University of Southampton

Faculty of Environmental and Life Sciences

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The Affective Geographies of Human-Pig Relationships

by

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Abstract

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This thesis delves into the diverse and often overlooked lives of pigs beyond traditional agricultural settings, exploring their relationships with humans across three alternative spaces of encounter; animal research facilities, homes, and animal rescue spaces. Adopting a more-than-human geography perspective, this research is intrigued by the circulation, coexistence, and conflict of affect in human-pig relations. While animal geographies have made significant progress in understanding human-animal entanglements with space, place, and power, this thesis underscores the need for further investigation into the lived experiences of pigs and the nuanced nature of our connections with them. The research focuses on the transformative potential of love and care, advocating for new forms of political action by critically examining the boundary-making processes co-constitutive of human-pig entanglements. It introduces the concept of the 'multiplicity of the pig' to reflect the diverse roles and relationships that (re)define the pig and their identities. This concept acknowledges that pigs are not confined to a singular context or narrative, challenging their normative categorisation as 'livestock'. Drawing on ethnographic data from animal research facilities, a pig sanctuary, and interviews with various participants including animal research technicians, pet pig keepers, sanctuary staff and volunteers, and a pet pig breeder, the thesis advances a more-than-human understanding of human-pig relationships. The inherently political relationships forged in the contexts explored in this thesis craft spaces for alternative encounters with pigs, representing practices of 'worlding' that reshape the boundaries of our shared worlds. This comprehensive understanding has the potential to drive ethical and political transformations, recognising that affective relations actively contribute to shaping shared multispecies experiences. However, the thesis identifies multiple challenges to worlding, entangled with species power relations that harbour hierarchical structures that seek to derail the transformative potential of affect.

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Research Thesis: Declaration of Authorship

Print name: Kate Goldie

Title of thesis: The Affective Geographies of Human-Pig Relationships

I declare that this thesis and the work presented in it are my own and has been generated by me as the result of my own original research.

I confirm that:

1. This work was done wholly or mainly while in candidature for a research degree at this University;
2. Where any part of this thesis has previously been submitted for a degree or any other qualification at this University or any other institution, this has been clearly stated;
3. Where I have consulted the published work of others, this is always clearly attributed;
4. Where I have quoted from the work of others, the source is always given. With the exception of such quotations, this thesis is entirely my own work;
5. I have acknowledged all main sources of help;
6. Where the thesis is based on work done by myself jointly with others, I have made clear exactly what was done by others and what I have contributed myself;
7. None of this work has been published before submission

Signature: Date:

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Definitions and Abbreviations

ADHB .....Agriculture and Horticulture Development Board

APHA .....Animal Plant and Health Agency

AT .....Animal Technician

CAS .....Critical Animal Studies

DEFRA.....Department for Environment, Food & Rural Affairs

RSPCA .....Royal Society for the Prevention of Cruelty to Animals

STS .....Science and Technology Studies

Chapter 1 Introduction

Upon embarking on my research into the world of pigs (*Sus scrofa*), many people told me that pigs were just like 'big dogs'. I hadn't properly understood this until I met Harry, a 320-kilogram Large White and Landrace mix breed pig. He was approximately four years old when I met him on a visit to a pig sanctuary in Southeast England in November 2021. I knew that pigs could be big animals, but Harry's size took me by surprise, standing at just over hip height next to me. I extended my hand for him to smell me. He nudged it with his nose and allowed me to scratch his head. I stopped briefly and he immediately nudged again, so I diligently returned to scratching his head. He seemed to like it. I felt Harry's gentle aura, something I wasn't expecting from such a large animal. Much like a dog, his tail wagged when anyone approached the pen. Jacqui, the sanctuary owner, had also taught him to sit and come to her call. He would live at the sanctuary, with his pen-mate George, for the rest of his natural life. Harry and George's lives stood in stark contrast to the approximately 9.7 million pigs that were slaughtered in the U.K. that same year (AHDB, 2023).

Meeting Harry, George, and the approximately 150 other pigs (some with names, some without) I encountered throughout the course of this research illuminated the disconnect between societal perceptions of pigs and the diverse realities of these intelligent and charismatic animals. As I traversed deeper into the world of pigs, I became increasingly aware of their complex emotions, social lives, and individual personalities. The pigs I met were not living on farms and instead lived in animal research laboratories, in family homes as pets, and in animal rescues or sanctuaries. It was not only the pigs present in these worlds, as the humans that shared these pig worlds also taught me the possibilities of kinship with these animals. These encounters compelled me to explore the affective geographies of these human-pig landscapes, contributing to multiple understandings and ways of living alongside pigs in different spaces. Exploring these distinct spaces and the intricate webs of human-pig relationships within them revealed heterogeneous landscapes, each with unique challenges that necessitate careful consideration. To make sense of this complexity, I employ the concept of the 'multiplicity of the pig' to reflect the diverse roles and relationships that (re)define the pig, the humans that care for them, and their identities. The multiplicity of the pig acknowledges that pigs are not confined to a singular narrative or context but inhabit various spaces and identities that challenge their normative placing as livestock. These spaces and identities are intimately woven with the relationships pigs develop with humans, who are too shaped by diverging and differing ways of relating to pigs.

This research delves into human-pig relationships within three distinct contexts: animal research, pet-keeping, and animal rescue. Whilst previous studies have predominantly centred on pigs within agricultural settings, this thesis broadens the scope to encompass these diverse contexts. I examine how practices such as love, care, and the imaginative construction of alternative human-pig futures can facilitate profound bonds between humans and pigs within these unique environments. I also investigate the complex interplay of power dynamics and societal structures that influence affective connections - and disconnections - that exist across human-pig species boundaries. Despite the markedly different lives pigs have across these contexts, the relations within them necessitate close and embodied forms of care separated from the pig as livestock. This thesis centres in on the complexities of these care relationships, bringing attention to marginalised care knowledges that emerge in alternative spaces of encounter outside of animal agriculture as new worlds for pig-human relationships are practised.

Pigs and humans share a long, intertwined history. The modern pig is descended from the wild boar who today remains ubiquitous across the globe, found in all continents except Antarctica. Early human ancestors hunted wild boar for sustenance across much of Eurasia. Throughout the Holocene, the domestication of the boar and implementation of animal agriculture regimes gradually created longer bodies, curly tails, shorter legs, and the diminishment of markings that previously helped them to camouflage in the wild (Mizelle, 2011). Today, pork is one of the most consumed meats across the globe, with consumption expected to increase by 129 million metric tonnes over the next decade (OECD, 2023). The highest levels of pork consumption are found in China, the European Union and the United States, which jointly account for 74% of the world's pork consumption (Szűcs and Vida, 2017), whilst lower rates of consumption are often found in regions typical of religious or cultural taboos against consuming pork. However, for many populations in post-industrial societies, such as the UK, encounters with live pigs are fleeting, often limited to eating their flesh at mealtimes. We also regularly consume what Brett Mizelle (2011) describes as 'pigs of the imagination', referring to the socio-cultural representations of pigs in everyday life. These include fictional figures such as Babe the Sheep-Pig, Wilbur of Charlotte's Webb, Peppa Pig, and even Percy Pig, the porcine cartoon mascot of British supermarket Marks & Spencer.

Nonetheless, physical interactions with pigs, among other species categorised as 'livestock', are fleeting. This spatial distance from pigs renders them less encounterable and increasingly 'invisible', shifting public imaginaries and constructions of farmed animals and where they are assumed to belong (Philo, 1995). This increased separation is largely due to the intensification of animal agriculture worldwide since the turn of the century, a trend that

is continuing despite rising concerns surrounding animal welfare and ethics, climate change, and food safety (Neo and Emel, 2017).

Despite advancements in animal welfare regulations in recent years and many farm animals subsequently enjoying a higher quality of life, the ongoing intensification of animal agriculture in capitalist economies brings to the fore ethical questions surrounding the use of animals by humans and the violence animals face in both their lives and deaths as a result of their exploitation (Taylor and Twine, 2014). I argue that exploring pigs in a range of different spaces and animating their lifeworlds not only allows us to understand the diverse affective connections and disconnections possible in human-pig relations, but also offers a lens through which to envision alternative relationships that aim to balance the wellbeing of both humans and pigs.

Outside of the farm, pigs are increasingly used in research trials, in both animal studies and as a model of human health due to their anatomical and physiological similarities with humans (Bergen, 2022). Pigs have also entered the pet industry in recent decades, with smaller breeds such as the Kunekune or Vietnamese Pot-Bellied Pig becoming popular breeds for companion pigs (Almaraj et al., 2018). Pigs can also be encountered in animal sanctuaries and rescue organisations that care for pigs that have been abandoned, taken from farms by activists or concerned members of the public, or in rare cases, have escaped. Intrigued by these spatial transgressions, this thesis examines the affective geographies of pig-human relationships across these three spaces of encounter: the research laboratory, the home, and the animal rescue. A critical exploration of the complexities and consequences of these relationships is vital not only in paving the way for more informed practices that can prioritise the care and wellbeing of pigs, but also of the people in these contexts. For instance, pet keepers drive emotional benefits from their animal companions, but also may be heavily impacted by the loss of their pet (McNicholas et al., 2005). Additionally, in the context of animal research, staff who work closely with research animals often suffer compassion fatigue (Newsome et al., 2019). Further, by examining how pigs, traditionally viewed as food products, are welcomed into these spaces and disrupt expectations of what and who is "in place" (Philo and Wilbert, 2000), the thesis highlights how these encounters open up new ways of knowing and living with pigs.

The thesis develops a more-than-human geography of human-pig entanglements through a sustained engagement with the circulation, co-existence and conflict of affect in these relations. Here, affect is conceptualised as a transformative force of and between bodies, revealing its potential in the mutual openness of these bodies to one another (Pile, 2009). Affect is crucial to human social experience and is implicated in the social production of

space (Woodward and Lea, 2010), yet I suggest that research must consider how 'dehumanising' the concept of affect can facilitate a greater understanding of how animals can become entangled in affective relations, as well as how these relations are experienced and handled in practice. Disentangling the implications of conflicting affective relations rather than attempting to identify examples of ideal, utopian multispecies relations is crucial. In suggesting that such perfect relations exist, the inherent complexity of multispecies entanglement is overlooked. Instead, we must 'stay with the trouble' (Haraway, 2016). Being entangled suggests not only a complex, layered connectedness between multiple species and nonhumans, but also suggests that these identities and connections do not act in isolation (Hird, 2009). This is attentive to the shifting identities of nonhuman animals as they navigate and transgress borders of space and place and contributes to discussions about the intricacies and interplays of animal categorisations, ethics, and care. Little research considers the role of farmed animals as co-creators of multispecies worlds, particularly when they transgress the spatial borders of the farm and enter novel relations for their species. The stories told throughout this research draw attention to the porous boundaries of human-pig identities and highlight the obscured tensions and negative geographies that sit alongside interspecies companionship and cooperation. Considering this, the research challenges the normative place of pigs in society by exploring their multiple affective becoming(s) with humans.

This thesis highlights that the identities that pigs adopt outside of the farm are heterogeneous, fluid, and complex. In doing so, the research recognises the agency of pigs in co-constructing multispecies entanglements despite ongoing power struggles that manifest through human exceptionalism. This contributes to broader debates surrounding the violent expressions of capitalist systems in animal lives and deaths but also explores how pigs may challenge and disrupt their societal placings. This is a novel way of approaching the farmed animal in the literature, who have previously been considered as 'more than food', for instance, in the context of hobby farming (Gorman, 2018) but very rarely as 'other than food', decoupled from their potential as food altogether. This contributes to the call for a radical politics that shifts the boundaries between human and animal within critical animal studies (White, 2015).

A critical discussion on animal transgression draws attention to the disparate ethical encounters at the border of human-animal. In this context, I explore how affect operates in human-pig relationships at these points of transgression in both productive and inhibitive ways (Deleuze, 1988). To understand the connections and disconnections made possible through affective relations, it is necessary to explore the bi-directional relationship between

power and affect (Müller, 2015). Acknowledging this, the thesis considers the 'affective dynamics' of human-pig relationships. These dynamics refer to the broader socio-material conditions that either foster or hinder the transformative potential of these relationships. Affective dynamics have the capacity to allow humans and pigs to mutually flourish, or to amplify the vulnerabilities of the pig in hierarchical human-animal power relations.

1.1 The Significance of Human-Pig Relationships

Animals are often thought to belong in certain spaces or have certain roles in relation to humans, as Herzog's (2010) book title aptly sums up, 'Some We Love, Some We Hate, Some We Eat'. The book guides us through the psychology behind the variable relationships humans have with animals, categorised by their multiple identities including companion, livestock, wild, vermin and so on. These identities are not stable across time, space, culture or within species. This research is intrigued by the varied roles pigs can take on in different spaces as companions, research animals, and rescue animals. It asks what we can learn about pigs, as well as our relationships with them, in the multiple spaces they occupy outside of the farm as both humans and pigs navigate through conflicting affective forces within their shared worlds.

The specific focus on pigs that this research takes serves both analytical and ontological purposes. In reference to the latter, animals must be bought into research as political subjects in their own right if the social sciences wish to overcome the anthropocentricism inherent across disciplines, including geography (Johnston, 2008, Hobson, 2007). Looking at 'the animal', or even 'the farmed animal', as a homogenous group can prop up this anthropomorphism by failing to pay attention to species differences, therefore perpetuating a human/animal binary whereby animals remain in the shadows (Jones, 2003). By refining focus, I argue we can bring greater attention to the nuanced lives of animals, creating a vibrant and thorough narrative of their life experiences. Bear (2011) provides a captivating narrative of an individual octopus, taking her away from the borders of analysis and bringing to life her unique lived experiences. In so doing, Bear opens new ways of relating to animals ethically and politically by engaging with their individual histories, problems, and relations. Whilst choosing a species as the point of analysis remains focused on animals as a collective, this research aims to be conscious of the anthropocentric binaries this can uphold and seeks to tell the story of the pig through various individual pigs, exploring the different spaces they occupy, the different lives they lead, their unique histories, relationships with one another, and with other human and nonhuman species. This is not to say that this research is not transferable to other farmed animal cases, or other animal cases

more generally. Rather, the themes explored here that are encompassed by affective practices of care, love, and ethics cut across different species, though are performed discordantly. A focus that is species-specific, but respects intra and interspecies difference, allows a more vibrant, distinct, and peculiar story to be told about the animals our lives are entangled with.

From an analytical perspective, I argue that our relationships with pigs are vastly unsustainable from environmental, social, and ethical perspectives. It is important to note that this thesis is written in a specific context. The Anthropocene has signalled significant and often devastating human impact on the earth, having implications for climate, ecosystems, animals, people and plants. This period of anthropogenic planetary change demands attention to human exceptionalism in multispecies worlds. The environmental impacts of the animal agriculture industry are irrefutable. The FAO estimates that the animal agriculture industry is responsible for 14.5% of global greenhouse gas (GHG) emissions (Gerber et al., 2013) though the true figure is likely to be higher (Twine, 2010). The pork industry alone is responsible for approximately 9% of all livestock related GHG emissions (Gerber et al., 2013), playing a significant role in contributing to climate change. This is projected to increase due to higher demand for meat in the post-COVID era (Ndue and Pál, 2022). Air, water, and soil pollution are also rising concerns, impacting ecosystems and human and animal health (Aneja et al., 2008). The pork industry also contributes significantly to the eutrophication of aquatic ecosystems due to ammonia emissions (Webb et al., 2014). Hydrogen sulphide emissions from pig farming also cause odour complaints and have negative impacts on human health (Aneja et al., 2009). Furthermore, intensive pig facilities are often disproportionately situated near low-income communities, spurring environmental justice concerns (Ponette-González, 2010). In regard to food safety, the prevalence of salmonella in pork products poses a risk to human health (Gavin et al., 2018). Further health risks posed by the animal agriculture industry relate to biosecurity (Graham et al., 2008) and antibiotic resistance (Van Boeckel et al., 2015). Considering the overwhelming amount of evidence, current animal agriculture practices are vastly unsustainable; socially, economically, and environmentally.

In addition to this, insights from animal welfare science tell us more about the main health and welfare issues that farmed pigs face, including pain and stress from procedures such as tail docking, teeth reduction, nose ringing, castration of male piglets, as well as limited mobility due to the use of sow stalls (although these are banned in the UK) and farrowing crates (RSPCA., no date). Furthermore, in a study of 15 UK finishing pig farms, Mullan et al. (2011) found that the majority did not meet or exceed the minimum guidelines for

enrichment. Living in a stressful environment with few opportunities to root and exhibit other natural instincts often results in welfare issues, such as tail biting, which may be more common in indoor systems although this behaviour is influenced by a complex range of environmental factors. Outdoor systems also come with their own risks, including a higher risk of lameness due to variable ground conditions (Pandolfi et al., 2017) and a greater risk of infection (Pietrosemoli and Tang, 2020). In light of the numerous environmental, ethical, and welfare concerns associated with animal agriculture, questions regarding the ethical and societal repercussions of our relationships with animals have thus become central to animal studies scholarship (DeMello, 2012). Given the urgency of the concerns discussed here, I argue it is of paramount importance to start a critical discussion on what alternative futures of human-pig relationships might encapsulate.

Then why not cows, chickens, ducks, goats, or any other farmed animal species? Any of these animals could tell us a meaningful story about human-animal relations. Pigs are particularly intriguing not only due to the multiple identities that can be afforded to them due to the numerous spaces they can inhabit (intensive farms, organic farms, city farms, petting zoos, sanctuaries and rescue centres, research facilities, private homes, smallholdings, and forests to name a few), but are also a species of importance to different groups in society with crucial roles to play in achieving sustainable and alternative ethical futures. This thesis also recognises the limited existing literature on pigs specifically and aims to fill this gap by providing a more nuanced understanding of the affective dynamics between humans and pigs across different spaces and contexts.

1.2 Structure of the Thesis

Following this introduction, Chapter 2 introduces the field of animal geographies and charts the disciplines' interest in the question of the animal. The focus then turns to the pig and explores how human-pig relationships have been understood so far. The chapter then proceeds to explore the sites of encounter relevant to this research; animal research, pet-keeping, and animal rescue. Each section illuminates the ways in which scholars have investigated and conceptualised multispecies relationships within these contexts, providing valuable insights that inform my own approach to understanding human-pig relations. The review of the literature identifies gaps in understanding, that inform the research questions presented at the end of the chapter.

The theoretical framework that informs this research is then outlined in Chapter 3. This draws on posthumanism and science and technology studies (STS) to create a more-than-

human analysis framework that considers both humans and nonhumans as active agents in co-creating shared worlds. The framework argues that power relations manifest in these worlds as broader socio-material-political structures delineate the boundaries and possibilities of human-pig encounters. By integrating posthumanist and STS perspectives, the framework illuminates the intricate entanglements and negotiations of power that shape the lived experiences of both humans and pigs in these relational contexts. This is used to build the concept of the multiplicity of the pig.

