open, expansive, criss-crossed and defined by granite and slate dry stone walls, evidence of centuries of controlled grazing. Pockets of once vast woodland speckle the landscape, now comprised of non-native pines and coniferous coppice used for timber. The landscape is functional, it is a relation of instrumentalisation between people and the world; dynamic and productive, recognised by farmers for its utilitarian potential. Nevertheless, compared to other regions of the country, intensive farming methods are in the minority here, despite dairy being by far the largest output (DEFRA, 2019, 2020).

Existing at a number of geographical junctions, with Scotland just visible to the North and the barrenness of the North Pennines masking the horizon to the south, the farm itself sits on the border of Northumberland and Cumbria. Just to the west is the Cumbrian Lake District, a popular tourist destination that has, particularly since the pandemic, seen new-found spikes in tourism and development from outsiders, a phenomenon that is increasingly encroaching on the surrounding area of Cragg House (Pidd, 2014). Between communities, between municipalities, caught in transitional times as old farming methods decline and city-folk and corporate developers buy up once arable land and farmsteads as second homes and tourist accommodation, an ageing demographic of farmers are finding themselves priced off their land, or, struggling to keep up with the whims of the free market, are turning to more market-secure megafarm models (ibid). A recent cause for concern has been ‘First Milk’, an intensive dairy operation that’s moved into the area. A corporate intrusion that’s been accused of supplanting and undercutting local farmers by selling straight to the consumer, greenwashing their product as ‘regenerative farming’ whilst polluting the local environment with slurry.

Yet in spite of the difficulties posed by acute market pressures, rural gentrification, and a withering labour market, many in this area still choose to farm the land 'properly', organically. The 'organic' moniker entails a strict process of certification. One of the leading certifying bodies, the Soil Association, outlines the requirements as follows: Cows must have a diet of at least 60% forage, and all feed must also be organic, meaning no pesticide use for pasture or feed crops. A ban on the routine use of antibiotics and deworming agents, which means allowing the herd enough space to move and remain healthy. No GM ingredients or preservatives instilled in the product (Soil Association, 2022). The sentiment at its core is that the process of production should reduce harm to the environment, to human health, to plant health and to animal welfare (ibid). The outcome is a market that generally boasts of higher-quality, more ethically-produced, but more costly foodstuffs. State institutions like DEFRA, offer funding to certified organic farms in a supposed bid to tackle the industry's ecological and welfare pitfalls (DEFRA, 2021). Such schemes offer little help, and are seen to have no effect in dissuading intensive farming but are merely regarded as offering well-earned pocket money to those who already farm organically ('well-earned' also considering the Kafkaesque administrative trials that applicants find themselves navigating). But due to often impenetrable bureaucracy and costly fees incurred by inspections, many organic farmers struggle to even become certified, tending to the land holistically without even the assurance of state funding or officially certified products.

Chapter One: Discipline and Extraction

The Factory

My first direct encounter with the herd, and theirs with me, is in the milking parlour. Twice a day; at around 8am and again around 6pm, the droning hum of a motor fills the air, shot through by the rhythmic chugging of the milk pumps. The timing of the routine is an inclusive approximation; some cows, at the peak of lactation will be more than ready for milking, producing high yields and relieved to be rid of the heavy load, others later in their lactation could go for days without urge or discomfort. Nevertheless all productive members of the herd must line up in successive rows of four to be hooked up and milked by Alan and the machine.

Foucaldian notions of biopower have been used extensively to describe the spaces that facilitate use-relations with agricultural animals in commercial settings (Cole, 2011; Novek, 2005; Taylor, 2013). Discipline, particularly that of the body - and the facilitation of 'docile bodies', is essential to the production of biocapital (Cole, 2011, 85). The milking parlour presents as an acute

space of discipline, of extraction, labour and biocapital. Resembling a factory, or a production line, it is a space specially designed to most efficiently extract a product. An orderly, technified space, replete with pipes, pumps and all sorts of whirring gadgetry; much of it personally fashioned and installed by Alan. There's no room for play in this space, and the tasks of milking and being milked are nodes of meticulous conformity, treated by Alan with technical precision, efficiency, and diligence. Cows file in and out, entirely conscious and familiar with the routine, many of them displaying obedience, reacting promptly to the shifting partitions of the space as gates open and close, and troughs fill with food. However some also express irritation; kicking the pumps off their udders, refusing to be distracted by the shoots leading feed into their troughs, irritated by the specially designed rubber spouts that attempt to mimic a suckling calf. If this happens consistently, Alan might use a kick bar - a bent steel tube that fits between their spine and rear leg - temporarily immobilising the leg that's kicking.

These disruptive expressions of agency in the face of extraction have been theorised as exactly what renders this space one of biopower (Novek, 2005, 236). Power is necessarily 'relational, mobile and active'; without a capacity to resist there would essentially be no relation, it would merely be a matter of force, of sheer imprisonment (Cole, 2011, 88). The need to control is embedded in the radical difference of the animal, the inability to fully domesticate or pacify (Novek, 2005, 237). This is reflected in the space itself; the space of production, of confinement, recognises this agency - it is constructed out of opposition to it - pre-empting the desire to resist through gates, hatches, orderly one-way tracks and specialised technologies. The imposition for the cattle to conform isn't just manifested in direct acts of control or confinement, but through coercive, satiating acts like feeding, or through the milking machine's purpose-built capacity to mimic the reassurance of a suckling calf. Biocapital doesn't just impose itself on nonhuman life;

it is manifested through it, guided by it, manipulating and entangled with nonhuman forms (Blanchette, 2020). Power then, in its distribution through space, through bodies, through practices of appeasement, is not a lone agent in itself, borne solely of human volition, but is formed out of different agencies, human, nonhuman, material (Bennett, 2010, 24-5).

Confinement

"Most domestic animals get a tough deal - anything dominated by man"

Most days on the farm begin with a chorus of moos rising from the cowshed. Some of these are announcing the need to start work, the night is long, and a cow at the peak of lactation might be just becoming conscious of an urge to be milked. Some are just hungry, pining for more hay or the opportunity to be fed at milking time. Others are calling out to their calves from whom they've recently been separated. This isn't the acute confinement of an industrialised farm, but it is nevertheless a partial confinement, a means of surveillance, of ensuring a very specific order; a docility in service of the well-regimented system of production. For obvious reasons, bulls are kept separately in their own pen, meanwhile newly calved cows occupy their own solitary enclosures with their young, and calves that are still being weaned occupy their own shed where they can't access their mother's milk. The rest of the herd enjoy somewhat more autonomy, occupying the majority of the indoor and outdoor space.

This strict order isn't maintained throughout the year however. It's only for about five months during the winter that all the cows are kept in this area. Alan comments that *'they're completely dependent on us when they're in there… its not in our interest or theirs to keep them locked up'.* This isn't just a matter of wellbeing during the cold winter though, and they often remain confined beyond the coldest spells. Farming organically often gives rise to a number of co-dependencies between beings and materials; and the difficulty here is that there are dual responsibilities towards both the cows and the land. The season is only just shifting to spring, and if the cattle are allowed out to pasture too early, when the grass hasn't grown enough and the earth is still soft, then it will be churned up beyond recovery, leaving the cows without the rich pasture they expect in the warmer months, and not enough hay for the winter.

Around mid April, after a long winter, and having already felt the relief of allowing the cattle back out to pasture, a series of late frosts afflict the farm; not only smiting the blossom from fruiting trees, but stunting the growth of the grass and compromising the earth. Alan, dispirited by this abnormality, confides that it isn't 'fair' for them to be back inside when they've already tasted the freedom of pasture. He recognises and shares in the cows' disgruntlement; they're terse moos, and displays of frustration at being kept inside after morning milking; some still waiting at the far end of the cow shed in hopeful anticipation. Nevertheless, by the month's end, after the right weather conditions, the grass is blooming, and the entire herd is enjoying the autonomy of the pasture, day and night.

The logic behind the confinement of the cowshed then is not entirely one of complete and unbridled control. Unlike the factory farm, where confinement functions as a means of surveilling and biohacking the animals; ensuring fattening and quelling energy expenditure (Novek, 2005, 235), in this context it is also a pragmatic element of '*farming properly'*, of tending to the needs of multiple species across time, without the use of pesticides or protein-embellished feeds.

The Herd

The herd generally consists of around 40 cattle, but this number is always fluctuating. For most of my stay there were 24 lactating cattle, three cows that were in between cycles, eight calves, and six bulls. The Ayrshire breed has been recognised since 1814, when it began to largely supplant its antecedent, the Dunlop, due to its superior biological and morphological qualities for human milk consumption (Livestock Conservancy, 2020). Manifested through the agricultural enterprise of selective breeding, they're square, barrel-like stature means they can calve regularly with ease and without serious detriment to their health. But far from being the high-yield biohacked species

that more commonly populate industrial farms, Ayrshire's are perceived by Alan and Dianna as functioning at a more 'natural' rate of production; less prone to the productivist ills of mastitis, and at peak lactation they produce roughly half the yield that a Holstein-Friesian might. Despite the longstanding biotechnological interventions into their physical morphologies, as a species, they don't entirely submit to the specialising demands of capitalism.

There's a notable equivocation here between what is perceived as 'natural' and that which is 'traditional'. Dianna places heavy emphasis on their being a native, local breed, on their meaningful connection to this context, being well-adapted to the climate, and their shared history with human beings. She's outspoken about the deplorable states of high-yield cattle; characterising the conditions of megafarms as wholly 'unnatural'. Nature, or the natural, is not presented as something unspoilt, beyond the bounds of culture, but rather it is treated as a quality

that they are themselves responsible for. As a category it's handled more as a signifier of wellbeing, of a capacity to be free from acute modes of extraction than it is anything wild or undomesticated.

Blanchette (2015) has investigated how biosecurity measures are often at the fore of farmer's concerns; and the recognition of an unruly, pathogenic nonhuman world informs many of the decisions that might come to structure the lives of both species. The practice of 'closed herds' is one such example of the microbiopolitics of farm life; acts of controlling microbiological life in the interest of limiting detrimental human contact with it, that in the process, reveal more complex relations (Paxson, 2008, 36). The herd has been strictly 'closed' since 1995; this means that they've neither bought in, nor sold any dairy cattle, but rather, starting with five pedigree Ayrshires in 1978 have bred the herd almost entirely themselves. Since the likes of the foot and mouth epidemic in 2001, or mad cow disease in 1993, such measures have been a logical means of maintaining biosecurity, safe in the knowledge that external contamination is not being introduced to the herd through auctions that might bring livestock from far flung regions into contact with one another. But Alan and Dianna take pride in this practice for reasons beyond sheer practicality. It creates long-lasting meaningful connections with the herd; they see it as meddling less with the natural course of things, maintaining a herd in a way that's closer to how they might live without human intervention, where cattle aren't being constantly ripped from contexts in which they've constructed meaning for themselves (Stuart et al, 2012). It allows for generative, meaningful continuities to emerge amongst the herd; rather than buying in livestock on the basis of efficiency and productive potential, this practice fosters intergenerational kinship ties that are conducive to a more stable social dynamic within the herd and with their human counterparts.

Managing Lifeworlds - Forging Deathworlds

The physical organisation of the cow sheds is predicated entirely on certain separations. The most striking of which is the broadly contentious segregation of mothers from their calves. There is obvious distress caused by this split, and it's common to see cows, especially newly calved heifers, lingering near the calf shed exchanging pained calls with their young, or grooming one another across the fences that separate their pasture. But this segregation is of course a necessity if the milk of the lactating mother is to be harvested as a commodity.

Due to the genetically altered biology of the dairy cow, if the calves are left to feed indiscriminately from their mothers then they can wind up feeding for too long, resulting in sickness and stunting proper development. In an undomesticated setting, such a surplus of milk would not be available to the calf, especially past twelve weeks when their ruminant stomach is reaching development. For the first five to six weeks of their life, calves remain with their mothers, and as long as they're out on pasture, with the autonomy to play and groom, they refrain from gorging on milk and overfeeding. Some milk is still left as surplus to be collected by the farmers, however - especially during winter - the farmers must be careful not to completely deplete the stores needed for the calf. The mother reaches peak lactation at about six weeks, and simultaneously at this time, calves begin to transition towards pasture and feed.

The separation of kin then, is not grounded in sheer productivism. It is the longstanding relation of extraction that has rendered these animals dependent on human intervention for the sake of their own well-being. The longevity of this relationship, and their instrumentalisation as producers, has rendered them incapable of living beyond the sovereign control of human beings. The potential for true nonhuman 'flourishing' without the direction of human beings is already denied by the interception of their biology (Gillespie, 2021, 4).

Despite consistent appeals to nurturing the 'natural course of things', all breeding is done through artificial insemination, giving the farmers assurance that they will be receive female calves. There are dual implications to this; on the one hand it's a biopolitical act; an overt instance of sovereign control over natural processes; a human-directed technification of reproduction conducive to creating productive specialised bodies that will service the commercial needs of dairying. Out of this specific feature of production, there is an eschewal of unnecessary suffering that reduces the chances of producing bodies that only have productive potential as a meat commodity. Many farms do not conform to the costly practice of AI, and opt instead to reproduce naturally, wherein unwanted bulls can then be reared and sold off profitably as veal, their lives kept as short as feasibly possible. This practice entails a number of needless, controversial cruelties like veal crates; an acute form of confinement that denies even a right to sunlight, as well as complete segregation from kin and a reliance on specialised, fattening feeding procedures (Cole, 2011, 88).

But this process is not without effectual limitations. Even with artificial insemination there is a margin of error and the farm winds up with an average of one bull per year. This is further evidence of the 'vibrant' agency of nonhuman life, of vital biological processes that function beyond the unimpeded control of human direction; an incapacity to truly standardise life (Blanchette, 2020, 190). The irony is that this is an attempted standardisation that tries to sidestep some of the grievances of this industry. For the duration of their lives, the bulls will be afforded similar freedoms to the rest of the herd, but ultimately, once they reach maturity and are judged to have adequately fattened, they will be slaughtered for subsistence, and this can take anywhere between 18 months and three years. No special exceptions are made to encourage fattening, and Alan and Dianna see it as only reasonable that they should take as long as circumstance demands

to fatten up for slaughter whilst living as autonomously as the context will allow. It's not a commodification of life, but an instrumentalisation predicated solely on use-value. Slaughter for subsistence in this manner is treated as entirely just; it's economical, ecological and entirely organic, an efficient means of utilising life without merely capitalising on it. Nevertheless, it is a 'deaded life', a bare life, existing as an exception, isolated from the polis of the herd at large, where their morbid fate is already inscribed in their birth (Agamben, 1998; Stanescu, 2013, 155). In this context, lifeworlds[2] are more akin to 'deathworlds', oriented from the very beginning around human modes of consumption (Gillespie, 2021a).

Mutilation

All calves are 'disbudded' or 'dehorned' at a week old. This is the earliest in their development that the practice can be executed, and it's supposed that the earlier calves are disbudded the less traumatic it is both psychologically and physically; as the tissue has not yet connected to the calve's skull and the pain is easily quelled by anaesthetics. The practice is a contentious issue, especially to those most concerned with the welfare of cattle. Mutilations have been posited as effective means of disciplining the flesh in order to attenuate economic costs; the ultimate rendering of a docile body (Cole, 2011, 86). Again there is a certain reactive, dialectic component to this; a need to pre-empt agency and prevent the behaviours that would arise naturally out of these circumstances were the cattle left entirely to their own devices. But it also seems somewhat reductive to distil this practice down to one of mere economic concern. There are constantly shifting social hierarchies within the herd; cows will regularly rut and challenge each other to

[2] Schütz's 'lifeworld'; the individual's common sense explanation of reality; the taken-for-granted social, temporal and structural features of life (Vargas, 2020).

renegotiate the social order, and even without their horns, this behaviour remains completely intact. It's another example of how these animals have not been socialised fully into the disciplinary order, how complete standardisation cannot be met.

Care for the herd comes with emotional, affective dimensions and not wanting to see them needlessly gored or hurt is not just a matter of productivity. Dianna expresses a reluctance towards this practice, an unwillingness and a certain sense of regret but nevertheless sees it as a 'necessary cruelty'. There are degrees of autonomy, and in this case, it's perceived that in order for the herd to live beyond the surveillance of the farmers, the production of a certain docility is necessary. Dehorning then, is seen as the unfortunate price of granting the herd the autonomy of the pasture.

Conclusions

The function of power, of human sovereignty over life is not a solely human-authored endeavour. Through resistance to discipline, the agency of nonhuman life finds itself imprinted on instruments of control. But similarly, via a history of extraction, power has also become inscribed onto nonhuman bodies through genetic manipulations that render life dependendent on human direction. In such a context, lives and landscapes become contingently entangled in productive means of control, and power is reconstituted through intimate modalities of care and concern. In the sovereign space of the farm, autonomy and control are not always in dialectical opposition but operating through one another. Nevertheless such acts of power are generally not a matter of maximal productivity and are essential to realising an organic mode of production and shifting practices away from the homogenising, efficiency and surplus-driven techniques of capitalism. Still a need remains to question the subtler dimensions of sociality and intersubjectivity and the extent to which they are reconcilable with power and production. Thus to better comprehend the

site of the organic dairy farm in relation to capitalism, it's necessary to conceptualise the work of those labouring beings that inhabit it, and seek out the moments where their worlds more intimately commingle.

Chapter Two: Non-human Labour to More-than-human Work

Species Being

After an unexpected but brief cold spell that saw the cattle confined to the barn, they're let back out to pasture. There's a palpable excitement amongst the herd as they're kettled into a gated space adjacent to the cowshed; rutting, barging, letting out loud calls to one another, the calves gleefully bounding around the periphery. As they make their way down the track, Alan and Dianna are glad for this turn, content to see them displaying their 'natural' behaviours as they disperse across the opposite field. As they frolic, play, and dart across the pasture, it's clear the cows don't take this new found autonomy for granted either.

Many of the aforementioned practices; the confinements, separations, extraction and mutilation, these features of the dairy farm could characterise this space as one of alienated labour; where dairy cows are estranged from their product and denied a naturalised 'species-being' (Stuart et al, 2012). Within a Marxist framework, it's been proposed that there are a number of observable natural behaviours that constitute the species-being of a cow; behaviours that the dairy industry

often denies them (ibid, 208)[3]. But for the herd at Cragg House, many of these criteria are fulfilled, or at least, not denied in their entirety. As already noted, for much of the year travel is not inhibited, and the herd enjoys playing, rutting, grooming and generally traversing the thirty hectares of pasture laid out for them. The bulls and some of the calves are not granted quite the same autonomy; generally resigned - even if only temporarily - to a single field, from which they can often be seen conversing with other members of the herd over the bushes and dry stone walls. Mothers are allowed the autonomy of rearing and nursing their young - but only up to a point. Nevertheless, in the long term the herd remains largely intact and longstanding kinship relations are fostered across generations. As already mentioned, nursing practices, and in tow, milking practices are contingent upon the genetically altered biologies of the cattle, and many restrictions that do exist are necessary in the healthy development of the herd.

In a context laden with interspecies contingencies, where nonhuman lives are overtly cultural beings entangled with human systems, the concept of species-being seems to fall prey to a false naturalism. It overlooks these contingencies that have come about through centuries of interaction, the sovereign dependencies that humans have fostered with cows that transcend purely 'wild' or naturalised forms. What is apparent here is that many of the expected features of capitalism that might otherwise define labour relations are not entirely present. Granted it is a site of exploitation, but the totalising potential of the industrial farm is not what's on display. As such it calls for a more discrete understanding of nonhuman labour. Rather than defining it merely out of opposition to their 'natural' way of being, as just the inverse of certain freedoms, it seems more appropriate to better understand their lives along the lines of what actually constitutes 'labouring'.

[3] Species being of a dairy cow includes: extensive socialisation with a capacity for play, rutting, grooming and longstanding kinship. Long-distance travel and foraging. Rearing calves and long-term nursing (Stuart et al, 2012, 208).

Perceptions of Work

Farmers have often been reported to view their herds as workers (Porcher, 2015, 8), and the same applies at Cragg House. "*Of course they work"* Dianna tells me *"they're incredibly hard workers our cattle*". And this work is generally perceived to be centred around coordinated instances of interaction between species such as milking, or coming to and from pasture. But such a statement is grounded in distinctly human precepts of 'work' and 'labour'. When we speak of say, a beaver; to say that it is working when it builds a dam tells us relatively little about the animal's circumstances beyond prescribing an anthropomorphic framework to its behaviour (ibid, 6-7; Ingold, 1983, 15). It's only through relational association with human beings that the activities of other animals come to resemble work, and through living together for millenia, domesticated species have interiorised certain human rationalities (Porcher, 2015, 6). Thus to speak of a dairy cow working, immediately calls to mind this relationality, where human and cow are both implicated in and conscious of the task at hand (ibid). But because nature and culture are so neatly entangled, we need to consider difference when thinking about relationality (Buscher, 2022, 4). Despite their inherent interrelatedness, relational ontologies are necessarily predicated on difference; they are both entangled and thus conceptually separable, and therefore to appreciate the multispecies nature of the farm, it's essential to probe certain dimensions of alterity (ibid). Haraway has remarked that nonhumans "are not human slaves or wage labourers, and it would be a serious mistake to theorise their labour within those frameworks. They are paws not hands" (2008, 55-6).