Chapter 4 then describes how research has been undertaken on pig-human worlds. It outlines the research design, a multi-sited ethnography at sites of human-pig encounter; two animal research facilities and a pig sanctuary, and qualitative interviews undertaken with animal technicians (ATs) in research facilities, staff and volunteers at animal rescue organisations, pet pig keepers, and one pet pig breeder. I explain how these methods have allowed me to approach human-pig relationships through the lens of the theoretical framework laid out in Chapter 3. I also draw attention to issues of positionality and reflexivity in researching multispecies worlds.

The following three empirical chapters each focus on one space of encounter, serving as a case study to investigate the affective dynamics of human-pig entanglements. These dynamics often play a dual role, serving as both a barrier and at other times a facilitator to pig and human wellbeing, thereby implications for lived experiences of the more-than-human actors in these relations. Whilst the affects and emotions explored in each chapter are not exclusive to the spatial context in which they are discussed, the chapters are focused in scope to allow fruitful discussion of the significant tensions that are apparent in each context. Crucially, these spaces have been chosen as they offer an alternative to the normative ways of living with and knowing pigs as their food-producing animals. I contend that thinking about livestock as 'out of place' (Philo and Wilbert, 2000) and alternative spaces of pig-keeping outside of an agri-business context allows consideration of alternative ways of living that are foreclosed for most farmed pigs.

Chapter 5 takes the animal research laboratory as a site of care and control between humans and pigs. In this spatial context, emotional bonds between animal technicians and the animals they care for must navigate the inescapability of harm and killing. Drawing on Lorimer's (2007) concept of 'nonhuman charisma', it discusses how the pig can engender a unique interspecies intimacy in the laboratory. However, this intimacy is often in tension with the goals of scientific research. As such, the charisma of the pig is both implicated in productive and inhibitive multispecies relationships in this context. The chapter argues for

greater attention to affective human-pig relationships in the ethical frameworks of the laboratory as a way to remove barriers impeding both animal technician and pig wellbeing.

Chapter 6 explores the ethical potential of love in human-pig pet-keeping relationships. It argues that love for the pet pig transcends societal norms associated with human-farmed animal relationships. In turn, this opens space for multispecies care based on the recognition of pig personhood and agency. Within these narratives of companionship, I nevertheless identify multiple social, ethical, and political tensions relating to the commodification of pet love (Nast, 2006) and navigating pig love within a societal context that places pigs as food-producing animals, often ignorant of the potential for affective human-pig kinship. The chapter highlights the ethical potential of pig love in creating a radical multispecies kinship, where pigs are valued as companion animals rather than food, but critically examines how love can inadvertently contribute to the perpetuation of dominance over pigs. The chapter also underscores the urgent need to address the challenges in pet pig-keeping.

Chapter 7 examines the role of sanctuaries and rescues in shaping human-pig relationships, with a focus on affective solidarities that emerge within these spaces. Unlike previous research, predominantly based in the US, that positions farmed animal sanctuaries as sites of resistance against dominant human-farmed animal relations based on consumption, the research findings indicate that while challenging normative human-pig relations is an objective for many sanctuaries, the primary focus of many pig-only sanctuaries lies in providing care and support for individual pigs in need. These spaces often cater to abandoned and unwanted pet pigs, with some also accommodating former farm pigs. By delving into interviews and observations with sanctuary volunteers and visitors, the chapter explores the affective dimensions of human-pig relationships within sanctuary spaces, emphasising the development of emotional connections and solidarities that extend beyond traditional notions of care. Furthermore, this chapter acknowledges that while sanctuaries and rescues provide important spaces for human-pig relationships, they are not immune to the challenges and anxieties inherent in caring for pig residents.

In the forthcoming chapters, this thesis unravels and explores the intricate webs of affective connections and disconnections within human-pig relations. It delves into the emotions and embodied experiences that shape the ethical landscape of these interactions, examining how affective forces can either foster productive, mutually beneficial relations or hinder them, thereby revealing the potential ethical challenges faced by both pigs and humans.

Chapter 2 Literature Review

There are approximately one billion pigs on earth, the majority of which are raised for human consumption in intensive farming systems. However, this thesis is intrigued by the affective geographies that emerge from the multifaceted roles that pigs can assume in different spaces. By examining pigs in animal research, as pets, and as rescue animals, this research seeks to unravel the intricacies of human-pig entanglements beyond the boundaries of the farm. Through this exploration I aim to uncover the potential for profound emotional connections, shared experiences, and mutual understanding between humans and pigs in these diverse spatial contexts.

The following literature review first situates the research within geographies of human-animal relationships and affect. I then reflect upon how existing literature has approached the pig, noting a dearth of research on human-pig relationships outside of the farm. Building upon this, I explore the use of pigs in animal research, their establishment as companion animals, and the role of animal rescue in providing care for abandoned and abused pigs. In each of these contexts, I discuss the challenges for more-than-human relationships present in the literature before presenting the research questions that guide this thesis in extending the understanding of affect in human-pig relationships.

2.1 Affective Multispecies Geographies

Our lives are intricately intertwined with the animal world. We share our homes with pets, rely on animals for food production, visit animals in zoos, incorporate animal-derived materials into our clothing, and utilise animals in biomedical research. The pig is a particularly noteworthy example of an animal with multifaceted roles in society, as detailed by Christien Meindertsma in her research project entitled 'Pig 05049'. The project documents the myriad of consumer products derived from a single pig. While some products, such as bacon, pork, and sausages, align with conventional understandings of the ways pigs and their by-products are used by humans, the pig's reach extends into surprising domains, including medicine, soap, cigarettes, conditioner, biodiesel, wine, sandpaper, and paint (Meindertsma, 2007). This serves as a vivid reminder of the intricate and multifaceted connections between pigs and humans.

Recognising the inherent interconnectedness of human and nonhuman worlds, posthumanism has prompted a critical re-evaluation of the long-standing Cartesian divisions that positioned humans as morally superior and animals as passive objects based on their

assumed lack of consciousness (Castree and Braun, 1998). Reflecting these ontological shifts, geographical research attending to the more-than-human world has undergone significant changes in recent decades. The 'cultural turn' reconfigured space as fundamentally intertwined with society, consequentially becoming made and remade by agential subjects (Keith and Pile, 1993). This encouraged scholars to theorise how human-animal relations are entangled with space, place, landscape, and power (Buller, 2014, Lorimer and Srinivasan, 2013). The development of cultural animal geographies marked a departure from previous work largely within the realm of zoogeography that sought to map the geographical distribution of animals. Philo and Wilbert (2000) identify two strands of work within animal geographies, the first concerned with 'animal spaces', which explores how humans relate to and represent animals. The second strand refers to work on the 'beastly places' of animals, referring to the lived experiences of nonhumans rather than anthropocentric understandings of human-animal relations. These novel more-than-human geographies are typically influenced by posthumanist theories, that seek to decenter the human in multispecies relationships and make animals visible as lively, subjective agents in the co-production of worlds (Buller, 2014). The attention to the 'question of the animal' has invited scholars to interrogate the multifaceted nature of our relationship with animals raising inquiries into the ethical treatment of animals, the anthropocentric biases that influence our interactions with them, and the recognition of the inherent value and agency of animals (Wolch and Emel, 1998). This allows reconsideration of the boundaries between humans and animals, to explore the ways in which our own understandings of ourselves as human beings are interconnected with our interactions with nonhuman animals.

As agency was granted greater power, scholars began to consider the role of the body as more than a material entity, also reinscribed with cultural value through multiple discursive practices. This is felt in embodied, lived experiences (Moss and Dyck, 2002). Whilst these new directions in cultural geography typically cast these agential subjects as distinctly human, a focus on the concept of 'encounter' draws attention to the fragile boundaries of the body (Wilson, 2017). For the study of human-pig relations, the concept of encounter explores the intricate and affective entanglements that are implicated in the becoming of the pig, whilst challenging anthropocentric perspectives and acknowledging agency and relationality within these multispecies encounters. Encountering bodies that are in some way positioned as 'other', such as nonhuman animals, allows us to theorise how otherness and difference are negotiated, performed, and often re-inscribed across space (Barua, 2016). The transgressive capacity of encounter thus opens the possibility for new ways of living with and knowing the other (Carter and Palmer, 2017). Scholars have engaged with 'more-than-representational' theories within cultural geography to understand cross-species

entanglements. Such approaches aim to be sensitive to the embodied elements of animal/human identities and becomings but do not deny how representations of animals may (re)produce meaning (Lorimer and Srinivasan, 2013). This grants the body a centre stage in the becoming of everyday life, with focus given to affect and how the body experiences encounter sensorially and emotionally (McCormack, 2003, Anderson, 2006).

The affective turn in social sciences challenges Cartesian dualisms that separate the body and mind and instead attempts to look beyond linguistics as a way of interpreting the world. Affect can be theorised as a somatic force that occurs non-consciously, experienced viscerally in the body (Massumi, 2002). This approach is taken from Spinoza, who thought of affect as emerging from bodily interactions with the world, in both positive and negative ways (Ruddick, 2010). As a response to external stimuli, affect is crucial to human social experience and is implicated in the social production of space (Woodward and Lea, 2010). In contrast to affect, emotions are experienced consciously but the concepts are interlinked. Affect can be thought of as a broader term encompassing emotions and feeling, as well as other bodily sensations (Thien, 2005). Studying the interplay of affect and emotion can draw attention to identities and subjectivities in the making of everyday geographies (Anderson and Harrison, 2006).

The concept of affect, when viewed through the lens of multispecies geographies, reveals that encounters with animals are shaped by and generate affective relationships. The notion of 'affective ontologies' proves valuable in foregrounding the emotional and embodied, as well as the material and immaterial, forces at play when multispecies bodies encounter one another (Roelvink and Zolkos, 2015,. p.48). Experiencing affect through the body reminds us that we are actively involved in the continuous reshaping of the world (Woodward and Lea, 2010). Lorimer's (2007) concept of nonhuman charisma refers to the traits of animals that call humans to be 'affected' by them. Such charisma invites novel material-affective relations with the animal, as it opens up opportunities for humans and animals to become increasingly attuned to each other. Affect is thus implicated in forming potentially transformative relations with others, but as Woodward and Lea (2010, p.170) remind us, "no affective relation is friction free". Whilst affective relations can be productive and contribute to positive encounters, they can also be inhibitive and hinder the body's ability to act (Deleuze, 1988).

These insights into affect and multispecies geographies serve as the foundation of my approach to human-pig geographies. This thesis focuses on the dynamic circulation of affect within human-pig relations, with a specific aim to identify the factors that render these

relations productive or inhibitive for both humans and pigs. Moreover, I will delve into the role of space in shaping these affective dynamics. By adopting a more-than-human perspective, I endeavour to untangle and understand how affective encounters in diverse spaces are cultivated and navigated in practice, leading to both positive and challenging outcomes in the intricate webs of human-pig relations.

Whilst scholars across human-animal studies have begun to incorporate the animal into discussion, I argue that within this literature, animals are too frequently figured as supporting characters in the stories of human worlds. Challenging this, the research intends to place emphasis on multispecies worlds in the becoming, taking a vitalist intrigue to the material liveliness of the world and the transformative, though unpredictable, nature of affective encounters within it (Greenhough, 2010). In this thesis, I delve into multispecies pig worlds where the boundaries between human and pig are (re)constructed, giving rise to intricate webs of relationality where pigs are recognised as active agents shaping their own experiences and contributing to the co-creation of shared spaces. These affective spaces give way to and are reinforced by certain pig identities.

I now turn to explore the pig in more detail, exploring the historical relationships between pigs and humans, as well as existing work in animal studies that has informed understandings of pigs in society. Recognising that a large amount of our understanding of pigs comes from an agricultural context, I then turn to explore the alternative sites of human-pig encounters of interest in this thesis; the animal research laboratory, the home, and the animal rescue.

2.2 Understanding Pigs

Pigs are highly intelligent animals and exhibit complex social behaviours. Research has unveiled their varied capabilities and capacities, including individual and consistent personality traits as well as proficiency in using spatial information and memory (Marino and Colvin, 2015). For instance, pigs can remember locations of food, details of the type of food and its replenishment rate, and subsequently use this information to avoid returning to locations with no food availability (Mendl and Paul, 2008). Recent research has shown that pigs have the ability to perform a joystick-operated video-game task to receive a food reward (Croney and Boysen, 2021). Furthermore, pigs exhibit emotional regulation abilities and can influence the emotions of other pen-mates to resolve social conflicts, indicating sophisticated social and emotional awareness (Cardoni et al., 2023). Despite these impressive abilities, negative connotations and stereotypes of pigs permeate in language

(Driscoll, 1995, Stibbe, 2003). Stibbe (2003) argues that unfavourable language surrounding pigs has continually justified their mistreatment, highlighting that in the English language pigs are often associated with negative expressions and characteristics to a higher degree than other species, even those who receive generally negative perceptions, such as rats. Connotations such as 'lazy' and 'dirty' are frequently used to describe pigs in everyday language, propping up adverse attitudes towards them and justifying their lower moral status in human society. Vandressen and Hötzel (2021) note that the differential treatment of farmed and companion animals is often legitimised by societal beliefs surrounding their usage. Perceptions of welfare and capacity to suffer can also vary between species. Animals with perceived 'higher' moral status, such as companion animals, can be granted greater ethical consideration than animals typically used for human use, such as farm animals (Te Velde et al., 2002). This leads to a paradox where species possessing comparable cognitive abilities, such as pigs and dogs, can be subjected to ethically inconsistent treatment.

The wild boar is the ancestor of all pig breeds. Pigs and humans have a rich and intertwined history that dates back centuries. According to Lutwyche (2019, p.122), "the further back in history you go, the closer the relationship between man and pig". He explains that the process of domestication likely occurred independently in more than one region, including modern-day Palestine, Turkey, and China around 9,000 to 10,000 years ago. Over time, selective breeding has led to the establishment of several distinct pig breeds including the Large White, Landrace, Duroc, Yorkshire and Gloucestershire Old Spots, commonly found in British breeding herds today.

During the Neolithic era, pigs were introduced to Europe from the Middle East, as their omnivorous diet and rapid reproduction made them a useful resource for European colonisers. In Europe, pigs became an integral part of daily life, serving as a source of meat and as a means to recycle household waste. Live meat markets were a common sight in cities prior to the Industrial Revolution. However, concerns regarding diseases and uncleanliness associated with livestock led to their exclusion from cities during the 19th Century (Philo, 1995). As a result, urban and suburban dwellers now have limited interactions with farmed animals in many post-industrial societies, despite pork being one of the most widely consumed meats globally. Consequently, our perceptions and understanding of pigs are heavily influenced by representations. For instance, Mizelle (2011) describes 'pigs of the imagination', referring to the cultural depictions of pigs that often overshadow the realities of living pigs. Films such as Babe and Charlotte's Webb portray anthropomorphic pigs and emphasise the pig characters' capacity for emotion and meaningful relationships with humans. These films may be seen as effective tools for raising

awareness and challenging preconceived notions about pigs. For instance, Nobis (2009) notes a trend in vegetarianism among young people after watching Babe. Whilst there is no evidence to suggest these people continued to be vegetarian in the long term, and the ultimate influence of films and media representations on real-world attitudes and behaviours is challenging to measure, Wang and Basso (2019) suggest that the anthropomorphic representations of pigs in popular media can affect consumers' pork consumption. Interestingly, these findings were not replicated with cow representations and beef consumption, indicating an intriguing species difference that may suggest unique qualities specific to pigs which engender a strong affective response in humans. Further exploration into the specificities and drivers of affective human-pig relations could, therefore, prove valuable to informing more empathetic and ethical interactions.

Furthermore, the transformation of pig farming and the dissociation between meat consumption and the individual lives of pigs have significantly shaped our perceptions of these animals in the context of modern animal agriculture (Benningstad and Kunst, 2020). Pig farming has undergone significant advancement and intensification since the 18th century which has led to the emergence of 'factory farm' operations, where large numbers of animals are housed in limited spaces to enable rapid production. These practices have drastically shaped the wild boar into the modern pig and increased the spatial distance between humans and pigs. In the EU, the majority of livestock pigs are raised in intensive conditions, with the exception of many breeding sows and piglets who are reared in outdoor systems (European Food Safety Authority, 2007). In the UK, approximately 60% of sow and fattening pig herds are kept indoors (Woods, 2019). As such, there is a stark distinction between perceptions of pork production tied to the rural idyll that many consumers hold, and the actuality of 21st century pork production (Mizelle, 2015).

As Potts (2016) argues, the overwhelming numbers of animals slaughtered can often overshadow the individual lives of farmed animals and their experiences. The idea of the absent referent, introduced by Carol Adams in her book "The Sexual Politics of Meat" (1990), helps to elucidate the increase in pig meat consumption and the simultaneous diminishing visibility of the individual pig. Adams argues that specific language is employed to disguise the living animal who is transitioned into meat. In this context, 'meat' is veiled with gastronomic language to dissociate it from the notion of dead, butchered animals, and instead evoke a culinary experience (Adams, 1990, p.51). For example, the term 'pig' transforms into terms like 'pork,' 'ham,' 'bacon,' or 'sausage'. Through such language, the concept of pork becomes detached from its pig origins. The lives of pigs and humans on the farm often contrast with popular representations of farm animals that conjure up our

imaginaries of livestock animals in childhood, creating the “alluring fiction of the farm” (Buller, 2013., p.160). Representations of farm animals are often anthropomorphised talking animals and can be considered an objectification of nonhuman life, blurring the boundary between sentient life and more ‘cute’, palatable depictions of animals in order to minimise the unease that might accompany consuming animal flesh (Grauerholz, 2007). These images, frequently utilised by meat producers, purposefully make invisible the deaths of these animals and respond to consumer concerns about the treatment of farm animals, making ‘happy meat’ a marketable quality (Buller and Roe, 2014, Bruckner et al., 2019). Stibbe (2003) highlights that this commodity-object status is engrained in the discursive construction of pigs. As well as the negative connotations of the word pig in the British language (such as ‘pig ignorant’, ‘selfish pig’ and so on), the language used by the pork industry strips away individuality from the pig and frames their bodies as economic subjects. For instance, health is often defined in relation to productivity and viewed at the level of the herd. They may also be re-defined in terms of their function (such as ‘weaner pig’, ‘farrowing pig’, ‘finisher pig’). Consequently, individual pigs and their unique health issues dissolve into the quantifiable productivity of the herd, and they are increasingly defined and known by their economic function.