Embodied Labour

Around the time of evening milking it's not uncommon to see some of the cows returning to the parlour on their own accord. Alan simply brushes this behaviour off as banal routine; *"it's just what they're used to"*. What's clear here though is that the regularised task of milking has been inscribed on the psyches of these cattle; and they can often be seen forming an almost orderly queue outside the parlour and entering without any prompt. This is practically the only instance where individual cows, or at least a minority, will break away from the majority entirely, often letting out harsh, impatient calls in the direction of the herd still out enjoying the pasture. On some occasions, caught up with the other duties of the farm, Alan will wind up milking the cows later than anticipated, finding himself on the receiving end of a lot of vocal exasperation from some of the cattle. He impassively acknowledges that the cattle are very competent time-keepers, and Dianna even jokes that it often feels like the cows are the ones in charge. Obviously any proscription of the motivations behind these terse enforcements of routine would always be speculative, or at least wrongly homogenising, but what can be gleaned here is that there is clearly a conscious, even embodied knowledge of their own work.

Beldo (2017) has offered an alternative view of this work as 'metabolic labour'. This is conducted by agricultural animals in the production of protein; it can be enacted even in idleness and may be conscious without being entirely intentional, but more comparable to human reproductive labour where work is also inscribed in cellular structures (ibid, 118-19). This labour functions at both macro and microbiological scales; the cow traverses pasture, grazes, eats hay and feed, whilst also metabolising these materials into milk (ibid, 119). The herd's labour then extends beyond the confines of the milking parlour or the cowshed, past the nodes of interaction with

farmers and the obvious sites of work and extraction, into the autonomy of the pasture, and the cyclical processes of their bodies.

For cows at the peak of their lactation, not being milked regularly enough can result in pain, discomfort, mastitic issues, and the reabsorption of milk; all of which would starkly inform them of the urgency of milking. But Alan is fairly consistent and regular with this routine; even where delays do occur, they are never lapsing into this sort of territory and it's incredibly unlikely that cattle are experiencing discomfort from their altered metabolisms. Nevertheless the aforementioned enforcements of routine present a clear consciousness of their own metabolic labour. The labour of cattle then, reveals a subtle interplay of material and intentional agencies, that both sit in relation with human structures. It's essential to recognise agency as relational; beyond the flattening effects of purely materialist, object-oriented agencies, or the myopic view of intentionality which only values the will (Meijer & Bovenkerk, 2021, 52). This is testament to how the agential acts of the cattle are not only conducive to disruption, or formal in the dialectical acts of dominion that serve to control them, but also reflected in acts of cooperation, functional working acts borne of their own volition.

Porcher (2015, 6) has commented that farm animals embody human work rationales, but the designation of labour-based behaviours in this context isn't entirely clear. Milking routines are structured around the cattles metabolisms; it's an accommodation of their animality, of their uniquely nonhuman capacity to exceed inputs; to transform and metabolise materials in ways that no human technology can (Beldo, 2017, 115). But even their unique metabolising propensities are not entirely their own; they're the extension of a work rationale 'grown into' their bodies ontogenetically through human intervention (Barua, 2019, 653). The structure of labour for both species is thus bound up in the implications of metabolic labour. But more than just a bodily labour,

through this model, the entire farm becomes a site of work; whether it be the autonomy of the pasture or the stern confinement of the milking parlour, labour becomes embodied by the herd from which it radiates out into the routines, structures and moments that make up farm life. The limits of human and nonhuman imposition are as always incredibly muddy.

More-than-human Work

"It's all work - looking after animals - there's always someone to tend to"

Barua (2016) proposes that nonhuman animals may 'work' but they do not labour (729). Labour necessarily entails submitting to capitalist models; it is quantifiable (measurable in time), entirely intentional, and negotiated in exchange for a wage (ibid, 728-9). In contrast, despite displaying degrees of intentionality and agency in their work, agricultural animals are not entirely self-directed in the constitution of their working conditions (Haraway, 2008, 55), even if, as we have seen, they may be agential in and conscious of these conditions. It is thus proposed that rather than a site of human and nonhuman labour, the organic dairy farm is one of more-than-human work, where the conditions of life and growth, metabolism and making are bound by a medley of relational agencies, and rather than conducting alienable labour and denied an innate species-being, subjective work functions somewhere beyond the normative confines of capitalism. This dynamic is exemplified at Cragg House, and a consciousness of this collaborative process is evident even in the minutiae of daily work. There's no distinct site of production; every place, act, being is contingently entangled in a common world where working together is conducive to the everyday experience of life, without neat distinctions of domestic and productive.

Ingold (2000) contends that theories of 'production' pertaining to nonhuman life are predicated on a cardinal sin; a pervasive anthropocentric narrative where the act of 'producing' is one of human-directed transformation, of willed creation (ibid, 77). Humans don't 'produce' livestock, likewise cattle don't 'produce' milk in the strict sense of the word; they're processes of growth, of making, that arise through natural circumstance (ibid). Farmers are formal in bringing about certain conditions of development; it's a "productive dynamic that is immanent in the natural world itself" rather than merely transforming natural forms according to their own preordained designs (ibid, 81). To a certain extent this is true of all farms, but it's especially prominent on the organic farm, where the specialisation and standardisation of life isn't pushed to elaborate extremes. There's a conscious recognition of this collaborative dynamic, the work of non-industrial farms coalesces in the production of a 'common world', a variegated taskscape where labour is enacted 'with', rather than just out of other animals, appealing to intersubjectivity, ethically-oriented practices, and affective modes of communication (Deleage, 2019, 154; Barua, 2016, 738).

Making Time

"The thing with this is it's working with the land, with the seasons. It gets in your blood and you're looking forward to spring"

Since Marx, numerous scholars have theorised time as a phenomenon utterly transformed by capital (Deleuze, 1998; Thompson, 1967). Since the advent of capitalism, once synchronic, cyclical, naturalised experiences of the world have become increasingly supplanted by the linear ordinance of clock time as it marches on into infinity (Deleuze, 1998, 28). This is the temporality of the city, the factory, where the quantifying hand of the clock is a metric of leisure and labour, detached from its material content (Thompson, 1967, 61; Ingold, 1993, 158).

But in agrarian settings, the regimented time of capital is recalibrated along material lines, submitting to the temporalities of cyclical growth processes. Despite conceptualisations of nonhuman life as automata that convert feed or nutrients into biocapital, the hubris of human mastery has never achieved the complete standardisation of plant and animal life as perfect time-saving machinations (Blanchette, 2020, 190). But capitalism is always a force both in and of time, and even in the agricultural sector, the flourishing of the market relies on attentively managing and regulating temporalities, evident in techniques of speeding up or suppressing material processes of time (Bear, 2016, 128; Nimmo, 2010, 47). Pasteurisation is one such example that seeks to reorganise the material constitution of the product, to renegotiate life in the service of a flattened, market-appropriate temporality. Similarly, the use of pesticides on crops and grassland offer means of biohacking that reduce the expenditure of human labour, and in a sense, speed up crop development by providing higher yields for less work. Alan and Dianna perceive this as more than just a pollutant, or a needless elimination of life, but also as a kind of cheating; transfixed by *"short term gains"* it's a *"race to produce"* that can only end in unnecessary exhaustion; depletions of soil nutrients and biodiversity that pay no mind to the future. Furthermore, as much as capital relies on the cow's capacity to exceed input - with the cycle of production chugging along at the cow's own rate of metabolism - it also finds ways to mutate these processes. I.e. the buying-in of biohacked high-yield cows, living in close-confinement, that rely on regular antibiotic treatment and for whom life has a strict productivity-based cut-off point. Routine antipathogenic procedures are singled out by Dianna not just for their needlessness and potential to contaminate food, but also for the inherent unwillingness to care for herds on a more engaged, affective basis. All of these practices, whilst still being dictated by natural processes, also reflect a desire to control time and render it more quantifiable, more standardised.

"Whatever you call it, if you can call it a routine. We get up, see what the weather's doing and that's that"

The rhythms of human work on the farm are dictated by a number of heterogeneous nonhuman temporalities; from the embodied cycles of metabolic work and feeding, to the seasonal demands of crops and grassland, or the minute tedium of waking in the night and tending to the microbial conditions of yoghurt production. There's no delineable labour time; it's a generalised space where work and life, the domestic and the productive, commingle as processes inherent to the world. This adherence to natural forms, to metabolic cycles and processes of growth is of course true of farming generally, and Ingold has defined this attendance to a multiplicity of temporalities that is so characteristic of agricultural work as the 'taskscape' (1993, 160-1). But at Cragg House, the taskscape comes with a certain attentiveness. Without succumbing to various homogenising processes, proper care necessitates tending to nonhuman life in a more engaged, affective way. There's a greater sense of congruence, a perceived coevalness of growing and becoming together. This is especially prominent in how they relate to the herd, where cows are granted the affordance of living beyond peak productivity, and are perceived as having idiosyncratic characters, temperaments and work rationales; their biographies intertwined with those of Alan and Dianna. This mutuality of life-histories also functions over a larger time-scale with the herd as a whole; a shifting but continuous entity made up of successive generations, not reducible to auctionable commodities, that signals the longevity and situatedness of their bond with other forms of life. These larger scale temporalities often bleed into conversation and they regularly recount memories according to seasonal cues; the specific trees that were fruiting, the

presence of lambs, or certain wildlife, cyclical, nonhuman events that delineate and ground blocks of time in the immanence of the world. This groundedness in temporalities that unfold cyclically at different scales and rhythms fosters a conscientiousness of both the present and the future where sustainability is manifested in coeval acts of care for the nonhuman world. Coevalness is the product of a 'thick present', a grounded situatedness that consciously engages with temporality in a way conducive to modalities of care beyond the human (Johnson, 2015, 309).

By resisting the homogenised, time-tricking techniques of capitalist production, and through the nurturing of a circumstantially engaged coevalness, temporality is formal in the creation of a common world. It's a mutual becoming, grounded in the recognition of other agencies that decentres the human. They are embroiled in, and fostering a post-anthropocentric landscape; but still, it is a landscape of labour, of work, where truly flourishing is secondary to producing.

Hybrid Affects

Alan moves through the herd with an unbridled fluidity, and the acceptance, tolerance and even reverence he receives is only really laid bare when I attempt to traverse, herd or otherwise communicate with the cattle. For the first couple weeks of my stay much of the herd is fairly anxious of my presence; scattering if I move too quickly in the confines of the barn and showing irritation at my presence during milking. Coming too close when they're out on pasture with their young could result in stern displays of aggression; shaking their heads, making hostile calls, and pawing at the ground. Alan puts this down to my being alien, attributing it to sheer unfamiliarity. As we work in each other's presence this hostility quickly subsides; replaced largely by curiosity, indifference or even affection. Later in my stay it's regularly amongst my responsibilities to herd the cattle back from pasture for milking, and whilst many members of the herd - judging my

presence and reading my gestures - comply without hesitation, a handful are flagrantly annoyed by my insistence that they should return to the farmstead.

It's been noted that many cattle perceive stockholders to sit at the top of the social hierarchy of the herd (Grasseni, 2005). This appears to be true of Alan and Dianna, though they claim that some cows have been known to challenge this supremacy. My own position is obviously more ambiguous; still being regularly challenged and met with hostility by certain members of the herd, whilst receiving reverent licks and invitations for grooming from others that suggest, at the very least, an acceptance of my being, and it's difficult to discern whether I'm perceived as a lower caste member of the group, a partial member, or I'm just personally disliked. Nevertheless, it's clear that personal social connection is imperative to working well together; the cattle aren't simply placated and subordinated at a species-level; they are to some degree selective in their cooperation, rendering it as more than just compliance to domination. Working effectively with the herd means entering into a social negotiation on their terms, becoming a meaningful actor congruent with their worldview. There's a continuum between the social worlds of human and nonhuman actors; a symbiosis of power structures.

Human dominion in these circumstances is often taken as a given, but this is an example of how cooperation is necessary on the part of both species. To effectively work with the herd requires integration into their social order; an adherence to nonhuman structures of being. This could be viewed as the exploitation of natural forms; the human capacity to trace and mimic the patterns and semiotics of the natural world for extractive purposes (Kohn, 2013, 160-164). But this is not a relation of pure extraction, and integration into the herd isn't just a matter of dominance or control. As Dianna tells me, it's a matter of trust; *"you can trust most animals more than people if you know how to be with them".* Farmers in the area have been known to die at the hands of their

livestock, and trust is therefore imperative to working together, but rather than just a matter of personal safety, this is an intersubjective trust. Where the most severely extractive farming models rely almost entirely on confinement, on enclosure and acute physical control, for Alan and Dianna it is a matter of mutual assurance. This '*knowing how to be*' requires an acute recognition and respect for their nonhuman alterity.

"Animals have their own set of needs and behaviours - and they should be able to indulge those natural behaviours as far as possible"

On more than one occasion Dianna complains to me of how people 'anthropologise' or 'anthropomorphise' animals. She tells me its essential to recognise their difference; that they're not humans that necessarily seek the same comforts as us, and she sees overly pampering nonhuman life as ultimately a cruel disservice that meddles in their well-being.

Dominance, the capacity for the farmer to remain at the top of the pecking order is asserted affectively. This functions through modalities of care; feeding, petting, generally being at the apex of the moments that structure their lives, and as such, meaningful long-standing emotional bonds develop in the process. But despite Alan's affections for the animals, when work demands it, communication with the herd can be rough, even unsightly to someone of my own disposition; acculturated into urban, coddled experiences of human-animal relations, where nonhuman life is most commonly instrumentalised for cosseted companionship.

As he moves through the herd, breaking up certain individuals that require temporary separation, or simply checking their physical states for any abnormalities, Alan makes no exceptions for clemency; barging, slapping them on the rear, making indistinct sounds, and they

generally disperse or follow suit without clear displays of aggression or distress. This roughness is reflected in the cow's communication with one another; in close quarters generally more physical and rowdy than vocal; rutting and barging as much as they might groom or play. It's the adoption of a physicality that also to some extent functions on the cattle's terms. A kinesthetic, embodied communication that recognises and plays off their radical difference from human beings (Shapiro, 1990, 191). Fundamentally, it is a working relationship; affections cannot be disentangled from discipline. Work is what lends structure to life here, and all relations are both matters of utility and of endearment. More than sheer exploitation, it is a modality of 'working with', of maintaining a functional, communicative relation that isn't just conducive to a product, but also to the synthesis of a 'common world' (Deleage, 2019, 154). Nestled amongst these directives are also physical displays of affection on the part of both species, whether it be a fond scratch of the neck by Alan or Dianna, or a reverent lick by a heifer. These encounters are part of a continuum, where the human and the herd, and where intersubjective individuals empathise with one another across species boundaries.

Some nights, when they're still within earshot, there's no need to herd the cattle back from pasture, and Alan will signal the time for milking with a loud, low, bellowing call. No distinct words, just a long, heavy drawn-out sound - identifiable as his own - that can carry far enough to reach the cows on the adjacent hillside. This call doesn't require any particular training; the cows know the work routines, they're aware of what time it is, and Alan need only make his presence known for them to begin making their way back. At least circumstantially, Alan concurrently recognises the calls of the herd, and distinguishes what he dismissively refers to as 'talking' from the calls that imply impatience or distress. These vocalisations are evidence of how interspecies communication doesn't necessarily rely on preempted or specialised means of control or direction; it comes about through a more generalised intersubjectivity, through integration into a shared world, the semiotics of which are predicated in the longevity of meaningful socio-affective bonds.

Communicating across species divides requires entering into a more-than-human worldview, conforming to nonhuman ways of being and recognising radically different forms of agency. This relies not just on knowledge and surveillance, on a capacity to co-opt their ways of being; the power to extract requires fostering strong social ties. Out of a need to produce, emerges also a need for companionship and cooperation, and in the space of more-than-human work, exploitation and empathy can comfortably coexist. Life is defined by work, and emotionally resonant kinship is both a product of this working life and an operative feature of it.

Selves

Farmers have been said to conceptualise their stock as 'sentient commodities' (Wilkie, 2005), or even protein-producing pets (Holloway, 2001). What emerges here however is that members of the herd are seen as individuals, selves and workers. Dianna is quick to insist that they are not

commodities; *"you might say they make a commodity, but even that I'm not so sure about",* and she sings their praises as generally being *'good workers'*.

In spite of her protestations at the anthropomorphisation of nonhuman animals, Dianna suggests that working with other species is much like interacting with children.[4] Granted there's a latent infantilization inherent in this remark that does undermine some notions of the radical alterity of nonhuman life, but it's clearly intended as an embellishment of their characters. Human acts of anthropomorphization towards other species have been proposed as amongst the clearest clues of character recognition and the attribution of selfhood to other species (Taylor, 2007, 64). She asserts that they both require the same degrees of care and attentiveness, they can learn and be guided in a similar fashion, and yet they're always capable of some degree of 'deviousness'. There's a clear recognition of agency and idiosyncrasy in this. But it also reinforces the functionality of this relationship; it is one of direction, of discipline and control but also concern and guidance.

Broadly speaking, as a breed Ayrshires are prized for their temperament, for a certain docility. Dianna contends that this is moot though, and whilst she does maintain that they're generally 'sensible, sensitive, and inquisitive', she more generally asserts that *"the temperament of the animal reflects the temperament of the person looking after them"*. Beyond the homogenising rhetoric of the herd, of hardy reliable breeds, this shows a unique recognition of their characterful potential as individuals, as beings that exist in the world relationally with people. It exposes how sovereign dependence on human beings is a conscious factor, recast as a matter of duty and responsible nurturing. Again, there is a maternalistic rhetoric extended to them, where a

[4] As well as farming, Dianna has a long history of working in education; where she's sought to use what she believes to be the unique characters of domesticated animals to nurture interests in science and agriculture, cultivating alternative roads into education, especially for children facing difficulty with standardised curriculums.

recognition of radical difference is re-embedded in human modalities of care. Anthropomorphisation can be pragmatic, 'strategic' even, revealing experiential in-roads to the worldviews of other beings (Donati, 2019, 125). But it can also be instrumental; and nurturing well-tempered cooperative workers is of course in the interest of production too.

At one time the cows all had individual, officially registered names, but with the exponential growth of the herd over the years, they've come to just receive numbers. These days Alan generally tends to the cattle on his own. He makes it apparent that in the context of this solitary intimacy there's no need for names, he recognises each individual cow and can easily distinguish them at a glance; *"they've all got different markings. Course they've all got their own characters too. And I mean I've known them their whole lives".* Character recognition has been identified even in industrialised settings (Hansen, 2014, 126), and it's a given that idiosyncrasies will be easily identified when working in the company of the herd day in day out. Distinguishing cattle is imperative to work, as Alan often has to separate or single out certain subjects depending on their individual duties. The notion of 'characters' in this context is somewhat diffuse, incorporating vague affective signifiers that immediately signal who's who, but simultaneously also notions of performance, of their individual standings and utilities on the farm. Some might be valued for their capacities as mothers, and can thus be used to foster the calves of other cows, whilst others are appreciated for their placid temperaments and compliance. But this is not to imply that the attribution of selfhood is a mere technique, just a method of identification and control, and a node of productivity. It's both the outcome, and a means of becoming together, of existing in constant mutuality. Selfhood is recognised in functional, affective ways, formed out of intimacy and shared temporality without relying on anthropomorphic designations. It illustrates the

emotional depth of their encounters with the herd but also how the fundamental dynamic of this relationship is always one of work.

Just as affective communication is grounded in closeness and familiarity, the recognition of selves reveals more complex dimensions of use-relations. Despite their instrumentalisation, members of the herd are recognised as individuals, as idiosyncratic selves with unique identities and capabilities that stand in relation with the immanence of the world and with their human rearers. Where agricultural animals are regarded as having a developmental potential akin to humans, a relation arises of not just dominance or control, but responsibility, care and attentiveness. The cow as a 'good worker', with desired temperaments and work rationales becomes something that can be nurtured into existence.