This decimation of the individual becomes increasingly prolific with larger herd sizes, a trend apparent in the UK, where the number of intensive pig farms (classed as facilities with upwards of 2,000 pigs or 750 breeding sows) has increased by approximately 5.2% between 2017 and 2022 (Colley and Wasley, 2020). Conversely, hobby farmers who typically have smaller numbers of animals may find difficulty in distancing themselves from their animals, compared to commercial workers with larger herds (Wilkie, 2005). As such, human-pig relationships on the farm are not always defined by distanciation, deindividuation and disengagement. Instead, the commodified status of livestock animals and their identities are fluid, creating conditions for varied and often contradictory human-animal relationships. The nature of these relationships is observed to be tied to what Wilkie (2005, p.215) refers to as the ‘career path’ of the pig. For instance, a sow that is part of a breeding herd may be enrolled in different attachment relationships with humans than finisher pigs or weaners. These different human-pig relationships can affect pig health and welfare on the farm, as negative and stressful encounters with humans can become a source of fear for pigs. Conversely, repeated positive encounters can lead to positive emotions and a greater affinity towards humans (Tallet et al., 2018). Buller (2013) highlights that farm animal individuality is not lost throughout the farming process but becomes visible at particular moments. The slaughter event makes visible individual sentience. Here, the suffering endured by an animal becomes

a matter of concern, and death becomes unavoidably visible. Whilst slaughterhouse workers may become emotionally detached from animals (Wilkie, 2005), this does not negate the negative impacts that routinised killing has on the wellbeing of workers (Baran et al., 2016, Slade and Alleyne, 2021). The affective geographies of human-pig relationships on the farm thus highlight the emotional dynamics and attachments within this spatial context and the implications they have for pig and human wellbeing. Outside of the farm, on the other hand, the lived experiences of pigs and the humans they are entangled with remain relatively unexplored in the existing literature. This gap in research forms a central focus of the thesis that will contribute valuable insights into understudied aspects of human-pig relationships beyond traditional agricultural settings.

Studies relating to pig-human relations remain focused in an agricultural context and often appear ignorant of the multiple identities of pigs. Much of the scientific literature on pig psychology and behaviour is centred around research applied to welfare in intensive farming. These applied frameworks shape understandings of pigs from both scientific and public perspectives. As a result, little is known about the potential for affective relationships between humans and pigs outside of the farm. Expanding the scope of research to explore diverse contexts of human-pig relations beyond the farm is vital in understanding the tensions and cohesions in shared human-pig worlds that are focused on achieving the potentials of the pig, beyond status as a food commodity. Considering this, I now turn to explore the spaces of alternative human-pig relationships. I discuss how affective practices of love, care, and imagining human-pig futures have the potential to be transformative, cultivating reciprocal human-pig connections in these spaces. It is important to acknowledge that these practices are also entangled within complex power dynamics and social structures. I introduce these practices and examine their significance in establishing connections or disconnections across species, while also exploring their entanglement within broader socio-material and political structures. Whilst these practices are discussed individually, it is important to note that in a given context they may overlap or co-constitute one another in practice.

2.2.1 Pigs in Animal Research

Between 2018 and 2020, a total of 12,659 pigs were kept in research laboratories in the UK, either used in procedures or bred but not used (Home Office, 2021, Home Office, 2020, Home Office, 2019). A number of breeds are used in this research ranging from larger commercial breeds, such as the Large White, to genetically altered minipig breeds, including the Göttingen minipig (Douglas, 1972, Bollen and Ellegaard, 1997). The use of pigs in animal

research dates to Ancient Greece, where they were reportedly used in attempts to explore circulatory and respiratory system functioning (Shoja et al., 2015). Pigs are particularly useful as models for human research, bridging the difference between traditional rodent models and humans owing to their physiological, anatomical, and genetic similarity with humans (Almond, 1996, Douglas, 1972, Gonzalez et al., 2015). As Douglas (1972, p.266) writes "pigs are not just pigs, but almost human", noting similarities in teeth, eyes, heart, skin, respiratory and circulatory systems. Pigs are, therefore, also suited for use in xenotransplantation research (Bollen and Ellegaard, 1997). Research using pigs with a practical focus on infectious diseases in animal agriculture is also vital to the success of commercial pork production (Almond, 1996). Their biological similarity to humans, in conjunction with the widespread availability of pigs as food-producing animals, their large litter sizes, ability to be housed in large groups, and early sexual maturity are a few of the advantages of the pigs' continued use in research (Meurens et al., 2012).

The use of animals in scientific research is a controversial subject in public debate. Proponents of animal research argue that the use of animals is integral to scientific progress. Opponents contend that the pain and harm inflicted on research animals is cruel and unnecessary (Hobson-West, 2010), highlighting alternative research methods and inconclusive evidence surrounding the applicability of animal trials to humans (Hartung, 2017). Public attitudes to the use of animals in research are also influenced by hierarchical categorisations of species. It is suggested that pigs as research animals provoke less ethical concern among populations who consider pigs as food-producing animals (Bradley et al., 2020) whereas other species such as dogs hold a perceived higher moral standing, despite their similar cognitive abilities. Hobson-West and Davies (2017) describe this as the 'core paradox' of animal research, where animal models are considered appropriate owing to biological similarities to humans and their ability to feel, whilst simultaneously their assumed lack of ethical capacities permits their use. This is particularly relevant to the case of pigs in research.

2.2.1.1 Affect in the Laboratory

Despite the frequent use of pigs in research, it is argued that challenges and opportunities to improve pig welfare in the research context are not well understood (Wilkinson et al., 2023). As pigs in research typically have more frequent human interactions with humans than their farmed counterparts, these interactions are highlighted as important opportunities to improve welfare by practising positive handling to reduce stress where possible (Marchant-Forde and Herskin, 2018). These affective dimensions of animal research are often

overlooked in the utilitarian framework that justifies the use of animals in research, positing that harm to animals is permissible providing these harms are outweighed by net benefits (Animal in Science Committee, 2017).

In the UK, research involving animals is governed by stringent legislation aimed at protecting the welfare of research animals. The '3Rs' are considered a core principle and encourage the replacement, reducibility, and refinement of animals in research (NC3Rs, 2017). These ethical frameworks operate alongside the assumption that good animal welfare improves the quality of science (Prescott and Lidster, 2017). Whilst mitigating pain is a significant aspect of the 3Rs, little robust literature exists on recognising and documenting pain in laboratory pigs. Recognising this, Marchant-Forde and Herskin (2018) suggest behavioural observations as a potential tool for assessing post-surgical pain in pigs. This requires animal care staff in the laboratory to become attuned to potential manifestations of pig pain.

A growing body of research has highlighted the importance of tacit, embodied practices between animal technicians (ATs) and research animals for animal welfare. From a relational care ethics perspective, where care responsibility is rooted in connections between bodies, standardised guidelines tell us little about care in practice. Researchers have demonstrated that exploring care in animal research through codified guidelines is inadequate and hinges upon masculinised notions of rights and rules as guiding principles. Instead, focus has turned to explorations of embodied and situated encounters between humans and animals (Greenhough and Roe, 2018, Greenhough and Roe, 2011). The idea of 'cultures of care' has been used to draw a distinction between welfare and care, that "goes beyond adhering to legal requirements. It refers to an organisational culture that supports and values caring and respectful behaviour towards animals and co-workers" (Robinson et al., 2020, p., 422).

This is reflective of the role of emotion in animal research. Ethnographic work shows that ATs often develop emotional bonds with individual animals in their care (Arluke, 1988). Herzog (2002) argues that these bonds can result in moral ambivalence as animals shift from the category of 'object' to 'pet'. The compassion and sensitivity towards research animals are arguably a crucial aspect of doing the job of an animal technician well (Reinhardt, 2003). Whilst these emotional relationships can provide positive impacts for both humans and animals in the context of animal research (Bayne, 2002), caring is practised alongside deliberate harming and killing of animals which can lead to a 'compassion fatigue' in animal research personnel (Newsome et al., 2019). Tremoleda and Kerton (2020) emphasise the importance of creating safe spaces for animal research staff to communicate openly about animal welfare and acknowledge the emotional impacts of their work. This research aims to

develop a comprehensive understanding of the ethical and emotional challenges inherent in the species-specific relationships between ATs and pigs in animal research.

To effectively research pig-AT affective relationships, it is crucial to highlight the significance of understanding the nuanced nature of these relationships, how affect circulates between bodies, and how this influences human and pig lived experiences in the laboratory. Greenhough and Roe (2011) draw attention to the forms of situated and relational ethics that are practised within ethical frameworks. Inspired by Haraway (2008) they argue that ethical engagement with the animal cannot be known solely through rigid frameworks. Rather, understandings of care should be informed by the affective response-ability between laboratory animals and humans, as ATs navigate ethical and political ways of responding to the animal Other (Puig de la Bellacasa, 2011, p., 89). Listening to the stories of ATs can alert us to the affective and embodied ways of attuning to laboratory animals, as specific encounters and moments of care are often retold in these stories (Greenhough and Roe, 2019). Drawing on Mol et al. (2010) and the concept of 'tinkering' with care, Greenhough and Roe (2018) explore the quotidian activities and moral responses to animals in AT work that are not encapsulated in formal ethical frameworks and reviews. In many cases, ATs tinker with care to improve the lives of the animals they are responsible for, such as creating enrichment activities despite the increase in their workload that this requires. Attention to the sensitive, intuitive ways that ATs respond to animals highlights aspects of care that are unlikely to be flagged in top-down ethical reviews can uncover different care needs across species.

Attention to the practices and performances of care alert us to positive ethico-political potentials in the laboratory, yet a growing body of literature is working to reveal the non-innocence of care across multispecies contexts (Gibbs, 2021). The dualism between care and control is a prevalent theme in animal research. While care is often seen as an ethical imperative, it can also be used as a means of controlling and manipulating animals. Within this context, harm, care, and killing not only sit uncomfortably alongside one another but often work together as spatially co-constituted practices (Roe and Greenhough, 2021). Giraud and Hollin (2016) reveal the active role of care in supporting the instrumentalisation of laboratory animals in a critical exploration of an experimental research beagle colony. They highlight that whilst care can allow space for animals to 'speak back' and voice their needs, allowing researchers to develop response-able ways of knowing, care also enables the exploitation of animals by using these knowledges to manipulate and control dogs for the pre-determined aims of the study. Thus, framing care as a mode of ethico-political tinkering is inadequate without attention paid to the wider historical context and exclusions of

laboratory care. Pihl's (2017) work further highlights the ambivalence of care in this setting. Sustained, daily interactions through caring for laboratory piglets allowed researchers to 'get to know' animals, facilitating greater attunement to individual pigs that was aided by allowing staff to name animals. Researchers were able to discern the likes and dislikes of individual piglets and provide appropriate care accordingly. In turn, this worked to shape piglets into compliant research subjects. These tensions underscore the need for continued ethnographic work to explore the inherent power relations that maintain hierarchical categorisations between humans and pigs in animal research, recognising that "the infrastructure imposes an inability to escape animal exploitation and AT attunement to animals is part and parcel of that" (Greenhough and Roe, 2019. p., 374).

The emotional complexities present in animal research, particularly when considering care and death, are multifaceted. While animal objectification in the laboratory reinforces hierarchical dichotomies and species identities, ATs who care for research animals often form emotional connections with them. Tacit care in the laboratory learned through personal, embodied interactions has the potential to improve the lives of animals in research yet emerges through a backdrop of 'mortal love' tensions due to the inextricability of killing and care in the animal house (Holmberg, 2011). Any attempt to understand practices of care in the laboratory must be alert to the fact that these practices work alongside, and must navigate the killing of animals, as their death is often vital in fulfilling the pre-determined aims of a study. Death in the research space is frequently framed as a 'sacrifice' to science (Birke et al., 2007). The discourse of sacrifice can be thought of as constructing laboratory animals as killable, whilst simultaneously attaching greater meaning to the animal who is thought to offer their body to science. Deaths of animals framed as having a form of higher purpose may ease the emotional discomfort of human caregivers in the research space but tell us little about the complexities of care throughout the life of the research animal. As Holmberg (2011) describes, care persists despite the emotional difficulties present in killing, as ATs often work to mitigate the stress of animals in their final moments, for instance, by providing rats with their bedding material when they are taken to be gassed. Roe and Greenhough (2021) pay further attention to the ambivalent co-existence of death and care that ATs must navigate in their work. One way this tension is made sense of is by constructing the notion of a 'good death', one that minimises stress and is a quick process for animals. ATs often empathised with animals further by imagining themselves in place of the animal and considering what kind of death they would choose. This acceptance of death as part of research informs how animals are cared for during their life in the animal house, as ATs feel responsible for providing both a 'good life' and a 'good death.' The study highlights that future

research must further explore the ways in which care and death are co-constitutive practices.

Utilising animals in research, particularly when experimentation is aimed at creating human benefit, reinforces masculinist, hierarchical dichotomies between human-animal and subject-object (Peggs, 2009). Such othering of the animal has implications for our relationships with them and the meanings attached to these relationships. In turn, species identities are continually reinstated (Jones, 2004). Whilst research animals are recognised as sentient and have legal protections, Arluke (1988) draws attention to the process of animal objectification in the laboratory, as bodies are remade into scientific material and data. Sharp (2019) argues for attention to be paid to this multiplicity of animal identities across life and death in the research laboratory, as the uses and values attached to research animals shift along spatial and temporal frames. Sharp gives the example of the neonate piglets used in a Denmark research lab, the subject of research by Svendsen and Koch (2013). These piglets shift from "living, vulnerable creatures, to a work object or research partner, to a data point" (Sharp, 2019., p.124). Furthermore, Dam et al. (2020) describe how piglets take on the identity of neonate patients, encouraging researchers to provide the best chances of survival and optimal care for piglets. Yet these identities are stripped away, leaving only data remaining that is subsequently translated into conference proceedings and journals, resulting in a "ghosting [of] piglet lives and unknowingly fleshy details about them" (p.7), despite the previous caring efforts of researchers. Ultimately, piglets become forgotten in translational biomedical research.

Building on this ethnographic work in Denmark, Svendsen (2022) introduces the concept of 'substitution' to explain how premature piglets are taken from the sow's womb to be used as models for human neonates. This is a socio-material practice, involving affective relations as technicians attempt to empathise with individual pigs to evaluate their suffering. Decisions about life and death for both piglets and infants overshadow care in the newborn pig facility. The book considers how the boundaries of human-nonhuman are navigated and crossed through these substitution practices. Humans in the laboratory become bonded to piglets as they treat them as vulnerable patients, striving to keep them alive for long enough to ensure they can become valuable in the research that will secure human infant futures. Their nonhumanness nevertheless delineates them as killable, highlighting the inherent tension between the caring relationships formed between humans and piglets in the laboratory and the parallel commitment to providing long-term care for human infants. The act of killing piglets served to enact certain worlds. Here, decisions are made regarding whose worlds must be made, as human infant futures are granted as pig futures are dismantled. The book

not only questions the ethical considerations surrounding the lives of these pigs, acknowledging their individual worth alongside human infants but also explores the broader entanglements with the Danish welfare state that influence the care provided to human infants. This suggests that affective human-pig relationships in the laboratory are characterised by the interplay of care and control across species borders, where the welfare and lives of research pigs are navigated alongside the responsibilities and priorities associated with caring for human populations.

This review has identified several gaps in the literature that my research aims to address. First, there is a need to explore the nuanced and affective dimensions of human-research animal relationships, particularly in relation to particular species (Davies et al., 2016). Second, care is often framed as tacit and embodied, but there is little focus on how this is limited by control in laboratory settings. Finally, the circulation of conflicting affective forces between humans and animals and its impact on the wellbeing of both parties requires further investigation. Considering this, Chapter 5 contributes to a more comprehensive understanding of the complexities of human-pig relationships in laboratory research, and how these affective relationships can be improved for the benefit of both pigs and humans.

2.2.2 Pet Pigs

Pet pig-keeping as a phenomenon provides an opportunity to explore the active role that pigs and humans play in shaping and navigating novel multispecies relationships. Smaller breeds of pig, often referred to under the umbrella term ‘minipig’, are preferred as companions compared to larger commercial breeds. In the U.K., Vietnamese pot-bellied pigs and Kunekune pigs are popular pet breeds (Carr, 2001). The former were imported to North America originally to be kept in zoos but were soon introduced as pets due to their size and gregarious nature (Tynes, 1999). Similarly, the British Kunekune Pig Society state that the Kunekune became “a firm favourite among pet pig owners due to its calm, friendly nature and love of human company”, after being imported from New Zealand, where the breed was originally domesticated for meat (British Kunekune Pig Society, no date). Other so-called ‘minipigs’, belonging to a smaller subspecies of domestic pig, are often bred from multiple different breeds and are raised either for research purposes or as pets (Sipos and Schmoll, 2007). Nevertheless, the umbrella term ‘minipig’ does not refer to a particular breed and is often considered to be a misnomer, as despite being smaller than commercial breeds, the Vietnamese pot-bellied pig and the Kunekune can reach up to 60kg and 80kg after one year, respectively (Almaraj et al., 2018).

The popularity of pigs as pets arguably grew in the early 2000s as celebrities including George Clooney (Mizelle, 2011), Paris Hilton, David and Victoria Beckham, and Jonathon Ross flaunting their own porcine companions (Wiseman, 2009). Since then, social media has also played a part in the shift from farmed animal to pet, as millions of videos and images of pigs as household companions are shared, with the hashtag "#petpig" returned 236,000 posts on Instagram and the search 'Pet Pig' boasting 7.3 million views on TikTok at the time of writing.

Whilst it is not clear what the size of the pet pig population is in the UK, in a recent study, Smith et al. (2020) estimated the size of smallholder and pet populations combined to be around 23,856. Importantly, this figure was calculated using movement data[1] which may omit pet pig keepers who are not aware of the legislation. Furthermore, the mean herd size of this group was three, indicating that this is likely to include many more smallholders than pigs kept solely as pets. Nevertheless, concerns about the welfare of the pet pig population in the UK have surfaced. In 2010, the RSPCA released a position statement expressing their concerns about pet pigs, as their specific needs can be challenging to meet (RSPCA, 2010). I term this 'the pet pig problem', referring to pet pigs often purchased under the misnomer 'minipig' becoming larger than expected or too challenging for their keepers to cope with. This has led to cases of abandoned pigs, and many being turned over to sanctuary and rescue organisations. This problem is perhaps better documented in North America (Carnutte, 2014) and currently no existing research covers this in the UK context, although, a number of news articles suggest a similar trend in the U.K. as animal rescue centres respond to a rising number of unwanted pigs (Dalton, 2022, ITV News, 2022, BBC, 2019)

Contrary to typical pet ownership, pet pig ownership is subject to a number of regulations keepers must follow. In the UK, pigs are legally classified as livestock animals. This classification This means that pet pig keepers must abide by the same legislations set out for pig farmers. The Animal Welfare Act (2006) protects farmed animals from 'unnecessary suffering' and outlines a duty of care that makes clear that persons responsible for an animal must ensure their welfare needs are met through taking reasonable actions. Guidance on keeping a pet pig in the UK states that all pig keepers must follow traceability guidelines intended to minimise biosecurity and disease risks. Pigs kept as pets must be registered with the Animal Plant and Health Agency (APHA) to track movement and location data in the event of disease outbreak. Keepers can choose to walk their pet pigs, provided they have a license which approves the proposed route to confirm it does not pose a biosecurity risk (DEFRA and

[1] By law, all pig movements to and from a holding must be recorded.