Convivial Landscapes

What distinguishes Cragg House and many organic farms, is a consciousness of this co-constituted production, actively motivated by notions of 'working-with', accommodating nonhuman life rather than working in antagonistic relations of suppression, depletion and extraction. In the context of agrarian co-existence, the capacity for humans and nonhumans to collaborate in a common goal of collective thriving has been conceptualised as a mode of multispecies 'conviviality' (Donati, 2019, 122). Cooperation through mutual understanding, pleasurable affective encounters, functioning with and nurturing alternative temporalities and promoting the 'natural' course of things; all are conducive to a common ground where modalities of care and of living well together take centre stage. This conviviality is not limited to the herd, and this care echoes out into relations with nonhuman life more generally.

"To use the countryside you have to be mindful of its use by your fellow creatures"

One morning after sending the cows out to pasture we encounter a hare. It's clearly unwell; wounded, disoriented and unfazed by our presence. Alan spends the next hour hurrying back and forth from the farmhouse; bringing it concoctions and tending to its injured leg. Ultimately it scrambles away, and he seems hopeful that he's given it a better fighting chance of surviving.

Nurturing local ecologies and maintaining the biodiversity of the farm is treated as a crucial dimension of farming. Alan has recently been tearing down non-native pines and constructing land-highways between fields out of native trees and shrubbery, creating a more inviting environment for a plethora of local wildlife. Pasture is managed in congruence with biodiversity; not expunging wild flowers or admixtures of grasses, and they condemn the monocropped, pesticide-ridden 'green deserts' that constitute so many farms. They're strict about the reuse and recycling of any waste on the farm, endlessly reconstituting waste materials into compost, as well as fertilising the fields with dry cow manure rather than the rancid, polluting slurry common elsewhere. Conviviality extends out into the landscape, beyond the intersubjective, to unknown Others, animal, microbial, vegetative. Ecologically-oriented practices are a recognition of other modes of life as agential actors, more than just dominion, it folds the human farmer into a complex network of contingencies.

Notions of cultivating an ecologically sound environment are always emplaced within the local context; one of functionality, of maintaining the productivity of the land. They show little faith in what they perceive to be 'trendy' rewilding projects, citing a local landowner, who, with the aid of an enormous inheritance, has forfeited the productivity of his extensive estate in favour of rewilding, resigning the agricultural potential of his land to that of a hobby farm. For Alan and

Dianna, a convivial landscape is one that can account for the needs of both human and nonhuman, it retains some extractive instrumental potential whilst nurturing and encouraging life in a more variegated sense. They emphasise the necessity to feed with what arable land we have, and maintain that tackling climate change and ecological degradation at-large, means producing extensively but responsibly, self-sufficiently and sustainably.

These practices are time-consuming, and many offer no tangible reward. More than just a modality of care, conviviality is closely associated with politics of degrowth that also emphasise the necessity of nurturing biodiverse landscapes (Gertenbach et al, 2021, 168). It's been theorised as a form of social relation concocted out of opposition to prevailing capitalist norms; "designed to reknit the social bond that has been unravelled by… the horrors of economics" (Latouche, 2009, 42). Conviviality then, is not just an incidental cosmetic feature, an elaborate economically costly whim, it's a coherent piece of a cosmology through which this entire mode of production functions.

Limits to conviviality

Knocking down molehills in the fields is a routine chore, especially in the spring as the time for harvesting hay approaches. If soil from molehills gets into hay and straw it can carry with it *listeria*, hazardous to the health of the herd. If the concentration of molehills gets too large it can become unmanageable, and Alan will lay mole traps to quell the extent of this disturbance. They explain that they're generally fond of the moles and they'd rather not do this, but figure that when the hills are this extensive it would imply that they're thriving well enough to warrant trapping without

disrupting the population. When life is structured around nurturing other beings, excesses emerge that pose a threat to farming, and conviviality can quickly turn into expulsion.[5]

There are limitations to this convivial endearment with local wildlife, and the functionality of the landscape recasts how ecology is managed. Within the human-authored boundaries of an agrarian setting, notions of ecology, biodiversity and appeals to 'nature' are reconstituted along a more ambiguous nature-culture continuum. Where carefully directed human stewardship of the land is seemingly unproblematically coupled with a resigned rhetoric of reducing impact and encouraging wildlife to operate undisturbed. When considering conviviality it's important not to become lost in 'utopian imaginaries' (Donati, 2019, 126); ultimately this is a place of gastronomic production with a commercial output, and death, discipline and commodification are always lurking imminently.

Expiry

"It goes against the grain for both of us to have to send them to slaughter"

It's revealed one morning that a member of the herd is being picked up by a neighbour to be taken for slaughter. The cow, 13 years old, is long past peak productivity; in industrial systems dairy cows are usually slaughtered after about five years, when yields and lactation rates begin to drop-off and it becomes more cost effective to sell their bodies as low-grade beef (De Vries & Marcondes, 2020). Food standards make home-slaughter practically impossible unless for

[5] A more contentious example is the culling of badgers; a practice recently outlawed by a government decree that rendered them a protected species in spite of their abundance. There's a broad consensus among many farmers that badgers carry tuberculosis and pass it onto herds. Recurrent outbreaks of TB can desolate a farm, and Alan maintains that the abundance of badgers, and the fact that they no longer have any natural predators makes culling perfectly apt, not just for the wellness of cattle and farmers but for biodiversity at large. Dianna doesn't entirely agree on this front and sees more hedgerows as a worthy deterrent, guiding their curiosities away from the farm, but still condones culling in exceptional circumstances where populations have swelled to the point of being a clear threat. She sees human occupation of the landscape as inviting a certain degree of contamination, and argues that it's the responsibility of farmers to avoid drastic measures as much as feasibly possible.

subsistence, and thus without specialised officially regulated slaughter, the body cannot be rendered as a commodity fit for the market. The meat will wind up somewhere in the organic food chain, possibly as pet food, though the exact destination isn't known. This is an acute expression of sovereign power; of a human appointed right to kill other animals, an expendability to life that is of course essential to the agricultural industry, and permits dairy farms to keep producing at the highest possible output (Taylor, 2013, 540).

However Alan is quick to qualify the execution in very different terms; he points to how skinny she is, how weak, he explains to me how age has worn her teeth to the point of discomfort. He sums up that it's a matter of weighing up and assessing their relative quality of life. In this sense it's closer to the backstage disciplinary actions we take against many other domesticated species (Tuan, 1984); more akin to having a pet put down, than it is an exacting cycle of production. The fact that this cow is permitted to live for 13 years, more than twice what they would see in an industrial setting makes it clear that sheer productivity is not the only concern at the fore when rearing these animals. The lifespan of Ayrshire cattle is generally between 15-20 years, and Alan explains that many members of the herd have lived with them for 16, 17, in some cases even over 20 years. There's a persistent ambiguity here; it in many ways fails to conform to the strict facets of efficiency-driven production, though empathy and kinship are not without their limitations. This ambiguity is reflected in his stoicism about the matter; there's the distinct impression that he's justifying this death as much to himself, as he is to me.

"It saddens me that the herd isn't as old as it once was"

At one time cattle would regularly live well into their late teens before being slaughtered. But with age, many cows become susceptible to subclinical mastitis. Though benign, painless and largely inconsequential for most cattle, for issues of biosecurity, milk infected with the pathogen cannot be sold. In order to meet organic standards, cows must be given antibiotics, and their milk isn't deemed fit for the market until six days after antibiotic use is stopped. This is detrimental to maintaining the commercial viability of the farm. Dianna expresses remorse over a recent outbreak that threatened output to such an extent that they were forced to cull a number of older cows. Judging well-being is not merely a matter of empathy for the individual, but concurrently for the care of the herd at large, and for maintaining the commercial potential of the farm. By not conforming to homogenising antibiotic techniques of industrial markets, new risks arise, bringing with them potential for contaminations that restrict the practical limits of compassion. Manoeuvring conviviality, commercial viability and pathogenic contamination is a delicate dance, and the smallest infractions can result in unavoidable death.

At the limits of conviviality, the tension between companionship and utility is laid most bare. Within the nurturing of meaningful socio-affective connections and the recognition of nonhuman selves, lurks a preordained deathworld (Gillespie, 2021a). Whilst dairy cattle may not be explicitly reared in service of meat, they're biographies are still marked by death, and ultimately - in spite of resistance - the pressures of enterprise and standardised output still dictate the parameters of life. These moments present an unavoidable affront to the ideologies of Alan and Dianna; the nurturing of nonhuman life is not always reconcilable with production, and the sovereign right to kill can be a remorseful emotional burden.

In death, a notable discrepancy emerges in the valuation of life. The bulls, brought into the world through technical anomaly, are unquestioningly slaughtered on a semi-regular basis. Their

role is as meat, as subsistence, and it's thus presumed that they should be able to pursue this end as autonomously as circumstance will permit. Though not kept as short as possible, their lives are nevertheless brief, but this is congruent with their human-imposed purpose. In contrast, the premature slaughter of a dairy cow, a companion that remains at least somewhat productive well into old age, is deemed impermissible, a source of regret. The dairy cow has the capacity to work for most of its natural life; even where productivity is incredibly slim, older cattle can make for proficient surrogates to calves. With the ebbs and flows of daily work coursing many years, there's more temporal overlap with the dairy herd, a greater sense of mutual growth and becoming. Thus even within the logic of deathworlds, where vitality is up for appraisal, a continuity remains between utility and kinship.

Willing contaminants

Cragg House prides itself on providing raw, unpasteurised milk to be distributed on the organic market. Alan and Dianna openly deplore the practice of pasteurisation, and complain of a pervasive culture of 'sterilisation' in food, a culture that they attribute to supermarkets and their demands for cheap, mass-produced, long-lasting products. Depleted of good bacteria, denatured and lacking in certain nutrients, they complain that the semi-skimmed milk offered in most shops can barely be described as milk at all. But there are implications to this beyond just the perception of delivering a nutritionally superior, whole product.