APHA, 2014). Any movement of the pig away from the registered address, including for walks, requires the pig to be marked with identification details such as a tag, tattoo, or slap mark (DEFRA, 2020).

The regulatory landscape of pig-keeping in the U.K., influenced by the categorisation of pet pigs as livestock, plays a pivotal role in shaping the everyday experiences of individuals engaged in pet pig ownership. This prompts questions surrounding the coexistence of these regulations, primarily designed for practical purposes such as disease control and biosecurity, with the profoundly emotional dimension inherent in pet-keeping, explored in the following section.

2.2.2.1 Pet-Keeping Relations

The classification of pigs as livestock animals demarcates pigs as animals for human utility and are, as a result, often assumed to hold diminished moral relevance (Loughnan, 2010). Pet pigs challenge established societal norms and disrupt traditional hierarchies associated with human-farmed animal relationships. In this context, it is important to investigate how pigs are integrated into affective relationships within households as they take on the role of pets. To date, no such research explores this. Whilst pets bring affection and joy they simultaneously exist for human use, raising significant ethical questions (Spencer et al., 2006). Tuan (1984) postulates that affection for pets sits in tension with the inherent dominance humans exert over animal life. Companion animals are not viewed singularly through a lens of affection. Instead, they become simultaneously instrumentalised for human use, bought and sold as commodities to fulfil a combination of social, emotional, material, and cultural human needs (Spencer et al., 2006).

Living alongside a pet in the home facilitates close relationships that involve daily negotiation of the divisions between human and animal (Fox and Walsh, 2011). It is through these understandings and performances of care that animals can become ‘part of the family’ (Charles, 2016), and recipients of love (Nast, 2006, Power, 2008). Whilst animal geographers have explored the negotiation of the species divide and the pervasiveness of love and emotion in these relationships (Fox, 2006, Cudworth, 2011), there is a lack of interrogation into the transformative potential of love in multispecies relationships. By focusing specifically on the affective dimensions of pig pet-keeping in Chapter 6, I aim to delve deeper into the transformative potential of affect within these relationships. I seek to understand how emotions such as love shape the interactions between humans and pet pigs and explore the ways in which these affective practices can challenge and redefine species boundaries.

Love is frequently noted as a crucial element of pet-keeping (Cudworth, 2011, Fox, 2006). This body of work emphasises that within pet-keeping relationships, borders of human and animal become blurred as companion animals take on forms of personhood, despite retaining their status as property (Fox, 2006). Without a critical exploration of 'what love does' (Morrison et al., 2012) as an ethico-political capacity in this context, a political and transformative understanding of love cognizant of relations of domination and power within affective relationships cannot be developed (Wilkinson, 2016). This approach to understanding love in multispecies relationships is further outlined in the theoretical framework informing this research (Chapter 3, section 3.4.2).

The 21st Century has seen a huge growth in pet-keeping, particularly in capitalist, neoliberalist societies where companion animals now feature commonly, sharing our homes and lives. The commonly cited biophilia hypothesis suggests an inherent trait in humans that creates a deep affinity for nature, that may propel our desire to keep companion animals (Wilson, 1984). Whatever drives modern-day pet-keeping, pets are often recipients of great love and affection, after a shift in the late 20th Century where pets were seen as a "species apart" (Nast, 2006, p. 894). Whilst pigs are not a popular pet for most homes, the families and individuals who do open their homes up to pigs as companions raise intriguing questions about the nature of the human-pet bond and the distinct dynamics that may exist within human-pig relationships, challenging existing notions of pet-keeping and expanding our understanding of interspecies connections.

As Fox (2006) shows, many owners value their companion animals as individuals, granting them a level of 'personhood', yet also respecting their animality and desire to exhibit instinctual behaviours, such as hunting, in the case of cats. Many pet owners use anthropomorphic understandings of their animals to interpret their moods, behaviours, and emotions, allowing a sense of more reciprocal relationships and allowing animals to integrate into family life. Companion animals also contribute to the shifting emotional geographies of the home, providing comfort and company in times of need (Cohen, 2002). Nonetheless, the application of these findings to pig pet-keeping is unclear. There is a need to explore how the unique characteristics and behaviours of pigs are interpreted within the human-pig bond, as pigs have their own set of needs and ways of relating to humans, which may require a different understanding. Given concerns about the deindividuation of farmed animals (Buller, 2013) it is also important to question how becoming pet may allow pigs to be seen as individuals with their own emotional lives, and how their presence contributes to the emotional dynamics and geographies of the home if they are to be seen as viable companion animals. Further research is needed to understand the complexities of

affective relationships with pigs and the ways in which they integrate into family life. Such research will form a foundation upon which we can begin to construct a comprehensive understanding of the potential for pigs to transcend their traditional roles as farm animals and be embraced as companions.

Building emotional relationships with companion animals requires learning to live together convivially. These emotional and intimate relations arguably blur the ontological boundaries of human and nonhuman, they are 'naturecultures' (Haraway, 2008). Julie Ann Smith (2003) reflects on experiences of living with house rabbits and grapples with the tensions in these relationships. In 'rabbit proofing' the house, owners are able to let the rabbits have greater space to exhibit their natural behaviours that a hutch would not allow. In compromising certain aesthetic desires in the home, such as replacing carpet with linoleum or purchasing durable metal furniture, owners are able to negotiate living with rabbits for a more harmonious cohabitation. She describes this as 'performance ethics'. Rather than a rigid set of ethical norms, a 'performance' recognises that multispecies relationships are full of uncertainties and require constant learning about one another. This inherent messiness and indeterminacy in human-animal relations is what Haraway (2008) encapsulates in her definitions of response-ability.

Despite the clear emotional significance of pets for many human lives, tensions arise at the intersection of affection and utility in pet-keeping. Tuan's (1984) 'Dominance and Affection' is a useful starting point for exploring these tensions. Tuan argues that these two qualities are inseparable in our relationships with companion animals, due to the apparent inherent human need for dominion over 'nature'. Companion animals meet various human needs, serving both as sources of affection and commodities traded to fulfil social, emotional, material, and cultural needs (Spencer et al., 2006). Given the commodification of pigs as food animals, understanding how these multiple dimensions intersect can provide insights into the transformative potential of affective geographies and challenge dominant narratives that reduce pigs solely to objects of human use and consumption.

Several scholars have attempted to build on Tuan's work, highlighting how post-industrialism and hyper-commodification are now deeply intertwined with pet love and pets as status symbols (Fox and Walsh, 2011, Nast, 2006, Redmalm, 2019). There are now endless options of pet food, toys, medicines, clothes and so on saturating the market. Celebrity and social media culture has also contributed to the aestheticisation of different breeds and species, arguably contributing to the growth of the 'cute economy' (Maddox, 2020). Nast's (2006) analysis of pet love in the 21st Century reveals that seemingly benevolent love for pets is entangled within the neoliberalist logic of consumer culture that has recast pets as

commodities, legitimising human power over animal bodies. Celebrity and social media culture have also contributed to the aestheticisation of different breeds and species, arguably contributing to the growth of the 'cute economy' (Maddox, 2020). For instance, consumer desires for 'cute' aesthetic traits in dogs have led to demands for brachycephalic dog breeds (characterised by flat faces) that face severe health problems as a result of their shortened airways (Packer, 2021). These accounts of critical pet studies take into consideration the biopolitical structures that govern companion animal lives and deaths. Given that pet pigs are typically smaller breeds of pig, applying this critical lens to exploring how pigs are selectively bred to be pets may identify similar practices of aestheticisation at play. Examining the intersection of consumer desires, and the lived experiences of pet pigs, we can uncover the complexities of their identities, wellbeing, and the ethical implications of their commodification within the broader framework of human-pig relations.

Fox and Gee (2017) have examined the shifting social, spatial and emotional aspects of pet-human relationships in modern-day Britain. They suggest that the rapid commercialisation of the pet industry has mobilised the responsibilities of the pet keeper, who is expected to provide appropriate care for their pet, which is now made available through enrichment toys, alternative foods, medical treatments and so on. The emotional ties that keepers have for their pets, as well as the financial costs of being a 'good pet owner', have shifted expectations of pets themselves, animals are now often expected to follow house rules and behave appropriately. When these expectations do not match reality, the pet-human relationship can become under pressure. Whilst the data for this study is based on a small, geographically limited sample size, which may undervalue perspectives of minority groups (or may instead reflect cultural and religious attitudes to pet ownership), the study provides much needed empirical data for a field dominated largely by theoretical work. It demonstrates the complexity of human-pet relationships, a bond often characterised by love and affection, but also subject to regulation and control. Consequently, pets are now 'lively commodities' (Collard and Dempsey, 2013). Drawing on Haraway (2003), Collard and Dempsey argue that the status of the lively commodity has implications on the politics of their lives and deaths through co-producing an 'encounterable life' that is simultaneously crucial to the material becoming of the human, and placed outside the ethical domain of human, ultimately rendering animals replaceable and killable. The challenges of pet pig ownership in particular, highlighted by animal welfare organisations such as the RSPCA (RSPCA, 2010), combined with the practical difficulties of housing a pig in family homes suggest that many pet pig keepers may already be struggling to provide adequate care. Exploring whether this is impacting the lived experiences of pigs and their owners is of vital

importance to understanding the dynamics of human-pig relationships and the ethical considerations surrounding pet pig ownership.

Pigs do not typically have the same history as loved pets in Western societies. However, in Southeast Asia and neighbouring regions, pigs are more commonly kept as companions and have a history of closer, companionable relationships with humans (Brumm, 2022). Conversely, the vast majority of the world's pigs experience a spatially distanced relationship with humans. This juxtaposition highlights the potential for alternative approaches to human-animal kinship and prompts consideration of whether there are lessons to be gleaned from these diverse cultural practices, offering new perspectives on how humans can form meaningful bonds with pigs.

In many post-industrial societies, pigs previously lived in close proximity to humans as backyard sustenance animals and efficient waste converters in the 19th Century (Mizelle, 2011, Lutwyche, 2019). Their utilisation in this regard combined with concerns around disease and dirt in increasingly sanitised urban spaces arguably prevented closer companion-like relationships from materialising. Consequently, veterinary medicine, food, and enrichment for pigs (and other farmed animals) are thus in large part designed around the assumption that they will not grow old, nor become subjects of human affection. In studying the pig through the lens of unique pet, the thesis hopes shed light on the transformative possibilities of human-pig connections that go beyond the conventional boundaries of pig farming.

The following section of the literature review turns to consider the role of rescue in the lives of pigs, many of which are victims of the 'pet pig problem' described in this section.

2.2.3 Rescue Pigs

Animal rescue organisations play a crucial role in providing care for pigs that have been abused, neglected, abandoned, and unwanted. No existing literature is available to understand the lives of rescued pigs in the UK, nor to reflect how many pigs are in rescue. Despite this, my own discussions with UK animal rescue organisations indicate there is no shortage of pigs coming into their care, often former pet pigs but also formerly farmed pigs. I here discuss the literature relating to animal rescue and animal sanctuaries and consider the roles that these organisations play in shaping human-animal relations. Considering this dearth of research, these insights will then be used in the thesis to consider the webs of affective relations that emerge in providing care for rescued pigs and facilitating their transition to a new life in rescue.

Animal rescue organisations in the UK that care for pigs range from animal welfare organisations, such as the RSPCA, which primarily respond to animals in need and offer a temporary home until a suitable rehoming option is sought, to animal sanctuaries that provide long-term care and often operate with a vegetarian or vegan ethos[2]. Animal rescue and sanctuary spaces have emerged as significant sites of transformative affect within the realm of human-animal relationships (Abrell, 2017). These distinct but interconnected spaces offer different modes of engagement and opportunities for affective transformations. This literature review explores the role of animal rescue as a site of transformative affect, while also delving into the unique dynamics of farmed animal sanctuaries, emphasising their ethical commitments and potential for reshaping human-animal relations within the broader context of animal advocacy and social change.

Peterson (2018) argues that animal rescue is a social movement, working to shift socio-political-cultural attitudes towards animals. Educational outreach programmes are often implemented by sanctuaries and rescues that wish to educate the public on the challenges facing animals. This often involves using resident animals as 'ambassadors' to evoke empathy and care among the public who may donate to the cause, or even adopt animals. Rescue spaces therefore become arenas to encounter animals, either through internet appeals or in person where the public can meet individual animals. Sanctuaries and rescues thus become places that can shift societal perceptions of pigs by providing the opportunity for encounter. Kymlicka and Donaldson (2015) speculate on the limitations of this sanctuary model. Firstly, sanctuaries are often located in rural areas and are aesthetically similar to idealised notions of what farms may look like in popular imagination. As many members of the public are unlikely to have visited a factory farm or know what one may look like, Kymlicka and Donaldson argue that the sanctuary may reinforce notions of the idealised farm rather than alerting publics to the differences between a sanctuary and an industrial farm. Consequently, this may not challenge conceptions about farmed animals and their lives in industrial agriculture, which is often a main aim of sanctuaries. Thus, whilst sanctuary volunteers and workers may recognise animal residents as individual beings, they may remain as distant 'Others' in the public imaginary, reinforcing human/animal, nature/culture, and rural/urban dualisms. Nevertheless, little research focuses on these

[2] 'Animal rescue' and 'animal sanctuary' are often used as interchangeable terms but have distinct meanings. Animal rescue often focus on rescuing animals in emergency situations, whereas animal sanctuaries typically provide longer-term care. Nevertheless, their practices often overlap.

issues in the context of sanctuary and rescue and more empirical work is needed to evidence such claims.

Expanding on the role of sanctuaries, Kymlicka and Donaldson (2015) highlight that animal sanctuaries can provide highly individualised care for animal residents, helping many to make recoveries from injuries and illnesses, and allowing them to re-socialise with other animals and humans. They argue that these efforts are creating new knowledge about species-specific care, expanding from current farm animal veterinary practice which tends to be aimed at keeping animals alive until slaughter (p.55). This is a clear example of how considering alternate realities for farm animals contributes to new knowledges and practices of care which may support future animal flourishing. It is important to highlight that animal sanctuaries do not represent a utopia for farmed animals. Sanctuary residents, much like companion animals, are often recognised to be individuals with their own preferences in terms of food, toys and so on. Though, this does not grant animals full agency and choice in their lives. Kymlicka and Donaldson (2015) refer to this as micro-agency, which allows individuals to select preferences based on pre-determined choices but denies the ability to make bigger life choices. Allowing animals to have macro-agency, on the other hand, would require fundamental changes to how animals' desires are discerned. For instance, they provide the example of allowing animals to roam freely with other species, allowing them to make their own social groups and so on. However, this poses safety concerns and disease risks. Thus, they argue that efforts should be made to determine what kind of life animals would choose if given the choice and supporting these decisions in ways that minimise risk. Scotton (2017) also outlines how farmed animal sanctuaries can provide a space to theorise alternative human-animal relationships. Describing sanctuaries as "frontiers of interspecies friendship" (p.99), Scotton argues that providing farmed animals opportunities to socialise with both other animals and humans is a basic right related to welfare, a point particularly relevant to pigs as socialisation is an important facet for pig welfare, consistently shown across a number of welfare indicators (Rault, 2012). This notion challenges the traditional hierarchical relationships between humans and pigs, suggesting the need for more inclusive and egalitarian forms of interaction.

Further, in enacting care for rescue animals, sanctuaries must make a number of ethical decisions. These include decisions around euthanasia, rehoming, reproductive control, and experimental veterinary care (Abrell, 2021). Giroux et al. (2023) describe this as decision-making in 'non-ideal conditions', referring to the broader context in which animal rescue must operate, where animals are commonly abandoned and mistreated, shelters are under-resourced, and speciesism prevails across society. Whilst these are also questions that

typical companion animal rescue shelters must consider, there are unique challenges that emerge in specific contexts. Rosenfeld (2023) has highlighted that the backyard chicken movement has led to an increase in rooster abandonment, creating challenges for rescues who must then provide life-long care, as rehoming of roosters is difficult. Whilst the backyard chicken movement allows humans and chickens to pursue alternative ways of multispecies living (Oliver, 2021), the movement delineates which chickens are valuable based on their sex. Thus, hens often benefit from these movements, whilst roosters do not. In the example of primate rescue, Fleury (2017) notes that 'pet' primates are often relinquished to sanctuary due to breeders misleading owners about their assumed responsibilities. Hence, such relinquishments are often emergency rehomings as owners do not consider the need for sanctuary until it is required. Given the commercial introduction of the pet pig in recent years, attention must be paid to the potential emergence of similar patterns in the companion pig-keeping community, where pig owners may find themselves unprepared for the responsibilities of long-term care and, as a result, may rely on animal rescues as a last resort.

It is clear that farmed animal sanctuaries and animal rescues play a critical role in transforming human-animal relations, particularly in the context of farmed animal rescue. Despite the ethical complexities of animal rescue work, the human-animal relations in this context can be thought of as empathetic engagement with the animal other. Drawing on Lori Gruen's (2015) concept of entangled empathy, Abrell (2021) argues that animal rescue practitioners can gain deep understandings of individual animals and their lives. Entangled empathy describes how responsiveness to encounters may be implemented in transforming relations. It encompasses an affectual state as emotion and cognition work concurrently to cultivate a shared understanding of another's needs and vulnerabilities, or "a process of engaging caring moral perception" (Gruen, 2017). This affective engagement transcends species and challenges essentialist ethics that have dominated the animal rights movement, instead recognising interconnectedness of all beings. It invites us to extend beyond these boundaries of knowing and to work towards a deep understanding and respect for the Other and their experiences. Entangled empathy requires sustained engagement with the Other, developing over time as individuals reflect on their encounters with nonhuman others in the world, either proximal or distant. Such affective capacities allow connections between imaginary ethics and the social world (Woodward and Lea, 2010), as mutual respect and willingness to adapt can challenge existing power structures and create novel ways of living with farmed animals. As a result, empathetic engagements with farmed animals hold the potential to transform human-animal hierarchies. By creating these relationships with

farmed animals, humans may be better placed to interpret their desires, thus allowing some level of participation in decision-making (Scotton, 2017). Whilst these options could perhaps allow greater species-specific flourishing, there is the possibility for power imbalances to emerge as a select few individuals are tasked with making decisions based on their skills and expertise (Donaldson and Kymlicka, 2015). Understanding the dynamics and complexities of animal sanctuaries provides insights into alternative models of care and human-animal relationships that can inform the exploration of pig identities and the affective interactions between humans and pigs in this context.

These spaces of rescue and sanctuary in which such transformative affective relations are practised can be described as heterotopias (Abrell, 2021). The concept of heterotopia is taken from Foucault's work and, although is fairly ill-defined in his original work, can be interpreted as alternative spaces that disrupt and overturn the status quo. Kevin Hetherington's(1997., p.8) interpretation places heterotopias as:

> "spaces of otherness, whose otherness is established through a relationship of difference with other sites, such that their presence either provides an unsettling of spatial and social relations or an alternate representation of them"

These are spaces where different kinds of social ordering, are tried out. Heterotopias are distinct from utopias as they provide an arena to tangibly experience alternative worlds (Foucault, 1998). I argue that heterotopia can provide a fruitful avenue for posthumanism as the concept relates to creating difference, and thus can be applicable to exploring complex ethico-political issues in practice. Johnston (2013. p. 800) writes, "the concept of heterotopia introduces a starting point for imagining, inventing, and diversifying space: nothing more, nothing less. Heterotopias have no axe to grind, just scissors to cut". In the case of the farmed animal sanctuary, this is a space where alternative ways of living with farmed animals can be tried and tested, often with the aim of creating less hierarchical, power-imbalanced relationships decoupled from the agri-food context (Scotton, 2017, Donaldson and Kymlicka, 2015).

In the context of an evolving discussion on the environmental and health implications of meat consumption, it is concerning that little attention has been given to the role of animal rescues and sanctuaries in shaping these new animal futures. These organisations not only play a crucial role in immediate wellbeing but also foster affective solidarities that challenge societal norms and have the potential to carry transformative power (Meijer, 2021). This thesis investigates these dynamics, shedding light on the transformative potential of these organisations in creating futures of compassion and solidarity. Further, more research is

needed to consider the specifics human-pig relationships and how they may evolve in this context. The literature presented here relating to farmed animal rescue relates overwhelmingly to the US sanctuary context. In the UK, farmed animal sanctuaries are less common. Hence, pigs are taken in by animal rescue and welfare organisations, often with the hope of being rehomed. As the limited scholarship in this area shows potential for these spaces to highlight how interspecies cohabitation and flourishing could be possible, Chapter 7 explores sanctuaries along with other animal rescue organisations as spaces to theorise alternative ways of living with pigs with a focus on the productive potential of affect in such contexts.

2.3 Conclusion

In this literature review, I have positioned my research within the field of animal geographies, aiming to account for the agency of nonhuman beings in human-animal relationships and explore the reciprocal transformation of humans and animals through encounters. Additionally, I have connected this to the study of affect within geography, seeking to expand the traditionally human-centred scope of affective geographies. This involves examining how human-pig encounters and identities are shaped and transformed through bodily encounters. I argue that by decentering human affect in geography, we can acknowledge animal agency and recognise the role of animals in navigating these entanglements.

Further, I have explored the paradoxical understandings of pigs in society. On one hand, they are recognised for their intelligence and affection, while on the other hand, they are frequently associated with filth, disease, and greed. The consumption of pig meat is widespread across the globe. However, due to the global intensification of animal agriculture, the reality of pigs has become increasingly invisible, and our understanding is primarily shaped by cultural representations. The literature review has highlighted contexts of alternative human-pig relationships outside of animal agriculture where embodied, intimate relations and knowledges with pigs emerge.

In the research laboratory, affective connections between staff and animals are frequently overlooked, despite the emotionally and ethically challenging nature of laboratory environments, which involve routine killing and harm to pigs. I propose that there is a lack of attention to how care is constrained by control in laboratory settings, emphasising the need for a deeper understanding of the interplay between care and control. Furthermore, there is a need to investigate the circulation of conflicting affect between humans and animals and its impact on the wellbeing of both parties. This literature review has highlighted that the

commercial introduction of the pet pig can have potentially undetermined ethical consequences that require further understanding, as existing literature on human-companion animal relationships highlights the potentially negative consequences of commodifying pets and exerting power over animals. However, it remains unclear whether farmed animals-turned-pets follow similar patterns, as this population is understudied. The review then considered the role of animal rescue in providing care for pigs affected by these problems, as well as those that have been abandoned or liberated from farms by activists. The potential of animal rescue as a social movement that challenges normative perceptions of animals is acknowledged, with sanctuaries playing a significant role in the lives of farmed animals. It is essential to recognise that these spatial contexts are not without ethical imperfections, and further research is needed to understand the complex dynamics between humans and pigs as we strive to improve mutual futures.

The lack of research exploring the spatial dynamics of pigs beyond the farm, their transformations through diverse human-pig encounters, and the ethical challenges of 'becoming with' pigs, as suggested in existing literature, has prompted the following research questions:

1) How can a focus on affective human-pig relationships contribute to understandings of animal categorisations across space?
2) How does the co-existence of conflicting affective relations impact the lived experiences of pigs and humans?
3) How can an exploration of affective dynamics human-pig relationships prompt a re-evaluation of the ethical and social implications of human interactions with pigs, and facilitate novel avenues for multispecies flourishing between humans and pigs?

With these research questions in mind, I will now present the theoretical framework that will guide the approach taken in this thesis.

Chapter 3 Theoretical Framework

The literature presented in the previous chapter highlighted the complexity and heterogeneity of human-pig relations. Across space, human-animal encounters are continuously navigating and reinscribing species hierarchies. In this theoretical framework, I discuss how applying a more-than-human approach to affective human-pig relationships decenters the human and considers the realities that emerge through these diverse entanglements. This facilitates a critical interrogation of how space (and movement across space) reconstitutes pig identity and the entanglements they are enrolled in. This forms an ontological framework rooted in the assumption that creating affective relations is an active boundary-making process (Puig de la Bellacasa, 2017) between varying ethico-political practices and pig identities. However, I argue that acknowledging these complex assemblages is not enough. To seek alternative forms of political action, research must critically interrogate the specific moments in which realities are brought into being in order to theorise alternative worlds. This must involve interrogating the power dynamics, ethical considerations, and practices involved in the human-pig relationships to challenge existing norms and hierarchies.

The framework presented in this chapter draws from work cutting across disciplines including geography, critical animal studies (CAS), and science and technology studies (STS). I engage with debates in cultural geography surrounding the ethical and political tensions that emerge from vitalist ontologies (Roberts and Dewsbury, 2021), particularly tensions surrounding the liveliness of nonhuman animals and how humans may engage with nonhuman liveliness in a responsible manner. On one hand, such approaches have promoted attention to the liveliness of the nonhuman. On the other hand, they can inadvertently create an emphasis on positive relational forms of life which fail to critique the negative geographies of the worlds under study (Falcon, 2023). I argue that it is precisely this disjuncture that derails the potential for a critical posthumanism that engages in creating a progressive, multispecies politics that CAS aims to achieve. To overcome this, I take inspiration from a materialism that engages with the vitality of human and nonhuman life but moves beyond depoliticised, descriptive accounts of agencies of the nonhuman which has become a distinctive element of the more-than-human turn (Roberts and Dewsbury, 2021), and considers the power and politics of materiality that is intrinsically linked with place. This application of materialism to exploring the socio-material arrangements of more-than-human entanglements provokes the “possibility for political change and reimagining of a complex of living that is situated in resolving human and nonhuman violence” (Tolia-Kelly, 2011, p.155). Understanding these entanglements is essential, for they constitute the complex worlds in which human-pig interactions unfold, challenging conventional notions

of human exceptionalism. In the next section, I delve into the concept of multispecies entanglements, recognising the active agency of nonhuman animals and the intricate processes of boundary-making that shape our shared worlds.

3.1 Human-Animal Entanglements

Multispecies entanglements can be conceptualised as the "webs of interaction in which living beings emerge, are held in the world, and eventually die" (van Dooren, 2014., p4), whereby both human and nonhuman actants co-evolve and bring each other into being through their relations. This concept recognises nonhumans as active agents in world-making and challenges human exceptionalism, rejecting the Cartesian dualist separation of the rational human subject and the wild nonhuman subject (Urbanik, 2012). Giraud (2019) encourages a critical reflection on the boundary-making processes that are co-constitutive of entanglements, to consider the material-discursive structures that allow for particular configurations of the world to come into being.

Crucial for Giraud's work is Karen Barad's notion of 'agential cuts', which alert us to the exclusions that are made when specific material-discursive structures allow for particular phenomena, such as life and knowledge, to emerge (Barad, 2007). Here, 'agential' refers to the agency that results from the intra-actions of different agents, human and nonhuman, and thus is contingent on the nature of their relations. The use of the term 'intra-action' rather than 'interaction' reflects that entities do not pre-exist their relations with other entities, instead, they emerge through them (p.128). Intra-actions, therefore, perform agential cuts (Barad, 2011, Barad, 2007). Important to this research is the materialisation of identities and knowledge, thus I consider the material-discursive factors and intra-actions that shape pig-human identities and care knowledges. Pigs that are considered primarily as pets rather than food, for instance, may prompt questions surrounding the intra-actions that delineate how pet and pet-owner identities are constructed, which in turn plays a role in shaping the knowledges about, and performances of, care for companion animals.

Giraud (2019) argues that it is within agential cuts that powerful ethico-political potentials can be found but are frequently overlooked in the existing literature that prioritises the unravelling of entangled and complex webs of relational entanglements. This is due to the difficulty in locating where ethical responsibility lies within mosaic assemblages of multiple humans and nonhumans, an argument also made by Roe (2010) in a critical analysis of the emergence of sentient materialities in food animal-meat-industry assemblages. Within these assemblages, there is a specific spatial-temporal frame of sentience in the meat industry, as "processes of sentient matter intra-act with material-discursive practices to give more than just the present,

but also, a past of a living, breathing animal body" (p.275), highlighted in the example of measuring pH levels in animal carcasses to indicate stress level in the pre-slaughter period, subsequently determining the future of the meat in the commercial market. These technologies have implications for the visibility of sentience and thus, foreclose certain materialities.

Therefore, Giraud (2019) encourages a politicisation of exclusions, urging for a critical examination of the power dynamics and consequences of decisions that enact boundaries. For instance, Giraud's discussion on 'hierarchies of care', takes issue with the limitations for ethical potential that come with an emphasis on proximity and entangled relationships in multispecies care, as these can often exclude more critical perspectives. To illustrate this, she examines media portrayals of anti-vivisection movements. The broad discourse surrounding one protest situated scientists on the 'rational' side of the argument, in contrast with 'emotional' activists who aimed to represent animal research as needless torture. As such, arguments around the usefulness of animal testing undermined activist knowledge claims. The proximity that researchers had to animals also positioned them as holding expert knowledge about animal needs, subverting activist care claims due to their lack of bodily engagement with the animals they were advocating for. Therefore, mainstream discourse can prevent alternative viewpoints and criticisms from disrupting the status quo. Politicising these exclusions and their ethical implications, Giraud argues, can work alongside relationality to create space for ethico-political intervention. These concepts are useful in thinking about how power is exerted over animal bodies, as well as how these bodies may exert resistance. For instance, identifying the discourses of gastronomy, culture, speciesism and so on that construct certain animals as killable is an important project (Adams, 1990).

Critical to this discussion is the concept of 'worlding', utilised to understand how different entities, human and nonhuman, actively participate in the construction of worlds (Haraway, 2016). In a posthumanist vein, this departs from universal truths and instead underlines the dynamic and complex nature of existence. For instance, Mol's (2003) work sheds light on the subjectivity and multiplicity of phenomena, using disease as an example. Mol illustrates how different actors, including patients, pathologists, and surgeons, engage with and perceive the same disease in multiple, diverse ways. Each of the diverging narratives constructed have consequences for the worlds that are subsequently made. In referring to the fluidity and ever-changing nature of co-living in multispecies worlds, Westerlaken (2020b) suggests that worlding involves learning how to negotiate 'unfinished' relations in the world. Therefore, maintaining a critical awareness of the stories we tell about multispecies living becomes crucial.

I contend we must ask questions about the specific material arrangements that construct pig-human worlds. Who designs worlds? Through what power relations and hierarchies are worlds permitted? Who benefits and who suffers in these worlds? We can go even further and ask what kind of worlds we deny when these material arrangements are made. What do these possible worlds tell us about the ethics of our current reality? Recognition of the constitutive role of exclusions in the production of phenomena remains largely absent in the literature, prompting this research to consider possibilities for imagined futures for multispecies flourishing. Barad's agential realist ontology is therefore useful to consider the broader material and multispecies arrangements that enact specific human-pig entanglements.

Expanding on the concept of worlding, I introduce the idea of the multiplicity of the pig. I use this concept to encourage a shift from fixed, normative understandings of the pig as livestock, to an understanding of the pig as evolving through their entanglements with different spaces and people. I now turn to ground this contribution within existing theory.

3.2 Posthumanism and Relational Becomings

The emergence of a posthumanist, relational ontology sought to think about society and nature in less anthropocentric terms. Thinking of space in relational terms is a key theme within human geography, which is concerned with how place is produced through relations and (dis)connections with space (Massey, 1991). The paradigm shift towards posthumanism has redefined the human subject as intrinsically interconnected with animals and the broader nonhuman world, through transformative encounters imbued with affect (Haraway, 2008). This leads us to an understanding of multispecies kinship as a transformative force across species borders that becomes entangled with practices of worlding (Haraway, 2016).

Actor Network Theory (ANT) offered a way in which to theorise nonhuman agency in the construction of space and was thus mobilised by many geographers, particularly those interested in the role of nonhuman animals, plants, and technologies in co-creating space (Murdoch, 1998). ANT attempts to map out the connections, or assemblages, of human and nonhuman actors (Latour, 1996). Here, an actor refers to any thing that exerts action and is capable of producing difference. Actors, therefore, are not fixed entities. Under this conception, actors (or actants) are not limited to the realm of the human. ANT thus presents a decentred role of the human in socio-material networks, departing from a traditionally dualist paradigm in the social sciences (Nimmo, 2011). ANT traces the movements of these actors that make up a shifting, heterogeneous network, rather than laying out a pre-defined network that actors simply act upon (Latour, 1996). ANT takes agency as decentred. That is, agency is a "distributed effect and the result of relations enacted through networks of heterogeneous things and materials"

(Bosco, 2006., p.137). Therefore, actor-network approaches allow social scientists to conceptualise the ways in which nonhuman actants are enrolled as active participants in the becoming of social worlds (Sayes, 2013).

Like many feminist STS scholars, ANT seeks to foreground nonhuman 'liveliness' in social networks (Twine, 2010., p.5). Building upon and critiquing Latour's work in the context of human-animal relationships, Sarah Whatmore's (2002) 'hybrid geography' focuses on the politics of relationality. Unlike many ANT theorists, Whatmore explicitly speaks about animals and does not relegate nonhumans to static entities that are acted upon, rather, they are capable of expressing agency in multispecies entanglements. For example, she writes about elephants as subjective beings enrolled in daily performances of 'the wild' as they navigate through their living spaces, interacting with zoo tourists, wildlife volunteers, other animals, and plants. In these complex webs of interactions, humans and nonhumans are enrolled in co-creating identities, knowledges, and realities. van der Duim et al. (2014) explore gorillas and humans in tourism actor networks, suggesting that gorillas become active subjects in co-creating relations with groups of humans including tourists and conservationists. In turn, they are shaped by these relations. These divergent interactions lead to varied perceptions of gorillas, transitioning from objects of interest, like hunting trophies, to subjects with unique behaviours, personalities, and social bonds, showcasing the gorillas' agency in shaping their own identities within these multispecies networks. Komi and Nygren (2023) consider how multispecies actor networks distribute power unequally in the case of human-wolf relations in Finland. Their research sheds light on how attributing intentional agency to wolves in these networks can have complex consequences. In the study, local perceptions of wolves revealed that people often ascribed intentional agency to wolves when trying to make sense of encounters between humans and wolves. For example, when wolves ventured closer to human homes, interviewees often interpreted these actions as deliberate choices made by the wolves. This interpretation viewed wolves as intentional actors who purposefully crossed boundaries into human spaces. Emphasising wolf agency served as a means for individuals to underscore the perceived hazards linked to wolves while simultaneously diminishing human accountability for addressing these risks (Komi and Nygren, 2023). Work in this vein has done much to transgress the nature/culture, human/animal binary typical of Enlightenment-era thinking. For instance, research interested in the consumption of animal bodies and products is often typified by a 'follow-the-thing' style of analysis of commodity chains (Cook, 2004). The embodied, intracorporeal experiences of eating practices have also been given attention, considering how human and nonhuman bodies are materially connected through agro-food networks and how 'things' become 'food' (Roe, 2006).

A key concept across the posthumanist literature is becoming, a process that happens across the borders of human and other-than-human. This entails a reconfiguration of the human and nonhuman subjects in transformative, affective encounters (Haraway, 2008). Applying this perspective to pigs, this thesis explores how pigs actively participate in and shape their relationships with humans and other beings. This concept recognises pigs and others as active agents in world-making and challenges human exceptionalism, rejecting the Cartesian dualist separation of the rational human subject and the wild nonhuman subject (Urbanik, 2012). Pigs are not passive objects, but rather dynamic actors in their interactions with humans, influencing and being influenced by these relationships. As Whatmore (2002) discusses elephants enrolling in daily performances of 'the wild,' pigs and humans engage in complex webs of affective interactions that shape their identities, knowledges, and realities. Such relational material approaches highlight that the inherent, conspicuous interrelations between humans and nonhumans have implications for the ways in which nature-culture entanglements are conceptualised as messy, overlapping webs of interconnectivity (Plumwood, 1995, Haraway, 2008, Haraway, 1991).

Following Deleuze and Guattari's (1987) 'becoming animal', who theorise that encounters between species shift the borders and identities of agentive beings and as such are always in a process of emergence, Haraway (2008) invokes the phrase 'becoming-with' to emphasise how affective connectivity between species co-produce bodies and identities. She argues that situated relationships transform human and animal subjects as they come into being through embodied ways of knowing. Her work often focuses on human response-abilities, the complex, transformative interactions between humans and nonhumans that form shared meanings, in turn creating space for a capacity to respond based on tacit knowledge and embodied communication. By reflecting on her own relationship with her dog, Cayenne, Haraway (2008) suggests that the embodied sensibilities of these intra-actions allow a capacity to respond which is not based on pre-defined, universal ethical principles, but rather a response-ability that emerges from, and is performed through, co-constitutive and shared understandings in perpetual becoming. Drawing from Haraway's insights, this research applies a similar approach to examine how spatially situated material-affective encounters contribute to the multifaceted and evolving identities of pigs. This perspective allows us to understand how emotions, sensations, and feelings shape affective human-pig relationships, or, as Davies and Loftus (2010., p.52) contend; "situated knowledges are more than recognitions of positionality or calls to or from the oppressed: they are a political tool for a more adequate knowledge, rooted in the messiness of the everyday". While traditional methods in ethology, such as animal preference tests, provide valuable insights into animal desires and behaviour (Kirkden and Pajor, 2006), they can fall short of capturing the full range of animals' emotions and experiences. We cannot

directly communicate with animals to inquire about their subjective states. However, this does not negate the possibility of recognising that the lived experiences we encounter when interacting with animals are shared ones (Buller, 2015). Response-ability thus provides a framework to examine the performative nature of ethics, as they are practiced and reformed in mundane situations as well as in moments of moral dilemma.