The introduction of pasteurisation was congruent with the emergence of capitalism and an industrialised dairy sector in the UK, where it assumed a pivotal role in matters of biosecurity. With the establishment of the railways and the industrialisation of dairy, new techniques needed to be established to ensure that milk could safely survive mass distribution over long distances

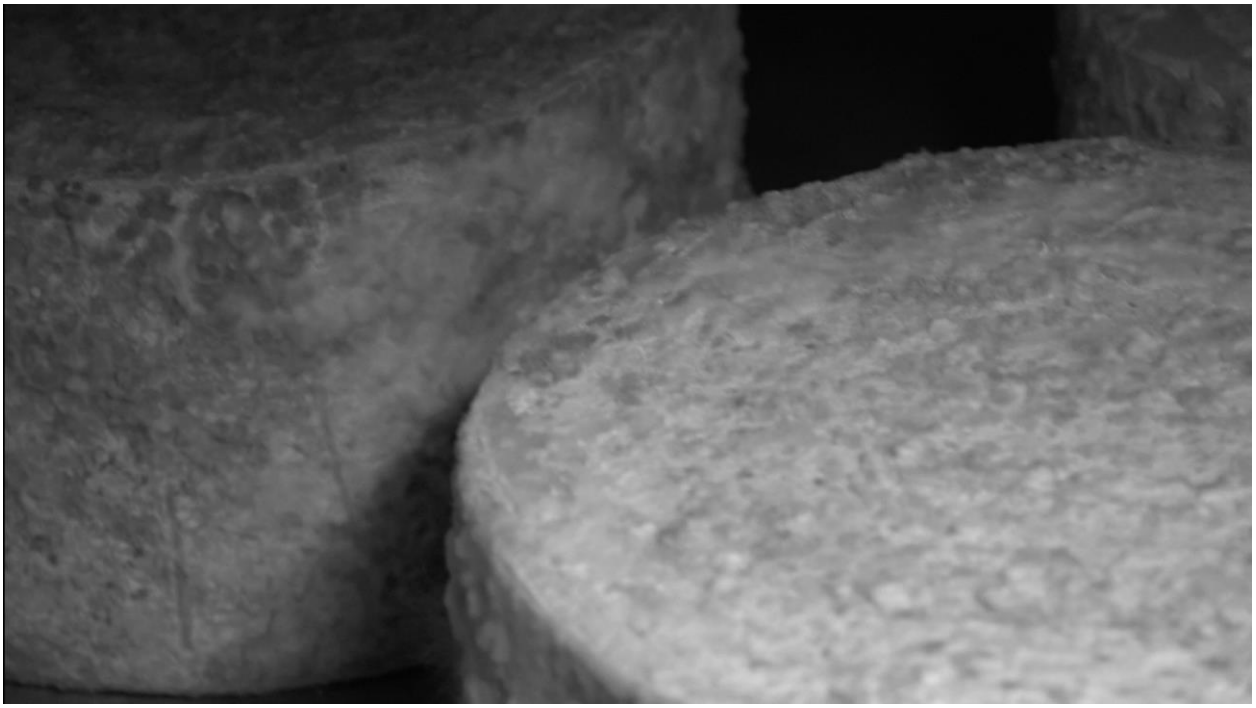
(Nimmo, 2010, 45). Pasteurisation and refrigeration were among these new techniques and helped to nurture an emerging relation of mistrust with the nonhuman world (ibid, 48). Milk had traditionally been a locally procured product, meant to be enjoyed fresh from the cow, its freshness even judged according to its lingering warmth, and prior to the emergence of the capillary refrigerator, human interference with the milk product was regarded as 'meddling'; associated with watering down or otherwise adulterating it (ibid). Where capitalism cultivated a relation of mistrust through the distribution of a natural product over long distances and temporalities, pasteurisation both pragmatically quelled, and conceptually bolstered this scepticism, as well as making for a simple means of putting out a hardy, reliable, standardised product. With the advent of Pasteur's germ theory came the emergence of 'purified' social relations with the microbial world, where the logic of the nature-culture divide became inscribed on the pasteurised product (Latour, 1988, 35). The act of 'cooking' milk and in tow eliminating microbes, allows for it to conceptually enter the realm of culture; denaturalised and dissociated from its animal origin (Nimmo, 2010, 92). It's within such a context that raw milk producers such as Cragg House have been honoured as 'post-pastuerians' who transcend antiseptic attitudes of standardisation to embrace the nutritional and generative potential of microbial life (Paxson, 2008, 17-18).

As part of an expansive organic supply chain, the milk at Cragg House is not granted the localised immediacy which was once associated with raw milk production, and every other day a tanker will collect the refrigerated milk for distribution. This comes with certain demands, and guaranteeing the safety of the product requires attentiveness to other aspects of the farm; ensuring that cattle aren't carrying pathogens and decreasing potential for contamination. The logic of post-pasteurian production echoes out into the daily practices of the farm, and the relatively small, grass-fed herd decreases the likelihood of diseases that would otherwise torment industrialised

settings. It's an extension of a convivial way of being with other lifeforms evident at every scale; where the accommodation of life is preferred to its expulsion.

As well as producing unpasteurised milk, the farm also turns out a number of crafted raw-milk products; a selection of cheeses and natural yoghurt. The most significant of these in terms of both quantity and sheer labour is the farm's own Vindolanda raw milk cheese. A batch of this is made most weeks, resulting in four pressed wheels of cheese that can then be waxed and aged for anywhere between three and six months. Alan explains to me that due to the rich microbiome of raw milk, if left to ferment, even without elaborate treatment, it will generally curdle or solidify without souring and becoming rancid, and it's this rich innate microbial vitality that raw cheese-making seeks to employ. Working with the preexisting microbiota of the milk, the result is an erratic, somewhat unstandardised product. But beyond just directing and harbouring its potential, there's a degree to which they also submit to the agency of the mould and bacteria, evident in the sporadic nature of the final product. Minor contaminations, and the life-cycles of fruiting moulds can result in radically different incarnations of the cheese, varying slightly in its taste and

sometimes even shot through with blue veins; a stark mycorrhizal reminder of this living commodity's essential vibrancy.



In the 19th century, pasteurians isolated certain bacterial cultures for commercial use in cheese-making, and sung the praises of this technology for producing specific standardised, consistently safe modes of making cheese from pasteurised milk (ibid, 22). Such practices would become the norm as cheese would be increasingly devalued and mass-produced, but in contrast, raw-milk cheese is inherently artisanal; not geared towards technified methods of mass-production that will likely harbour and circulate contaminants if handled this way[6] (ibid, 32-3). Nurtured by the sheer quantity of raw milk in the vat, some vegetarian rennet, and salt, the good bacteria native to the milk collaborate to outcompete any harmful pathogens. Much like working with the herd, this process is presented as one of trust; where it's a matter of knowing *how* to be with nonhuman

[6] Ironically, a number of studies in the US have actually found far higher rates of contamination among pasteurised milk cheeses. Stripped of good bacteria, pasteurised milk may provide a richer setting for unwanted pathogens to thrive (Paxson, 2008, 30).

life. A conviviality where natural life doesn't necessarily demand the most severe control, but can be nurtured to work with the requirements of the farm, and impurity is enlisted for its unique metabolic capabilities.

"Post-pasteurians rescue indigenous cultures - microbial but also human - from industrial homogeneity" (Paxson, 2008, 23)

Named after a nearby roman fort, Vindolanda is Alan and Dianna's variation on a type of 'Dunlop cheese', recipes for which date back to 1688. It's closely associated with Ayrshire cattle and the two both share an origin in a historic culture of rearing Dunlop cows; the domesticated Scots predecessor to the Ayrshire. The milk of Ayrshires is also ideal for cheese-making due to its high solids content. There's a certain symbiosis between these factors; all are discretely emplaced, grounded in traditions that have emerged congruously through history. The actual constitution of the cheese is specific to the region in other ways too, and as significant as the technique is, different geographies may nurture unique microbiomes that are ultimately formal in the distinct compositions of various cheeses and recipes (Marcellino, 2003, 65). The milk itself also has unique qualities that are significant here, not just for its progeny in the Ayrshire cow, but for enzymatic chemical flavours that had their origin in local forage and wind up influencing the taste of the cheese (Paxson, 2008, 26). The metabolic work of the cow then, is not just incidental in the cheese product, but idiosyncratically formal in the result. The breed and individual activity of the cow, the characteristics of the soil and native grasses, the microbial milieu - all these dimensions are subversively entangled with a sense of place and cultural history. It's a kind of *terroir*, but rather than just an established geographical indicator, it's the coming together of multispecies histories

(Lally, 2020). The prevailing sentiments of the farm - the disruption of industrial production, and the cultivation of impure convivial relations with the nonhuman world - are distilled and preserved between the hard waxed walls of the Vindolanda cheese.

Again, production comes about through collaborative acts of making, through a recognition and utilisation of the discrete capacities of nonhuman life. It is inherently antagonistic to prevailing capitalist norms through not just scale or intensity, but the allowance of life and the active indistinction of the most overt nature-culture binaries. It points again to a broader cosmology, where perceivably natural ways of being are convivially nurtured and instrumentalised in service of a gastronomic commodity. As the wheels of cheese age in the cooling room, readying themselves for consumption, the generation of value hitches a ride with the flows of microbial life.

Conclusions

In the space of the farm, humans and nonhumans collaborate in the creation of a common world. But the structures, temporalities and affects that produce this world are guided by work, by a need to produce. It's not possible to compartmentalise, to resign the work of different species to their own corners; it's a relationally entangled more-than-human work guided by a medley of forces. Striving towards a more considered, collaborative mode of production is a conscious affectation, formal in the cosmology of organic farming. But nevertheless, it is an instrumentalisation in itself. Conviviality, the recognition of selfhood, integration into nonhuman ways of being, and caring for the landscape are matters of utility. But this doesn't render them any less meaningful or intimate - as is evidenced in the moments of rupture, in the unwilling invitations of death that show a clear desire for things to be different.

Chapter Three: Salvage

Commodity

"It shouldn't be a commodity, it's food, it's essential"

Capitalism brought with it the delocalisation of the dairy industry, promoting competition across counties and transforming its commercial potential from one of use-value to pure surplus (Nimmo, 2010, 45; Gunderson, 2013, 262). In recent decades a deregulated market has continued to drive prices down, forcing farmers into dependency on government subsidies which push them to find means of becoming more efficient in their production in order to meet exorbitant output quotas (Perry, 2015). Cragg House is not locked into any such deadlock. Though they do receive some funding from DEFRA on account of their organic status and biodiversity efforts, these are hardly considered a worthy exchange given the labour and exception of many of their efforts (though efforts they were making long before such funding opportunities came along). Dianna even chastises reliance on government subsidies; maintaining that greater self-sufficiency is always possible in the course of descaling, diversifying and caring for the land. Alan jokes that they could make more money working for minimum wage; most years they barely break even, and whatever surplus is produced is reinvested into the operation of the farm.