3.3 Animal Transgressions and Identity

I now turn to explore how an understanding of relational becomings with animals impacts identity construction. As Hall (1996. p.4) argues, "identities are constructed through, not outside, difference". This is evident in the human-animal binary, where human identity is viewed as cultured, rational and free-thinking, superior to the unconscious, non-rational animal. Othering of the nonhuman reinforces and defines human identity (Peggs, 2009). On the other hand, engaging with nonhuman difference questions what it means to be human and can prompt a reconsideration of the boundaries and hierarchies that define human/nonhuman identities (Lulka, 2009).

Geographical work has highlighted how space is linked to animal categorisations that subsequently influence how they are viewed and treated. In multiple ways, social and cultural understandings of animals can position them as either 'out of place' or 'in place' (Philo and Wilbert, 2000) with various (un)ethical potentials (Jones, 2004). Spaces such as the animal laboratory, the home, or the sanctuary are not just geographical sites where human and pig relationships passively play out upon. Place becomes intrinsically entangled within the becoming of humans and animals, leading to a multitude of different and often controversial relations. People and pigs are continuously entangled in a relational becoming with place, co-constructing their multiple, unstable identities.

Focussing on multispecies entanglements can promote greater care for animals, however, the emphasis on temporally bound, situated ethics that these accounts produce arguably overshadows the need to critically interrogate the unequal power structures that permit these realities to remain unchallenged (Arcari et al., 2020). Animal identity categories such as 'livestock' and 'pet' carry with them distinct geographies for pigs. These socio-spatial placings of animals can also have implications for their legal status (Braverman, 2011). For example, McCumber (2021) explores this in the context of a rat eradication programme in Alberta, Canada. The province's 'rat-free' status works as a boundary through which that rat is cast as an unwelcome outsider, and a national Albertan identity is reinforced. Pigs too become entangled in the complex dynamics of identity formation and boundary maintenance. To fully understand the multifaceted relationships between humans and pigs, it is crucial to critically

examine and challenge the cultural practices that construct and reinforce these boundaries that may demarcate them as welcome and unwelcome in human social worlds. Interrogating how affective human-pig encounters take place within these wider structures, this research contributes to a comprehensive understanding of the conditions that shape human-pig relationships and identifies points of ethical contention that require critical reflexivity.

It is essential to recognise the vulnerability of the pig and their subordination to human power. The subordination of pigs can be witnessed in the spaces of industrial farming, where they are often subjected to exploitation and commodification. As Gillespie (2021) argues, the commodification of farmed animals inherently relies on their subordination. Across different geographical contexts, the hierarchies of power in human-animal relationships are heterogeneous, reflecting the complex interplay between human-animal relationships and their spatial dynamics. In following pigs as they transgress the boundaries of the farm and experience lives as pet pigs, rescue pigs and research pigs, this thesis aims to develop a comprehensive understanding of the multifaceted ways in which pigs experience power imbalances in human-dominated environments. The narrative of the pigs' multiplicity becomes crucial in understanding the complex interplay between the affective connections that may be forged across species and their persisting hierarchies of power.

Reconfiguring and transgressing boundaries and borders is a key theme of research concerned with destabilising dualisms that disavow the interconnectivity of nature-society and human-animal worlds. Several accounts of animal place-making seek to foreground hybrid ontologies through stories of nonhuman transgressions. Chambers and Main (2014) discuss Sirocco the Kakapo parrot, who defies his species' norms and categorisations. Kakapo parrots are an endangered species in New Zealand and thus became the focus of conservation projects. Sirocco was hand-reared by human caregivers due to illness as a chick, preventing him from socialising with others of his own species. Consequently, Sirocco continually chose to engage with humans rather than other Kakapo parrots, making him a conservation failure as he did not mate. Nonetheless, his popularity led to him becoming the face of conservation initiatives. Sirocco's story not only blurs the boundaries of human-animal binaries but highlights the active role of animals in multispecies care entanglements. It can be argued that through exercising his agency through resistance, Sirocco did not fulfil the intended outcomes of care at the conservation site, though eventually became entangled in much larger networks of care. In another example, Van Patter and Horvoka (2018) discuss the case of feral cats, a population often considered 'out of place' when they do not live with human owners. By thinking of feral cat colonies as places through which cat lifeworlds emerge, they argue that ethical engagements with nonhumans must recognise animal agency in building meaningful beastly places, rather than focussing on anthropocentric ideas of where animals are perceived to belong. Several

accounts of animal transgressions such as these contribute to the visibility of animals as agentive beings, including alligators (Keul, 2013), dingoes (Carter and Palmer, 2017), dogs (Brown and Dilley, 2012), primates (Hill and Webber, 2010), and even a singular octopus (Bear, 2011). A focus on transgression can also be used to explore ethical ways of living with animals. As Oliver (2021. p. 122) posits in her exploration of urban chicken keeping, such transgressions and new modes of relating to chickens can be thought of as a "dedication to experimenting with alternative modes of multispecies living".

These more-than-representational ways of thinking about ethics are crucial in animal geographies. This work suggests an overthrowing of the idea that political rights are strictly contained within the human realm and opens a discussion on what less anthropocentric worlds, and their ethics and politics, may look like (Castree, 2003). However, a major shortcoming in this literature is a lack of critical exploration of what alternative multispecies worlds with less anthropocentric politics could look like. Instead, research often finds itself caught up in the 'irreducible complexity' of relational entanglements (Giraud, 2019).

For instance, Donati (2019) explores the farm as a space of human-animal world-making and conviviality, enrolling social collectives of humans, dogs, cattle, sheep and chickens. In exploring how these entanglements are bound up with practices of care, they draw attention to a particular breed of chicken, the Sommerlad, bred with the intention of being a free-range bird that is resilient to the outdoor environment and seasonal fluctuations. Donati argues the Sommerlad chicken "demands modalities of care that multiply and amplify affective intersubjective relations on the farm" (p.125), as opposed to industrial chicken breeds that are bred for efficiency and optimisation. The agency and freedom of the Sommerlad chicken facilitates affective exchanges between farmer and chicken, where their personalities, preferences and social lives are on display. Yet, the animals retain value as commodified production machines. Various human and nonhuman actants, including the farmer, selective breeding biotechnologies, the Sommerlad chickens, the working dogs that protect them from predators, and the feeding systems facilitating foraging, assemble to co-produce affective multispecies entanglements unique to the Sommerlad chicken. In this sense, entanglements with livestock can be thought of as Haraway's (2008, p. 273) "multispecies multicultural flourishing", where farmers and their animals are engaged in convivial, enjoyable relations that are not categorised by emotional detachment (Bruckner et al., 2019). Nevertheless, these affective attachments can serve as added commodity value to meat. Critical animal scholars argue that these forms of 'new carnivorism' and happy meat discourses continually prop up the animal-industrial complex through continued concealment of animal suffering, butchering and slaughtering (Linné and Pedersen, 2016, Cole, 2011). Further, Donati (2019) points out that there are larger structures at play that overshadow the remit of, even give rise to, human-animal

entanglements. Quoting Ginn et al. (2014. p. 155), she argues greater attention must be given to the socio-political context in which farmed animals live, to "who lives well and who dies well under current arrangements, and how they might be better arranged".

Despite the exceptions mentioned here, farmed animals do not benefit from the same attention to and recognition of liveliness and agency as their status, as commodities is rarely debated (Gillespie, 2018). This thesis contributes to these ideas by exploring the novel ethical terrains that pigs and humans occupy as pigs take on new identities for their species. By acknowledging the multiplicity of pigs, this research unveils the intricate dynamics of power in multispecies coexistence, offering a nuanced understanding of the agency inherent in these complex and evolving relationships. This research approaches pig-human entanglements with an effort to understand how the pig might be known under a different set of arrangements, that is, outside of animal agriculture. In exploring disparate spaces of the research laboratory, the home, and the rescue, I explore how these various pig-human actor-networks strive towards alternate ways of knowing and living with pigs, but still must navigate through co-existing practices of flourishing, harming, living, and dying in shared worlds. Considering this, I now turn to explore how this theoretical framework can be applied to affective relations and practices of care, love, and imagining multispecies futures.

3.4 Politicising More-Than-Human Affective Geographies

Posthumanist work is often critiqued for romanticising human-animal entanglements, which does little to disrupt species boundaries and can reinscribe notions of anthropocentrism when the power assemblages that give rise to certain human-animal relations remain unquestioned (Giraud, 2019). Recognising the limitations of situated ethical frameworks, I follow Puig de la Bellacasa's (2017) reframing of ethics as emerging duties within relations involving agentive beings, rather than a set of moral dichotomies. This research recognises the limitations of thinking with relational entanglement and aims to consider how relational entanglements of humans and pigs are bounded and shaped by broader networks of socio-material and political structures. Pig-keeping for companionship or hobby farming, for instance, may well replicate the positive and intimate bonds present in many other pet-keeping relationships. Despite this, the conflicting categorisation of pigs as both livestock and companion highlights that animal identities, and their realities, are contingent on socio-political context. This research seeks to delve deeper into the complexities of relational becomings with pigs whilst maintaining a critical awareness of how these relational dynamics are intricately entwined with biopolitical and material structures governing the lives of pigs. In doing so, I build an understanding of what a political kinship may look like for pigs.

Srinivasan (2015) contends that considering the weight given to space-power relationships in political geographies, it is unclear why a political approach to human-animal relationships remains largely unpursued. She argues that without intervention, animal geographies' intrigue with care-based, situated ethics will not facilitate the discipline in critically interrogating the basis of oppressive power relations inherent in many human-animal relationships. This concern is shared by Collard and Gillespie (2015), who advocate for a critical animal geography that questions how hierarchical power relations between humans and animals are established and reinscribed. I suggest that this must call into question the lived experience of animals and consider them as political subjects. Drawing upon Giraud's (2019) 'ethics of exclusion' to recognise that the question of entanglement can reach an impasse whereby the focus on the complexity of entanglements overshadows potentials for political action, I consider the realities foreclosed when certain human-pig entanglements are materialised. This takes inspiration from ANT and STS to suggest that reflection on the boundary-making processes that are co-constitutive of entanglements may provide a way to move beyond relationality and propose new forms of political action. This requires attention to the socio-political technologies that create these exclusions, as well as to the constitutive role that exclusion itself has on the world. This can work to highlight the sometimes violent exclusions that allow entanglements to flourish (Arcari et al., 2020, Giraud, 2019), or how matter comes to matter (Barad, 2003). In other words, how the boundaries of human and nonhuman and the binaries that may uphold their ontological separation are maintained and preserved through the intra-actions of actors (Lemke, 2014).

Destabilising the dualisms between Human and Animal thus must be continued as a key ontological project. This does not necessarily make redundant relational approaches, which Wadiwel (2015., p.7) contends, "can be adapted to take into account systems of violence and the way in which ethics might be formed by context and situation". Wadiwel argues for the visibility of animal resistance, and how this is responded to, in these relational accounts in order to avoid an account of animals as passively instrumentalised. For example, the case of the "Tamworth Two', A pair of five-month-old pigs that escaped from an abattoir in 1998 and were eventually housed in a sanctuary to live out their lives, highlights the agency and resistance exhibited by pigs in navigating oppressive systems. Regardless of the debate surrounding whether animals act with intentionality and to what extent, stories such as these signal the remaking of worlds and the opening up towards alternative possibilities of flourishing. Morgan and Cole (2011, p. 126) consider the case of the Tamworth Two, arguing that the widespread reporting of the two pigs blurred the subject-object distinction that so frequently demarcates how animals may be treated. Their stories allowed their liberation from their identity as 'food', as they became known as individuals and gained public support. I argue that incorporating instances of pig resistance into the exploration of affective geographies of human-

pig relationships is vital. In this thesis, I consider how pigs navigate and respond to conflicting affective practices, allowing an insight into the intricacy of their lived experiences.

Recognition of the constitutive role of exclusions and inclusions in the production of phenomena remains largely absent in the literature, therefore, this thesis aims to take the lessons from STS and critical animal studies outlined here to consider how hierarchical boundaries between human and pig are built, maintained, and potentially deconstructed through affective engagement with spaces of encounter. As Mol (2021) demonstrates, doing or caring are not always purposeful acts executed in isolation, they are embedded in broader networks of historical, cultural, social and material entanglements. I will now outline how this approach to politicising exclusions can work to create a useful framework for interrogating affective human-pig relations and the boundaries that they shape and are shaped by. To do this, I first focus on care, before considering love and imagining multispecies futures as affective practices in human-pig worlds.

3.4.1 Critical Reflections on Care

> Through caring, we make worlds in which certain kin encounters, lives and relations (but not others) become possible.
>
> (Desai and Smith, 2018., p.45)

Care relations can be seen as boundary-making processes that allow certain ontologies and identities to flourish. The act of caring is thus an act of worlding, where certain kinship encounters become possible (Haraway, 2016). Drawing on Puig de la Bellacasa's (2017) notion of care as a site of situated ethics, care cannot be confined to an impartial framework or set of rules, it is relational and often tacit in nature, where 'tinkerings' to socio-material structures allow for care practices to be remade (Mol et al., 2010). This section calls attention to the non-innocence of care and the contentious boundaries that can materialise in caring relations. A multispecies entangled view of care must be sensitive to the possibility of human control over animals which becomes apparent in the coexistence of care, killing, and harm (Gibbs, 2021, Holmberg, 2011). Yet, to interrogate the ethical implications of care it is not enough to conclude that things "could have been otherwise" (Hollin et al., 2017., p.20). Rather, we must politicise the geographies of care. Exploring how humans learn affective responses to animal needs may alert us to how complex, messy, and often challenging human-animal relations unfold in specific socio-political contexts (Greenhough and Roe, 2019).

Given geography's interests in social justice and inequality, discussions about ethics are prevalent across the discipline. For geographers, ethics are unavoidable in human-animal

relationships and are often recognised as deeply entangled with place (Buller, 2016). Debates about multispecies ethics are often linked to discussions about care. Geographical interest in politics and practices of care is broadly interested in who is involved in care relationships, where they take place, and how care and ethics are intertwined (Middleton and Samanani, 2021, Milligan and Wiles, 2010).

Advocates of care ethics often work within a relational framework, focusing on compassion and mutuality in embodied, emotional, and affective relationships (Lawson, 2007). It is within these relations that care, knowledge and identity are intertwined and co-constituted. Therefore, these care relations can be seen as boundary-making processes that allow certain ontologies and identities to flourish. I borrow Puig de la Bellacasa's (2017, p.6) notion of care as a site of situated ethics where care performances:

> "cannot be about a realm of normative obligations but rather about thick, impure involvement in a world where the question of how to care needs to be posed. That is, it makes of ethics a hands-on, ongoing process of re-creation of 'as well as possible' relations and therefore one that requires a speculative opening about what a possible involves."

This definition points towards a cosmopolitical account of care, requiring a sustained openness and engagement with who and what are composing worlds and the implications of different performances of care. How are we to care well, when care is full of complexities and ambiguities, or happens in tandem with suffering and even death? Mol et al (2010., p.14) recognise the inherent contradictions of care and argue that 'good' care involves "persistent tinkering in a world full of complex ambivalence and shifting tensions".

Sayer (2011) argues that emotions are often a contributing factor in ethical reasoning, motivating capacity to care. This is often obvious in human relationships with certain animals, particularly companion animals, where care may be driven by emotional bonds. Conversely, care might also be enacted as labour by different actors including livestock farmers and animal welfare practitioners, though this does not necessarily strip away the emotional drivers of care in these spaces (Wilkie, 2005). Love as an affectual force (Pile, 2009), for instance, can be thought of as intimately linked with a sense of responsibility and care towards others (hooks, 2004), discussed in more detail in the following section (3.4.2).

Although care is commonly regarded as an ethical obligation, it can also serve as a mechanism for exerting control and manipulation over animals. Arora et al. (2020) discuss control as a practice that instils hierarchical categorisations, such as the distinction between subjects and objects, or humans and animals. Care and the emotions associated are therefore fraught with

ethical complexities. This is particularly complicated when caring for nonhuman others, who cannot articulate their requirements readily to their human caregivers. Considering this, it is important to flesh out the tensions which often arise from interdependency and unequal power relations, as well as how these relations also create exclusionary boundaries (Puig de la Bellacasa, 2011). This is exemplified in van Dooren's (2014) writing about conservation efforts to protect the Whooping Crane through a series of captive breeding programs in North America. Whilst these programs care for individual cranes to secure a future for the species, individual cranes possibly face developmental issues due to a lack of interactions with their conspecifics. The broader context of exploitation and violence in this example, van Dooren argues, whilst may be beneficial for the species and knowledge about animal behaviour, leaves an uncomfortableness in care. This calls attention to the non-innocence of care and the contentious boundaries that can materialise in caring relations. A multispecies entangled view of care requires a cosmopolitical approach attentive to the indeterminacies of outcomes, which may have undetermined or undesirable consequences for both humans and nonhumans. This non-innocence of care, particularly in industrial agriculture, is expanded on by Ginn et al. (2014, p.119).

> "With no prospect of an end to industrialized killing, the environmental humanities now grapple with questions of how to 'kill well' amid 'mortal companion species entanglements' from which we have no obvious escape route".

Gibbs (2021) highlights the inseparability of killing and caring themes in the animal geography literature, particularly relating to animal conservation and food-producing animals. The commodification of farmed animals sits alongside these tensions, whereby animal lives and deaths are engineered within, and integral to, the commodity logic of animal agriculture (Gillespie, 2020). Similarly, Holmberg (2011) highlights the inextricability of care and harm in the 'mortal love' experienced in animal experimentation, as discussed in Chapter 2.

The co-existence and entanglement of care and death is omnipresent and warrants further exploration, as negotiating these tensions involves negotiating the boundaries of human/nonhuman (Mazhary, 2021). Considering how animals are made grievable, killable, and/or worthy of care tells us more about the shifting spatiality and temporality of nonhuman identities. Therefore, I argue that this body of work can benefit from further understanding of multispecies care and how this necessarily invokes discussions of animal death. As Haraway (2008., p.80) states, "There is no way of living that is not also a way of someone, not just something, else dying differentially". This thesis explores how humans and pigs navigate this moral dilemma in practice as they affectively engage with one another through practices of care.

3.4.2 The Ethics of Love

Love is an elusive concept. Colloquially understood as an emotion and associated with romance, feminist theorists remind us that love is not always romantic, instead often associated with care and responsibility towards the other (Haraway, 2008, hooks, 2004). Morrison et al. (2012) argue for an understanding of love as a spatial, social, and relational phenomenon. Crucially, love has the potential to create more ethical relationships with others. However, feminist care ethics has emphasised that love is not a purely benign emotion or ethical realm, but rather a complex and fraught relationship entangled with power dynamics, exploitation, and even potential harm, as "we can both harm and kill, in the name of love" (Holmberg, 2011., p.129). Therefore, a political concept of love must also be cognizant of relations of domination and power within affective relationships (Wilkinson, 2016). In this thesis, I consider love to be a multifaceted force, going beyond simple notions of affection, to unravel its transformative potential and ethical complexities within human-pig relationships. This section extends the typically humanist framing of scholarship on the geographies of love to consider love in a multispecies context. This responds to the call by Morrison et al. (2012) for geographers to critically engage with 'what love does', inviting us to explore the political and ethical potentials of love.