Despite the grounded, convivial fervour with which Alan and Dianna approach yoghurt and cheese-making, the practice originally came about as a matter of necessity. About twenty years ago, in one of many depreciations when milk rates dropped off, they were forced to find means of diversifying their output, seeking value-added modes of dairy production. Until recently they were also running a farm shop and tea room, though it's felt by Dianna that this was always more about supporting organic local produce than it was turning a profit. The same sentiment is attached to

the cheese, yoghurt and eggs they sell. Though some of this is profitable; being sold direct to the consumer at a fortnightly farmer's market, or to local customers willing to come to the farm, the overwhelming majority of this produce is distributed to local organic shops and cooperatives at a rate that isn't predicated in profit.

"We told the supermarkets to sod off"

Once a week Dianna will spend a long day in the van delivering produce to organic shops and cooperatives. Darting around between remote villages across the north pennines, it's a dramatic and arduous series of deliveries, generally totalling about five hours. She explains to me that this isn't about turning a profit, it isn't even about efficiency as such. *"It's the need to build community, local community".* They're not going to outsource the task to some delivery service; localising their produce also means forging social connections with communities throughout the area, and every stop along the way is met with the same genial familiarity. Dianna details how a cheese merchant from London once offered them an inflated rate for their Vindolanda cheese, far beyond what they would, or even could charge locally. The offer was turned down on the basis that it conflicted with their sentiments; with the idea that markets should be localised, rates should be fair, and produce shouldn't be racking up excessive road miles. The use-value of these commodities then, is not just formed of a desire to feed, to provide for the local community, it's an investment in alternative modes of enterprise, that aren't constructed around the generation of capital. Thus such sentiments echo through every dimension of the farm, all the way down to the minutiae of everyday convivial encounters.

Alan and Dianna complain about the devaluation of food, and argue that produce *should* be more expensive. The devaluation of food necessarily engenders a devaluation of life itself, but extolling the virtues of ethical practices and resisting the logic of cheap, expendable life comes at an economic cost that brings with it its own inequities among humans (Patel & Moore, 2017, 34). Despite the deficits they run at, and their best attempts to 'provide', much of their produce, and particularly cheese must be sold at a price that far exceeds the affordability of industrially-produced supermarket equivalents.

The irony is that, despite striving to descale, to foster local community and decenter the ordinance of exchange-value, Alan and Dianna have no choice but to sell the majority of their raw milk on the organic market where rates and distribution succumb to forces beyond their control. Every other day a tanker collects about 600 litres of milk, for which they receive a flat rate of 35p per litre. This is operated by OMSCO, a farmer-led organic collective that grants dairy producers some control over how their product is used; providing detailed knowledge of processing and final destinations as well as maintaining that the producers have a say in setting their rates. This prevents the need to meet excessive quotas and inequitable relations of dependence with government subsidies and supermarkets.

The commodity chain is flexible and doesn't demand entirely standardised output. The extent of distribution throughout the country varies regularly, depending on demand, and a portion of the milk will also be shipped internationally. Beyond just the meagre flat rates, Alan and Dianna are dissatisfied with the extent of this distribution, but they're powerless against this dimension of the market. This dissatisfaction has been exacerbated by Brexit, as previously international shipments would only travel as far as the EU. The fact is, even if they don't personally profit from

it, they're still integrated into the competitive pull of the free-market, a process that regards life as a source of accumulation and food a mere exchangeable commodity.

To a certain extent, this is an example of capitalist 'salvage'; the means through which capital can co opt value produced without its control (Tsing, 2015, 63). Salvage is not incidental to capitalism, it's a function of it, a primary means through which nonhuman life can be exploited for value generation (ibid, 62). In exchange for a standardised, paltry flat rate, much of their raw milk will wind up in the hands of organic companies who will process it into profitable value-added commodities on a large-scale. It is a site of 'pericapitalism', existing both in- and outside capitalism, where a non-scalable product is transformed into a scalable one through industrial distribution (ibid). Even in resistance, in striving to remove themselves, capital casts a long shadow, seeking out and incorporating even its own assailants through branching networks of supply.

Closing Contentions

Many farmers in the area are facing issues of inheritance; working well into their old age, often living entirely solitary lives, there's a growing anxiety about not just the well-being of an ageing agricultural community, but the future of their farming practices (Lobley, 2010, 846). One of the most prominent agricultural schools in the county was recently closed, and as standardised school curriculums fail to encourage children to engage with this sector, and potential sources of income continue to diversify, there's a growing deficit of young people willing to take on this kind of working life. This is a common topic of conversation and clearly a source of concern for Alan and Dianna, who see the educational sector and its failure to nurture meaningful connections to the land and to nonhuman animals as a primary catalyst of this phenomenon. It's not a lifestyle that

can be taken lightly. Alan and Dianna are impassioned and resolutely committed to their ideologies; living this way is incredibly taxing and presents constant hardship. They express anxiety about indifference among younger generations, towards food production, the environment, politics, and fear that people are becoming increasingly disengaged from this agrarian landscape, funnelled into office jobs in the nearby city of Carlisle or emigrating to other parts of the country that appear to present more lucrative opportunities.

For years the farm has sought to reach out to the local community and beyond. As well as generally having one volunteer staying on-site, they regularly host workshops and outreach programs. This is always treated as an opportunity to inspire, to radicalise even, and more than just a pragmatic means of practical education, this is handled with political urgency. Dianna jokes about instilling 'communistic' values in people, but it's made abundantly clear that subversion and rejecting capitalism are at the core of their ideology, driving the purposive intentionality of their lifestyle. Many conversations revolve around fears of climate change and ecological degradation, the maltreatment of animals at the hands of poorly regulated agricultural production and the greenwashing of these industries. They lament the corruptible processes of governance in the area, and the endless succumbing to the whims of the free market, bolstering manufacturers that have no regard for the general well-being of life.

Meaningful change starts with transforming the mode of production, and far from being an intentional community, digging their heels in at the margins in panglossian protestation of the world around them, Cragg House is treated as a vessel for subversion, for cultivating dissent, and it's abundantly clear that they trust in the potential of this remote farm to bring about the future they believe in.

Retirement

Alan and Dianna have been farming in some form for practically their entire lives, and now, getting into their seventies, with the physical burden beginning to take its toll, they're looking to retire. But in retirement, there's a reluctance to forfeit what they've built here over the years. For many farmers retiring means auctioning off the herd - usually for slaughter - selling the land and severing the bonds that have developed over the years, and there's a costly emotional toll to this degree of abandonment (Riley, 2011, 20). The plan at Cragg House is to sell the farm to a land trust, and endow the core responsibilities of running the farm to a younger generation of tenant farmers who work for the trust. If bureaucratic procedure will allow it, they hope to use the proceeds of the sale to build themselves a home on the land, where they can live side by side with the new management.

The main entry point into farming in England is succession (ADAS, 2004), but without familial heirs the anxiety of retirement lies in choosing the right inheritors, who they can trust to work the land and care for the herd as they have. As outright landowners they're privileged in this respect; not forced into letting go and still formal agents in the farm's management. In recent months they've been flooded with applications from young farmers willing to work the farm but barely a fraction meet the requirements, worldviews, and degrees of experience that they deem necessary. Beyond the assurances of experience or shared ideology, it's a more-than-human legacy, one that recognises the need for nonhuman life to thrive beyond the parameters of a human lifespan. The herd, conceived by a cosmology of kinship, of longevity and resistance to terse commodification, will continue to thrive long past Alan and Dianna's departure. There's no 'final sale' here; the farm is not a mere business, an enterprise with an expiry date; it's a complex medley of living entities, an ecology of vital agents and ideologies living in close but fragile coalition.

Conclusions

On the organic dairy farm, the biopolitics of life are diffuse. Though tempered in comparison to the intensive factory farm, degrees of discipline and confinement still play a central role here. Through resistance to discipline, the agency of nonhuman life finds itself imprinted on instruments of control. But similarly, via a history of extraction, power has also become inscribed onto nonhuman bodies through genetic and physiological manipulations that render life docile and dependendent on human direction. In such a context, lives and landscapes become contingently entangled in productive means of control, and power is re-embedded in intimate modalities of care and concern. Such acts of power are generally not a matter of maximal productivity; they are essential to realising an organic mode of production and integral to shifting practices away from the confined, homogenising and surplus-driven techniques of capitalism. With conscientiousness, comes even greater complexity.

Outside of the confines of the industrial farm, concepts of nonhuman labour only take us so far. When nonhuman agency is taken seriously it reveals a context where the parameters of labour are diffuse, where work seeps out into every corner of life, transcending clear species boundaries. In the space of the farm, human and nonhuman agents collaborate in the creation of a common world, but this is not an equitable 'commons', a place of unbridled flourishing. The structures, temporalities and affects that produce this collective world are guided by work, by a need to produce. Working with other species to produce a commodity may entail cooperation, even coeval collaboration, and it displays a conscious indistinction of nature-culture binaries, but still degrees of exploitation persist. Modalities of care, intimacy, conviviality, all of these exist within the organic ideology of production as a way of resisting capitalism, and yet they are also the means through which extraction operates. Incorporation into nonhuman social orders, affective

communication, the nurturing of idiosyncratic selves into ‘good workers’; these are all formed from, and conducive to kinship, but they are also vital in-roads to working cooperation and productivity. What at first appears as tension, between companionship and instrumentality largely coheres both practically and cosmologically. But this is not to detract from the emotional depth inherent in these interspecies relationships, and the perceived meaningfulness of conviviality is evident in instances of unwanted morbidity.

The commercial endeavours of the farm and their willfulness to operate beyond the bounds of sheer exchange-value are promising, but they also reveal a certain frivolity in trying to renegotiate commercial enterprise under capitalism. In spite of all its protestations, Cragg House still finds itself integrated into a system that regards nonhuman life as merely a fecund source of value generation. But this doesn’t render resistance completely fruitless. Alternative ways of producing go a long way in disrupting the deleterious effects of limitless growth and surplus-generation. In conditions where nonhuman life has been instrumentalised to the point of dependence, it offers a life outside of confinement, where sociality can be meaningfully exercised both within and beyond the herd.

Bibliography

ADAS et al (2004). Entry to and exit from farming in the UK. Wolverhampton: ADAS

Consulting Ltd, report to DEFRA, London.

Agamben, G. (1998). *Homo Sacer: Sovereign Power and Bare Life*. Stanford, CA: Stanford University Press.

Barua, M. (2016). Lively commodities and encounter value. *Environment and Planning D: Society and Space*, *34*(4), 725–744. https://doi.org/10.1177/0263775815626420

Barua, M. (2019). 'Animating capital: Work, commodities, circulation', *Progress in Human Geography*, 43(4), pp. 650–669. doi: 10.1177/0309132518819057.