A critical exploration of what love can do is complicated when the relationships under question involve more-than-human subjects, both as recipients and providers of love. How are we to reconcile our desire to love animals alongside our commodification of their bodies? This ethical tension raises important questions about the nature of love and its implications within human-animal relationships. In this multispecies context, Pile's (2009) understanding of emotion as affective, occurring within and between bodies is useful, and allows for a view of love as embodied and performed, flowing even in the absence of shared language. The ethical potential of love in transforming relationships with others thus can be useful in a multispecies context. Lauren Berlant's writing on love is underpinned by a sense of love as a political affective attachment to the world that aspires to build and transform relations with others (Berlant, 1998). In their call for a greater engagement with the political nature of love, Berlant (2011., p.687) notes "I want a bigger imagination of the affective dimensions that it would take to (re)build a world". Such a heterotopic understanding of love is thus useful in pursuing alternative ways of flourishing, a key aim of several animal studies scholars (Ginn et al 2014).

Love in a multispecies context is heterogeneous and modern relationships with animals are fraught with tensions and contradictions. For instance, pigs may be perceived as edible, unclean, and even despised in certain contexts, while simultaneously being beloved and celebrated in popular media portrayals such as Peppa Pig and Babe. Whilst love is frequently

noted as an element of particular human-animal relationships, such as pet-keeping (as noted in Chapter 2), there are no critical explorations of 'what love does' (Morrison et al., 2012) as an ethico-political capacity in multispecies relationships. As such, love has been largely overlooked in animal geographies. It is imperative to delve deeper into the role and impact of love in shaping human-animal interactions, as it has the potential to challenge normative frameworks and foster alternative ways of relating and coexisting with nonhuman beings. By addressing this gap in research, this thesis aims to shed light on the transformative capacities of love in multispecies geographies and its implications for ethical and political considerations.

3.4.3 Imagining Multispecies Futures

> In a world in which animal oppression is part of almost every aspect of the lives of most people, it is profoundly difficult to think of scenarios, futures, alternative presents, ideas, or examples that fundamentally escape this dominant paradigm.
>
> (Westerlaken, 2020a, p.22)

This thesis has framed affect as a force of transformation, discussed above in the context of love and care. A shortcoming of this work lies in the failure to build conceptual links between understanding multispecies affective relations and the reimagining of alternative worlds, which should be an aim of any critical exploration of human-animal entanglements. As Westerlaken (2020a) argues, exploring the complexity of relations is an easier way to critique unjust human-animal entanglements without imagining potential alternate realities. Without this, animal geography can fall into a trap where analysis rests on "a perpetual becoming of heterogeneous networks and events that connect internal spatio-temporal relations" (Jones, 2004., p. 491) rather than critiquing the power-laden borders that bring these relations into being and opening up to alternative ways of living. Here, I discuss why imagining alternative multispecies futures must involve recognition of the role of affect in transforming relations and carving out new realities.

Catherine Oliver (2021) discusses the resurgence in backyard chicken keeping during the COVID-19 pandemic in the UK. She focuses on rehoming of spent ex-laying hens, who experience a decline in commercial value in the agricultural industry. Still, these hens continue to lay regularly and are appealing to owners looking to adopt more sustainable practices in a critique of intensive chicken farming, a trend further fueled by the pandemic and associated food security concerns. Thus, Oliver uses the term 'pets with benefits' to describe these chickens who are transgressing the borders of their species through meaning-making as backyard pets, opening up opportunities for alternative, closer modes of multispecies living with farmed animals. These alternative ways of living are "not separate from industrial farming and

killing of chickens but rather intimately connected in webs of violence" (p.130), as chickens display lingering signs of their commodification for the egg industry, namely in defects and health issues caused by histories of selective breeding. Rehoming represents a porous boundary-making process whereby new affectual human-chicken relations are exercised. Whilst the pet pigs encountered for this research are not used for human consumption in any way, Oliver's (2021) work illuminates the ethical possibilities of multispecies flourishing when farmed animals enter into new relations for their species with humans. Yet, this can have unintended consequences for the roosters left unwanted by backyard chicken keepers who are motivated by the prospect of their own eggs (Rosenfeld, 2023). By examining the dynamics of affective relations across blurred boundaries between companion and food animals, research presented in this thesis can shed light on the ethical complexities and potential for transformative encounters with pigs who straddle these identities when enrolled into networks of pet-keeping (Chapter 6), and the consequences this has for pigs who are considered unwanted (Chapter 7).

In another example, van Dooren (2016) takes the case of the government authorised killing of house crows in Holland, justified by the potential for the crows to become pests in an imagined future, despite no recorded concerns. This example calls attention to the implications that imagining certain futures has for multispecies worlds, in this case, an imagined future where crows are constructed as unwelcome legitimates their culling in the present. Enacting this demarcates a boundary that prevents other futures from being realised. It is argued that any alternative imaginaries should recognise that the world is not a uniquely human place and is instead shared. Following this logic, no bodies can be made welcome or unwelcome. Holland may have to learn to live with corvids and their impacts, perhaps implementing deterrence tactics rather than culling. Any possible futures must recognise inherent multispecies entanglement demands responsibilities that lie outside of anthropocentric entitlement. This case illustrates the ways in which human imaginaries and boundary-making practices can limit the possibilities for alternative futures and impede affective transformation.

This highlights the implications of imaginaries and boundary-making practices on the treatment and understandings of certain species. Just as crows were constructed as unwelcome and subjected to culling based on an imagined future, pigs too can be subjected to predetermined roles and treatment based on societal norms and expectations. Examining the ways in which pigs are imagined and bounded within human societies can shed light on the limitations and possibilities for affective transformation in human-pig relationships. By exploring and promoting ethical practices, this research can begin a discussion on affective transformation within human-pig relationships and advocate for more respectful and mutually beneficial engagements with the other.

Donaldson & Kymlicka (2011) argue that creating new futures for animals, particularly farmed species, is difficult in the face of negative cultural views of animals and widespread opposition to abstain from consuming animal products. Because of this, they contend that rights-based animal advocacy has little to offer in terms of garnering political action and change. They argue that the basic animal rights framework that grants inviolable rights to sentient animals is "a political non-starter" (p.5) and is problematic insofar that it has little to say about what humans may owe in terms of our relational duties to animals, who should be recognised as having inherent agency. Their counter-argument, developed extensively in 'Zoopolis: A Political Theory of Animal Rights' (2011) recognises that in the human case, citizen members of a political community are not passive receivers of rights and that to allow animals to become responsible citizens, it may be appropriate to intervene in some cases where the flourishing of all members of the society is at risk. They give the example that it would be expected to socialise dogs not to bite, to protect all citizens (p.124). For this citizenship model to be effective, they argue it is imperative to explore novel ways of attending to the subjectivities of nonhuman co-citizens. They draw from disability theory to postulate that a model of dependent agency would allow nonhumans to communicate their preferences and interests, as through "vocalizations, gestures, movements and signals, domesticated animals tell us what they want and need from us" (p.109). This might be done through engaging with those who have close relationships with animals and could act on their behalf as advocates of their interests.

Other theorists, although congruent with the statement that sentience and the ability to feel pain and suffering is adequate in granting basic rights to animals, find weaknesses in Donaldson and Kymlicka's citizenship model. Ladwig (2015) instead advocates for an interest-based rights model, arguing that animals have no concept of citizenship and should not be considered as citizens, as they do not recognise themselves as active members of a political community. Instead, Ladwig advocates for an interest-based approach. This states that due to the possibility of continued flourishing and positive experiences, animals have an interest in continued life. In the case of farmed animals, this is sufficient to impose duties on humans not to kill them, even if this is done humanely. A similar interest-based approach is developed by Cochrane (2012), postulating that animal interest in avoiding suffering is paramount in shaping our relations with them. Cochrane is not against farming animals for certain products, though acknowledges that these animals have a right not to be killed or made to suffer. In these interest-based arguments, killing animals would only be morally permissible if their interest to continued life directly clashed with that of a human's interest to continued life. What these citizenship models and interest-based models of rights have in common is the argument that there is a need to engage with novel ways of understanding animal subjectivities, so we can better interpret their needs, preferences, and desires. In turn, this can build imagined futures where humans and

animals may co-flourish. This may be done by engaging with humans who have extensive experience caring for animals. Though, care is complicated when the recipient is nonhuman and cannot articulate their requirements readily to their human caregivers. I argue that joining this literature with an understanding of the transformative potential of affect can help to work through these dilemmas.

As discussed in the context of animal sanctuary in Chapter 2, Lori Gruen's concept of entangled empathy can here be invoked to navigate through these challenges thrown up by such debates in the animal rights movement. Entangled empathy describes how responsiveness to encounters may be implemented in transforming relations. It encompasses an affective state as emotion and cognition work concurrently to cultivate a shared understanding of another's needs and vulnerabilities, or "a process of engaging caring moral perception" (Gruen, 2017., p. 445). This transcends species and challenges essentialist ethics that have dominated the animal rights movement instead recognising the interconnectedness of all beings. It invites us to extend beyond these boundaries of knowing and to work towards a deep understanding and respect for the Other and their experiences. Entangled empathy requires sustained engagement with the other, developing over time as individuals reflect on their encounters with nonhuman others in the world, either proximal or distant. In the context of animal sanctuaries, entangled empathy becomes a practice towards animal flourishing (Rosenfeld, 2022). Such affective capacities allow connections between imaginary ethics and the social world (Woodward and Lea, 2010), as mutual respect and willingness to adapt can challenge existing power structures and create novel ways of living with farmed animals.

3.5 Conclusion

The theoretical framework developed here encompasses an exploration of affective relations within the human-pig nexus. It recognises that affective entanglements serve as both productive and inhibitive forces, generating boundaries and power dynamics that shape the experiences of both humans and pigs. Going beyond the identification of these power structures, the approach delves into the specific socio-material elements that construct human and animal realities. These critical moments act as gateways to conceptualise alternative worlds for humans and pigs.

This framework supports the thesis in interrogating the power imbalances within affective relations experienced by pigs as they navigate various contexts. The thesis specifically probes into human-pig relations marked by care, love, and imagining multispecies futures and interrogates the distinct ethical realities that subsequently emerge for both pigs and humans. Before this framework is employed to discuss human-pig relations across spaces of animal

research, pet-keeping and animal rescue, the following chapter outlines the specifics of the research methodology used.

Chapter 4 Researching Human-Pig Worlds

There is a burgeoning of academic work responding to the call for methodologies to capture the essence of the 'beastly places' of animals (Hodgetts and Lorimer, 2015). These accounts are rich and compelling narratives of conviviality, conflict and cooperation, providing captivating insights into the worlds we share with nonhumans. Much of this work brings focus to one physical site that holds these encounters, from small-scale in gardens (Ellis and Wilkinson, 2020, Ginn et al., 2014) to expansive rainforest entanglements (Remis and Jost-Robinson, 2020). However, within this literature, it is difficult to find a sustained empirical engagement with one species, their experiences, and relationships across spaces. Therefore, this research advocates for a multispecies and multi-sited approach to human-animal encounters. The sites of interest include the animal sanctuary, the animal research laboratory, and the home. Within each of these sites, pigs embody different and conflicting identities. Employing a multispecies ethnography alongside qualitative interviews with pig caretakers in each of these spaces, this research critically interrogates the spatial transgression and co-construction of human-pig identities and care practices in divergent affective relations.

Th methodological design of this research is driven by two aims. Firstly, research attending to the nonhuman as an active world-making agent pioneers methods that seek to destabilise assumed human superiority, instead diverting attention to the lifeworlds of animals as agentive beings in their own right (Hamilton and Taylor, 2017). Secondly, this multi-sited way of studying multispecies interactions complements an exploration of the theoretical arguments made in chapter 3. Not only does this multi-sited approach allow insight into the multiplicities of pigs and humans across different spaces of encounter, it also useful in revealing boundary-making cuts that purposefully limit the possibilities of pig-human relationships that are entrenched in social and historical contexts of viewing pigs as food. A multi-sited, multispecies ethnography allows focus to be given to different worlding practices that permit diverse enactions of pigs, revealing possibilities for alternative futures and encouraging a critical reflection on our current ethical and caring relationships with them.

By addressing these aims, this research seeks to contribute to a deeper understanding of human-pig relationships across different spatial contexts, emphasising the agency of animals and the dynamic nature of multispecies encounters in the becoming. In pursuing these aims, this thesis places a spotlight on animal agency and the transformative potential

of multispecies encounters. This chapter delves into the rationale, design, ethical considerations, and my own positionality as a researcher that underpins this methodology.

This chapter firstly explores how methodological innovations by scholars interested in the more-than-human have begun to consider how animals can be taken seriously as political subjects and knowledge co-creators in our accounts of them. In doing so, I identify the challenges of researching animal lives and human-animal relationships across space with current methodological tools. This forms the epistemological framework and rationale for the research design, which is then outlined in more detail. I then reflect on the ethical challenges of conducting research in human-pig worlds, noting the difficulties in accounting for animal experience and engaging with animals in a respectful manner alongside academic ethical frameworks that offer limited guidance for non-experimental research involving animals. Lastly, I reflect on my positionality as a researcher entering spaces of human-pig encounter and discuss the tensions that arise in navigating conflicting priorities in the field.

4.1 Multispecies Ethnography

Multispecies ethnography extends the humanist frame of traditional ethnography, attentive to the humans and nonhumans that make up life through their assemblages. This 'more-than-human' approach is attendant to emergent becomings as animals, humans, plants, places and other nonhuman entities encounter each other within socio-material assemblages (Whatmore, 2006). In line with the theoretical framework outlined in Chapter 3, this actively challenges the binary assumption that humans are centres of knowledge-making and animals are mere passive objects. Multispecies scholars often highlight the importance of being attentive to the 'becoming' of agentive beings, following Deleuze and Guattari (1987) in their thinking on 'becoming-animal'. As previously outlined, the idea of becoming in this sense supposes that interactions between species shift the borders and identities of agentive beings. As such, they are always in a process of emergence and do not pre-exist these relatings (Barad, 2007, Haraway, 2008).

The concept of encounter is useful to think with here. Encounters cross differences and produce new ways of knowing the 'other' (Barua, 2016). The transformative potential of encounters with animals encourages a physical engagement with their 'contact zones' where interactions unfold in the making, such as the laboratory (Greenhough and Roe, 2019, Arluke, 1988), the farm (Blanchette, 2020, Donati, 2019), dog walks (Brown and Dilley, 2012), and the dairy cow auction yard (Gillespie, 2015), to name a few. Many multispecies ethnographers also draw on interviews with animal caretakers in these contexts and analyse relevant textual

data to enhance their knowledge of the field site, allowing for a richer ethnographic inquiry. Whilst these close, personal insights from humans who spend their lives with animals can animate the idiosyncrasies of individual animal lives, research must seek to move beyond exclusively human representations and accounts of animal life, and instead work to advance understandings of the 'beastly places' of animals (Hodgetts and Lorimer, 2015).

A key aim of this thesis is to recognise the agency of pigs in co-constructing multispecies entanglements, despite ongoing power struggles that manifest through human exceptionalism. This contributes to broader debates surrounding the violent manifestations of capitalist systems in animal lives and deaths but also explores how pigs may disrupt their societal placings. This is a novel way of approaching the farmed animal in the literature and contributes to the calls for radical politics that shift the boundaries between human and animal within critical animal studies (White, 2015). A key challenge in developing these methodologies is finding ways to account for animal agency in produced narratives. Methodologies must seek to overcome human-animal binaries that position humans as superior knowledge creators, as this maintains the political as a distinctly human space. Animals must instead be considered lively, political subjects and respected as co-creators of knowledge in order to open up new alternatives for ethical engagement with the nonhuman. Nevertheless, anthropocentrism is difficult, if not impossible, to overcome in the absence of a shared spoken language between humans and animals (Buller, 2015). Other ways of communication must be forged, often requiring an embodied approach to research that reflects on the researcher's own positionality, emotions and reactions to being with animals. Researchers are increasingly finding novel ways of intimately relating and attuning to animal subjects in the process of 'becoming with' (Haraway, 2008, Despret, 2004). This cognizance of transformative interactions between humans and nonhumans facilitates response-able encounters, where the formation of shared meanings in turn creates space for a capacity to respond based on tacit knowledge and embodied communication (Peltola and Heikkilä, 2015, Brown and Dilley, 2012). Approaching affect through this framework of response-ability alerts us to the contingent nature of emotions, responsibility, ethics and political commitment to nonhuman others. Similarly, the concept of attunement is used to conceptualise how multispecies interactions can facilitate situated knowledges and identities (Despret, 2004). Understanding the performances of care for animals and the relationships that are entangled in this provides not only an opportunity to explore how humans learn affective responses to animal needs but also how complex, messy and often challenging human-animal relations unfold in specific socio-political contexts (Greenhough and Roe, 2019). Such methods reject human-animal binaries that position humans as

superior makers of knowledge and instead aim to account for animal agency. This attention to animals extends the political from the human subject and opens up new ways of politically engaging with the nonhuman world (Castree, 2003). Methodologically, this requires going beyond the stories told about animals by humans and finding novel ways of incorporating animal voices into the research process.

Anthropocentrism is difficult to overcome given the absence of a shared language with our animal participants. Despite this, ways of harnessing embodied experiences and knowledge from our shared worlds with animals offer some way out (Buller, 2015). The inherent inability to fully understand animal life necessitates a constant reflection on the power hierarchies between animals and the humans they share worlds with. Kathryn Gillespie (2019) reflects on teaching multispecies ethnography at a sanctuary for pigs to highlight how doing research with animals becomes a politicised practice in itself. The stories that are told about animals are contingent on the experiences and positionality of the researcher. Students were encouraged to consider their previous interactions with and perspectives of pigs, as well as to critically reflect on the challenges they faced in portraying the story of the pig. In many ways, the intimacies students developed with the pigs at the sanctuary forced them to relearn what they thought they knew about pigs, causing reflection on their ethical entanglements with animals in other aspects of their lives, such as eating. Thus, responding to animal agency is a reflective and transformative process for the multispecies ethnographer.

4.1.1 A Multi-Sited, Multi-Species Story

Whilst traditional ethnography would suggest a sustained engagement with a particular group or community to gain a privileged 'insider' status (Crang, 2002), multi-sited ethnography follows particular social phenomena through different sites (Coleman and von Hellermann, 2011). Whilst this approach to studying social and cultural experiences has been critiqued for being unable to create the intense depth and 'thick description' of a locale that Geertz (1973) advocates for, Falzon (2009) describes a multi-sited approach as more 'holistically inclined'. Recognising the limits of multi-sited ethnography as being unable to achieve the same level of profound insight into one field site and its inhabitants as traditional ethnography, I argue it instead has the potential to generate depth in understanding how phenomena (in this case, affective human-pig encounters and identities) transgress borders and take on new forms in different spatial contexts.