Bear, L. (2016). Afterword: For a New Materialist Analytics of Time. *The Cambridge Journal of Anthropology, 34*, 1, 125-129.

Beldo, L. (2017). Metabolic Labor Broiler Chickens and the Exploitation of Vitality. *Environmental Humanities.* 9 (1): 108-128.

Bennett, J. (2010). *Vibrant matter: A political ecology of things*. Durham, N.C: Duke University Press.

Blanchette, A. (2015). Herding species: Biosecurity, posthuman labor, and the American industrial pig. *Cultural Anthropology, 30,* 4, 640-669.

Blanchette, A. (2020). *Porkopolis: American animality, standardized life, & the factory farm*. Durham London Duke University Press 2020

Büscher, B. (2021). The nonhuman turn: Critical reflections on alienation, entanglement and nature under capitalism. *Dialogues in Human Geography*. https://doi.org/10.1177/20438206211026200

Clay, N., Garnett, T. & Lorimer, J. (2020). Dairy intensification: Drivers, impacts and alternatives. *Ambio* 49, 35–48. https://doi.org/10.1007/s13280-019-01177-y

Cole, M. (2011). From "Animal Machines" to "Happy Meat"? Foucault's Ideas of Disciplinary and Pastoral Power Applied to 'Animal-Centred' Welfare Discourse. *Animals, 1*, 83-101. https://doi.org/10.3390/ani1010083

De Vries, A., & Marcondes, M. (2020). Review: Overview of factors affecting productive lifespan of dairy cows. *Animal, 14*(S1), S155-S164. doi:10.1017/S1751731119003264

Deleage, E. (2019). From desolation to the creation of a common world. In *Animal labor: A new perspective on human-animal relations* (2021) ed. Porcher, J., & Estebanez. Bielefeld : Transcript, 2021

Deleuze, G. (1998). "On Four Poetic Formulas that Might Summarize the Kantian Philosophy", in Essays: Critical & Clinical. New York: Verso.

DEFRA (2019) Agricultural Facts: The North West. Accessed at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/972099/regionalstatistics_northwest_23mar21.pdf

DEFRA (2020). Organic farming statistics United Kingdom 2020. Accessed at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/996197/Organic_Farming_2020_stats_notice-24jun21.pdf

DEFRA (2021). Sustainable Farming Incentive: Defra's plans for piloting and launching the scheme. Accessed at: https://www.gov.uk/government/publications/sustainable-farming-incentive-scheme-pilot-launch-overview/sustainable-farming-incentive-defras-plans-for-piloting-and-launching-the-scheme

Donati, K. (2019). Herding is his favourite thing in the world: Convivial world-making on a multispecies farm. *Journal of Rural Studies*, 66, 119-129.

Gertenbach, L., Lamla, J. and Laser, S. (2021). 'Eating ourselves out of industrial excess? Degrowth, multi-species conviviality and the micro-politics of cultured meat', *Anthropological Theory*, 21(3), pp. 386–408. doi: 10.1177/1463499620981544.

Gillespie, K. (2021). An Unthinkable Politics for Multispecies Flourishing within and beyond Colonial-Capitalist Ruins, Annals of the American Association of Geographers,112:4, 1108-1122, DOI: 10.1080/24694452.2021.1956297

Gillespie, K. (2021a). The afterlives of the lively commodity: Life-worlds, death-worlds, rotting-worlds. *Environment and Planning A, 53,* 2, 280-295.

Grasseni, Cristina, (2005). Designer cows: the practice of cattle breeding between skill and standardization. Society and Animals 13 (1), 33-49.

Gunderson R. (2013). From Cattle to Capital: Exchange Value, Animal Commodification, and Barbarism. *Critical Sociology.* 39 (2): 259-275.

Hamilton, L. & Taylor, N. (2017). Ethnography After Humanism: Power, politics and method in multi-species research. Macmillan: London.

Hansen, P. (2014). Becoming bovine: Mechanics and metamorphosis in Hokkaido's animal-human-machine. *Journal of Rural Studies, 33,* 119-130.

Haraway, D. J. (1985). *Cyborg manifesto*. Victoria, B.C: Camas Books

Haraway, D. J. (2010). *When species meet*. Minneapolis: University of Minnesota Press

Holloway, L. (2001). Pets and protein: placing domestic livestock on hobby-farms in England and Wales. *Journal of Rural Studies.* 17, 293-308.

Ilea, R.C. (2009). Intensive livestock farming: Global trends, increased environmental concerns, and ethical solutions. *J. Agric. Environ. Ethics.* **22**:153–167. doi: 10.1007/s10806-008-9136-3.

Ingold, T. (1983). The architect and the bee: Reflections on the work of animals and men. *Man, 18,* 1-20.

Ingold, T. (1993). The temporality of the landscape. *World Archaeology, 25,* 2, 152-174.

Ingold, T. (2000). *The Perception of the Environment*. Routledge: London.

Johnson, E. R. (2015). Of lobsters, laboratories, and war: Animal studies and the temporality of more-than-human encounters. *Environment and Planning D: Society and Space, 33,* 2, 296-313.

Kohn, E. (2013). *How Forests Think: Toward an Anthropology Beyond the Human*. University of California Press.

Kopnina, H. (2017). Beyond multispecies ethnography: Engaging with violence and animal rights in anthropology. *Critique of Anthropology,* 37(3).

Lally, A. E. (2022). Extending *terroir*: Icelandic lamb production and the taste of land(rights). *Anthropology of food* [En ligne], S14 | 2020, mis en ligne le 31 juillet 2020, consulté le 08 juin 2022. URL : http://journals.openedition.org/aof/10647 ; DOI : https://doi.org/10.4000/aof.10647

Latouche S (2009). *Farewell to Growth*. Cambridge: Polity.

Latour, B. (1988). *The Pasteurization of France*. Cambridge , MA : Harvard University Press.

Latour, B. (1993). *We have never been modern*. Harlow: Longman.

Livestock Conservancy (2020). Ayrshire Cattle. Accessed at: https://livestockconservancy.org/heritage-breeds/heritage-breeds-list/ayrshire-cattle/

Lobley, M. (2010). Succession in the Family Farm Business. Journal of Farm Management, 13(12): 839-851

Marcellino, N. (2003). Biodiversity of *Geotrichum candidum* Strains Isolated from Traditional French Cheese. Ph.D. dissertation, University of Connecticut .

Meijer, E. & Bovenkerk, B. (2021). *Taking animal perspectives into account in animal ethics*. Animals in Our Midst: The Challenges of Co-Existing with Animals in the Anthropocene. Springer Science and Business Media B.V.

Moore, J. W. (2016). *Capitalism In The Web Of Life: Ecology And The Accumulation Of Capital*. London: Verso.

Morton, T. (2019). *Humankind: Solidarity with nonhuman people*. London: Verso

Nimmo, R. (2010). *Milk, modernity and the making of the human: Purifying the social*. London: Routledge.

Novek, J. (2005). Pigs and people: Sociological perspectives on the discipline of nonhuman animals in intensive confinement. *Soc. Anim. 13*, 221-244.

Patel, R & Moore, S. (2017). *A History of the World in Seven Cheap Things: A Guide to Capitalism, Nature, and the Future of the Planet:* University of California Press, Oakland, California, 2017,

Paxson, H. (2008). Post-Pasteurian Cultures: The Microbiopolitics of Raw-Milk Cheese in the United States. *Cultural Anthropology, 23,* 1, 15-47.

Perry, M. (2015) Explaining Britain's Dairy Crisis. Sustainable Food Trust: Accessed at: https://sustainablefoodtrust.org/articles/explaining-britains-dairy-crisis/

Pidd, H. (2014). How Lake District holiday homeowners are pushing out local residents. The Guardian. Available at: https://www.theguardian.com/uk-news/2014/jul/09/lake-district-homeowners-local-residents

Porcher, J. (2015) Animal Work. *The Oxford handbook of animal studies* (2014). Ed. Kalof, L. Accessed at: https://liverpool.idm.oclc.org/login?url=http://dx.doi.org/10.1093/oxfordhb/9780199927142.001.0001.

Riley, M. (2011). 'Letting them go' – Agricultural retirement and human–livestock relations. *Geoforum.* 42, 16-27.

Schwabe, C. W. (1993). Animals in the ancient world. *Animals and Human Society : Changing Perspectives.* Ed. Manning, A. & Serpell, J.

Shapiro, K. (1990). Understanding dogs through kinesthetic empathy, social construction, and history. *Anthrozoös.* 3(3): 184–195.

Soil Association (2022). Organic Milk & Dairy. Soil Association. Accessed at: https://www.soilassociation.org/take-action/organic-living/what-is-organic/organic-milk-dairy/

Stanescu, J. (2013). Beyond Biopolitics: Animal studies, factory farms and the advent of deading life. *Phaenex*, 8(2).

Stuart, D., Schewe, R. L., & Gunderson, R. (2013). Extending Social Theory to Farm Animals: Addressing Alienation in the Dairy Sector: Alienation in the dairy sector. *Sociologia Ruralis, 53*, 2, 201-222.

Taylor, N. (2007). *'Never an it': intersubjectivity and the creation of animal personhood in animal shelters*. Available at: http://www.qualitativesociologyreview.org/ENG/volume6.php.

Taylor, C. (2013). Foucault and Critical Animal Studies: Genealogies of Agricultural Power. Philosophy Compass, 8: 539-551. https://doi.org/10.1111/phc3.12046

Thompson, E.P. (1967) Time, Work-Discipline & Industrial Capitalism, *Past & Present*, Volume 38, Issue 1, December 1967, Pages 56–97, https://doi.org/10.1093/past/38.1.56

Tsing, A. L. (2015). *The mushroom at the end of the world: On the possibility of life in capitalist ruins*. Princeton, NJ: Princeton University Press

Tuan, Y.F. (1984). Dominance and Affection: the Making of Pets. Yale: University Press, London.

Vargas G. M. (2020) Alfred Schutz's Life-World and Intersubjectivity. *Open Journal of Social Sciences* 8, 12. https://www.scirp.org/journal/paperinformation.aspx?paperid=106203

Wels, H. (2020). Multi-species ethnography: methodological training in the field in South Africa. *Journal of Organizational Ethnography, 9*, 3, 343-363.

Wood, E. M. (2002). *The Origins of Capitalism: A Longer View*. New York, NY: Verso.

Wilkie, R. (2005). Sentient commodities and productive paradoxes: the ambiguous nature of human–livestock relations in Northeast Scotland, *Journal of Rural Studies*, Volume 21, Issue 2, 213-230.