Multi-sited ethnographers adopt the approach of following their study agents through different sites, or visiting multiple sites within a given context, such as pet-keeping (Fox, 2006). This research takes a different approach. Rather than following individual animals through spaces, my research intended to trace the experiences of human-pig entanglements across different spaces of encounter. Thus, a multi-sited approach was demanded by the nature of the research. This allows my research to build up a story of pigs and humans across space, by following the emergent multispecies encounters and their contingent social and ethical terrains.

Following Giraud's (2019) ethics of exclusion as discussed in Chapter 3, the multi-sited approach I employ understands that in a singular context, identifying possibilities for flourishing may be necessarily limited by the socio-materialities specific to that context. Further, I contend that it is important to consider what knowledges emerge when attention is paid to unusual and heterotopic multispecies landscapes. The research seeks to tell the story of the pig through various individual pigs, exploring the different spaces they occupy, the different lives they lead, their unique histories, relationships with one another, and relationships with other humans. Centrally, I seek to explore how affect cuts across spaces through the emergent stories of pigs and humans. This aims to identify and build upon knowledges that do not solely emerge from the echo chamber of assemblages of agents within a singular space of human-animal interaction. In this case, it may be inappropriate to base assumptions on furthering flourishing for farmed animal species on empirical work gained from engaging with individuals at one single site of analysis, as this excludes voices of other interest groups that may bring alternative knowledges to the fore which have previously been dismissed. Thus, a multi-sited approach can work to pick apart hierarchies of expertise and knowledge. I now outline the research design employed and provide justification for the spaces of human-pig encounters used as field sites.

4.2 Data Collection

This research employed a multispecies ethnography alongside qualitative interviews to explore the nuances of human-pig entanglements across space. These settings include people's homes, animal research labs, and spaces of pig rescue. These contact sites were chosen as they offer diverse examples of affective human-pig entanglements.

A multi-sited, multispecies ethnography involved active participation and observation within one animal sanctuary across four days and two animal research facilities, one of which was visited for five days, and the other one day. Additionally, a one-day observational visit was

conducted in a participant's home, where they cohabited with two pet pigs. Incorporating ethnography into the research design was critical to exploring bodily interactions between humans and animals in the proposed field sites and required sensitivity to both human and animal experiences. Qualitative interviews were also conducted alongside ethnography with pig caregivers. Interviews are employed as perhaps the most common qualitative research method across the social sciences due to the ability to obtain insight into the complexity of sociality (Dowling et al., 2016). To capture social processes and experiences of human-pig relationships, it is necessary to talk with people who are directly involved. Through interviews, discussions of attitudes, emotions and experiences in great depth are facilitated (McDowell, 2010). They also allow researchers to ask follow-up questions or for clarification from participants, which a survey would not allow. I chose to adopt a semi-structured approach, using an interview guide when conversing with participants (Appendix A). This allowed topics of interest to be defined beforehand and was designed to elicit information which related most strongly to the themes of the research, yet the flexibility of a semi-structured approach allowed elaboration and further probing into certain topics.

Interviewing human subjects in this research context, aimed at decentring the human perspective, may seem paradoxical. Yet, the conditions for pig lives are largely created by the human party in these relationships. Therefore, this method sought to elucidate how animal care persons viewed and practiced their relationships with pigs, as well as how they constructed animal identities. Interviewing can thus tell us more about the life of an animal, however, to mitigate the risk of producing an overly anthropomorphised, human-centric account, interviews are often used concordantly with other methods such as ethnography (Seymour and Wolch, 2010).

In total, 35 interviews were conducted with a diverse range of participants, including animal technicians from two UK animal research facilities, pet pig keepers, staff and volunteers from animal rescue/sanctuaries, and a pet pig breeder (Appendix B). These distinct groups were chosen based on their varying experiences with pigs across different spatial contexts, offering unique perspectives on human-pig relationships.

Interviewing requires the researcher to establish a rapport with participants. To do this, I spoke with prospective participants prior to interviews about my research. This allowed participants to ask any questions and for us to get to know each other in a casual conversation (Baxter and Eyles, 2004). Interviews also require great attention to detail when crafting questions and navigating the conversation, ensuring questions are clearly understood and that the interview stays on topic, whilst also keeping participants engaged. I

encouraged all participants to ask for clarification if unsure about questions and aimed to 'go with the flow' of conversation to keep the topic of interest to the participant, whilst steering back to the interview guide where possible. Where possible, interviews have been conducted in person during ethnographic research. At the sanctuary, walking interviews proved to be useful in encouraging participants to share stories about their relationships with individual pigs. Whilst the walking interview was not used extensively, it proved useful in two interviews in allowing participants to connect with the material environment of the pig sanctuary.

Within these spaces, the research is attentive to the affective geographies emerging from human and nonhuman bodies and how these influence the socio-material infrastructures that encompass human-pig entanglements. Inspired and motivated by scholars approaching their multispecies field sites with a framing sensitive to shared movements and affect, I focused on bodily engagements with the world in my own field sites. I questioned how my own body moved through the field and what thoughts, emotions, and senses I experienced as a result of these physical engagements with the material world. I also questioned how the bodies of the humans and nonhumans I interacted with may experience their worlds. As Deleuze (1997, p.124) explains, "the mind begins by coldly and curiously regarding what the body does, it is first of all a witness, that is, it experiences for itself affects that are not simply effects of the body".

To further bring a critical perspective to this discussion, I aim to decentre human-animal relations and bring greater attention to pig experience through ethnographic vignettes that bring the animal into focus, as stories can be used to portray non-representational and embodied geographies of social life (Cameron, 2012). The stories told in the latter chapters of this thesis will draw attention to the porous boundaries of human-animal identities and highlight the obscured tensions and negative geographies that sit alongside interspecies relationships. They not only describe these relations but also challenge and (re)shape conventional notions of what it means to be human or pig.

As I have mentioned, representation is a key issue for multispecies ethnographers. I could not speak directly with the pigs involved in my research and had no real way of knowing their true thoughts and feelings. I recognised this as a limitation of being human but did not intend to dismiss it as an inevitability. Instead, I immersed myself in animal science literature on pigs, their cognition and behaviour. Whilst this does not make me an expert, I intended to use this knowledge combined with an openness to forming reciprocal relationships with the animals I encountered. By doing so, I hoped to position myself in a more credible position to attune to pigs. As well as this, it is important to note how my positionality may create a

uniquely situated insight into human-pig relationships (Rose, 1997) and aimed to be reflexive on how my positionality may have influenced the ways in which I related to the pigs I met and how I interpreted their agency. This process of critical reflection and empathetic engagement aimed to enhance my methodology, allowing for a more comprehensive understanding of the complex dynamics at play within human-pig relationships and the ethical implications they entail.

My veganism undoubtedly influenced my interest in pursuing this project and gave me a unique lens through which to study pigs. This aspect of my lifestyle both hampers and aids my research in different ways. Whilst I was not initially open about my veganism to participants, I made no effort to hide it if asked. When speaking to vegan participants, veganism frequently came up in conversation and I would divulge that I was also vegan. This often aided the comfortability of vegan and vegetarian participants during the interview process (Oliver, 2021). In some cases, it changed the dynamic of the conversation where participants appeared to be put at ease through the realisation that they were speaking to someone with similar views. This privileged status advanced my credibility as a researcher to the vegan and vegetarian participants (who were mostly in the pet keeper or rescue/sanctuary categories), as they recognised our shared similar views on animal ethics and trusted me to do 'good' with the information they provided. However, I chose to remain silent about my veganism when it was not talked about by the participant. This intended to avoid any potential discomfort and to discourage participants from potentially adapting their answers to be seen to have similar beliefs.

Field notes were used to record observations, conversations, and researcher thoughts. As such, they became part of the research process (Wolfinger, 2002). I chose to use a small notebook to jot down my notes briefly whilst in the field. These brief notes generally contained keywords and short descriptions, used to create longer in-depth narratives after each day at the field site. I also used audio recordings if I had more extensive thoughts that I wanted to reflect on later and took photos and some videos to prompt my memory when writing up notes. I was also aware of the power of images in capturing the 'beastly worlds' of animals by bringing their movements and expressions into the foreground of focus (Bear et al., 2017). Taking photos was not permitted in most areas of the research facilities, prompting greater reflection on the movements and liveliness of animals in written field notes to compensate for this lack. These field notes are critical in producing a meaningful account of the ethnographic experience. Connecting the researcher, field, and audience in what Mahadevan (2012) terms the 'ethnographic triangle' is a challenge for ethnographic

writing and should allow the audience to feel involved in the stories of the field and give them a greater understanding of the experiences of the researcher.

4.2.1 Ethics

Ethical approval was granted for this research prior to data collection through the University of Southampton's ethics committee (ERGO number 62629). This required the submission of several documents including posters that would be used to recruit participants and interview guides. Anonymity was provided to all human participants of this research through the use of pseudonyms and the removal of identifiable information from the research record. Names of sites visited have also been removed.

Conducting research involving nonhuman animals introduces a complex ethical landscape, revealing the inherent anthropocentrism in academic ethical practices. Whilst the use of animals in experimental research is heavily governed and subject to strict ethical guidelines, I found no guidance for interacting with the pigs I would meet during the course of my research. Throughout my ethical approval application process, I was asked if my research would involve interaction with vulnerable individuals, including individuals who do not have the capacity to give free and informed consent for any reason. Animals cannot provide informed consent or articulate their preferences regarding participation in research. There was no option to state that animals might fall into this category. This raises fundamental questions about how we should approach and interact with the nonhuman beings who play central roles in our research. Anthropomorphic representations and unequal power relations between humans and animals are difficult to navigate in multispecies research practice. As Lori Brown comments, the transformations we undergo in the process of 'becoming with' animals do not result in exclusively positive ethical outcomes (Brown, 2007). In addition to residues of anthropocentrism present in multispecies ethnography work, the field has faced critique for its perceived reluctance to engage critically with animal rights issues, labelled as "too academic to be truly political" (Kopnina, 2017., p.349). There are calls for critical animal studies to draw attention to hierarchies of power and knowledge which produce often violent consequences for animals (Taylor and Twine, 2014). Sensitive to these critiques and concerns, this research aims to explore options available for multispecies scholars in building this way of researching and thinking with animals, which currently presents a methodological gap in animal studies research.

In the absence of official ethical guidance, this research drew inspiration from the work of van Patter and Blattner (2020), who argue for respect, justice, and reflexivity as key elements

of any ethical framework in research with animals. They discuss beneficence as a facet of this, which should ensure that animals receive some benefit from the research they are involved in. This perspective provided valuable insights into shaping the ethical considerations for this study. For instance, I was conscious of creating an interaction that was gratifying in the short-term for the pigs I met. This required approaching them with respect, allowing them to inspect me if they would like, and ensuring they were comfortable with interacting with me. Whilst many of the pigs I met showed interest in being petted and socialising with me, others preferred to be left alone, indicated perhaps in their dismissal of my presence or visible agitation when approached. For these animals, their desires to not interact were also respected. In some circumstances, creating an enjoyable interaction with an animal is not possible. Therefore, the research encourages reciprocity by identifying ways in which these animals might benefit in the long term by theorising new approaches to their care. I also consider the animals I have met and gained insight from during the research as co-creators of this knowledge. Whilst this has the potential to benefit animal life, it does little to challenge the specific contexts that permit animal suffering (Taylor and Twine, 2014). The chosen methodology thus actively engages with and acknowledges the agency and wellbeing of the animals, thus contributing to a more comprehensive and ethically grounded understanding of human-pig relationships.

I will now outline how this research took place in practice and provide rationales for selecting and engaging with each of the chosen field sites, shedding light on the distinct challenges and insights they offered.

4.2.2 The Animal Research Laboratory

The animal research laboratory was chosen as a key site to explore care-ful human-pig entanglements. Pigs are used in scientific research on infectious diseases, vaccines, transplantations, and pharmacology, among many other areas. This research has implications for farmed animal health and medicine, as well as translational impacts for human patients. As outlined in Chapter 2, exploring the care of research animals delivered by highly skilled staff can highlight ways of knowing pigs that could also be extended to advance normative understandings of the pig. Ethnographic work is uniquely positioned to recognise tacit knowledges at work in human-animal relationships in animal research by working closely with animal technicians whose voices are not represented in archival records (Davies et al., 2020).

The knowledge that emerges through entanglements of humans and pigs in the animal laboratory has far-reaching impacts that cut across the socio-spatial contexts of interest in this study. Little research attends specifically to pigs in animal research, with the exception of work by Mette Svendsen exploring the role of the pig in biomedical research in Denmark (Svendsen, 2022), and Vibeke Pihl's (2017) work on pig research biographies, as explored in section 2.2.1. However, the pig as a laboratory animal can tell us more about the construction of the pig as well as provide a unique opportunity to explore how multispecies human-pig entanglements emerge within tensions between death, purposeful killing, science, and care.

Two animal research facilities were visited over the course of this research. The first was a five day ethnographic visit to an animal research facility which involved shadowing ATs during their day-to-day roles and helping with caring for pigs. It also allowed me to observe regulated procedures (such as blood sampling, inoculating and culling) and to interview staff. A second research facility was also visited, where caretaking activities between staff and pigs were observed and staff were interviewed over one day.

Animal research in the UK rests on a historical backdrop of secrecy and division of public opinion. Recent government initiatives have aimed to introduce greater transparency to rebuild public trust (Cressey, 2014), yet I was acutely aware that research facilities may be apprehensive about my proposed visit. I contacted animal research facilities through existing mutual contacts, which facilitated access. Early on, I engaged with key gatekeepers, such as facility managers, via video calls to outline to goals of my research and have candid discussions about what data I would collect, and what I would do with the data. Prior to my visits, I distributed participant information sheets and recruitment flyers (Appendix C.1) to both facilities, allowing potential participants to familiarise themselves with the project and formulate any questions. To further foster understanding and rapport, I conducted brief presentations via video call for staff members, including animal technicians and researchers at the facilities. These sessions clarified what would be involved for interview participants and what I intended to achieve from observing their work. Notably, they played a pivotal role in building trust between myself and participants and provided a platform for addressing any inquiries.

Given the higher participation rates of women in animal advocacy and their heightened concern for animal welfare (Randler, 2021, Munro, 2001), I was conscious of potential gender dynamics in entering the controversial world of animal research. To mitigate any potential tensions, I presented myself as inquisitive and non-judgmental during interactions with

participants. This approach required me to be attuned to how my own positionality might influence my perceptions of the field sites and the human-pig interactions within them.

Reconciling with the impossibility of separating my own values and moral attitudes from my research (Rose, 1997), I attempted to navigate the conflicting priorities of doing research and upholding my own personal views. One instance during my fieldwork illustrates the challenges of balancing these tensions. During observation of culling pigs, a technician asked me to assist in identifying a suitable vein in the ear of an anesthetised pig. This step was crucial in administering the drugs that would cause the pig's death. I diligently applied pressure to the ear of the pig with my fingers to make the veins more visible. This experience presented a moral dilemma. Here, I found myself in the unexpected position of actively participating in the euthanasia of a pig, a stark contrast to the role I initially envisioned in my research—to advocate for the wellbeing of these animals. This unsettling moment served as a poignant reminder of the intricate ethical terrain I had entered. The discomfort I felt highlighted the moral complexities of doing animal research. Despite this, the experience led to a more nuanced understanding of the ethical considerations surrounding human-animal interactions. Engaging in conversations with facility staff, I sought to comprehend how they grappled with similar feelings and gradually came to terms with the ethical dilemmas they faced on a daily basis.

4.2.3 The Pig Sanctuary

Research has highlighted how farmed animal sanctuaries may provide space to ask how animals might choose to live their lives when allowed greater agency (Donaldson and Kymlicka, 2015, Rosenfeld, 2023). By creating these spaces for farmed animals, humans may be better placed to interpret their desires, allowing some level of nonhuman participation in decision-making. Whilst these spaces could allow greater species-specific flourishing, there is the possibility for power imbalances to emerge, as a select few individuals, often those with relevant skills and expertise, make decisions on behalf of animals, creating hierarchical structures that are difficult to challenge (Giraud, 2019). Nevertheless, this context allows us to ask questions about what animal desires might be in terms of their social lives, activity preferences, and so on.

My own extensive internet search using Google and Facebook identified at least 70 animal rescue and sanctuary organisations in the UK housing pigs as of February 2022. I argue that despite the relatively small numbers of farm animal residents in these spaces compared to the 4.2 million pigs on agricultural holdings in the UK in December 2021 (DEFRA, 2021), these

populations could provide critical insights into the materialities that are foreclosed for the majority of livestock animals and how these animals may be known when their bodies are de-commodified from the agri-business context. The limited scholarship in this area shows potential for these spaces to highlight how interspecies cohabitation and flourishing could be possible, yet more empirical work is needed in these spaces.

Early in the planning stages of this research, I reached out to the founder of a pig sanctuary in the UK who agreed to an informal conversation over video call. During this discussion, we spoke about the 'pet pig problem', as well as health and welfare issues that pigs face. She expressed interest in facilitating my research further, as she felt little attention was paid to pig rescue in policy and research. From this, she invited me to visit and stay at the sanctuary to aid my research. In November 2021, I volunteered at the sanctuary over a consecutive four-day period This ethnography involved actively participating in caring for pigs, helping other volunteers, observing human-pig interactions and interviewing volunteers and staff.

Understanding my own positionality as someone deeply interested in animal welfare and ethical treatment of animals was essential in approaching the people involved in pig rescue. It allowed me to bridge the gap between academia and on-the-ground practice, fostering cooperation. This positionality as an empathetic researcher with shared concerns, was instrumental in gaining access and building relationships within these unique research spaces.

4.2.4 The Home

The case of pet pigs provides a unique case study to understand how a farmed animal, used as a food product by humans, can be welcomed into other spaces where they may be considered 'out of place', such as family homes as a valued companion. Living alongside a pet in the home facilitates close relationships that involve daily negotiation of the divisions between human and animal (Fox and Walsh, 2011). It is through these understandings and performances of care that animals can become 'part of the family' (Charles, 2016) and recipients of love (Nast, 2006, Power, 2008). Within these relationships, the borders of human and animal become blurry as companion animals take on forms of personhood, whilst retaining their status as property (Fox, 2006).

Observing pig-human relationships in the home took a different approach to the other sites of interest in this research. In January 2022, I joined a Facebook group for pet pig keepers in the UK to recruit participants. Members of the group frequently posted pictures of their pets and their enclosures, often accompanied by requests for advice or stories about their life with a

pig companion. I posted a participant recruitment poster in this social media group, inviting interested members to contact me (Appendix C.2). These individuals were then sent a copy of a participant information sheet to inform their decision to participate.

Over the course of the research, I maintained contact with some participants and was able to get updates on their pigs and hear more about their shared lives. One participant invited me to visit her two pigs in her home. Whilst I had not planned to do any observations in homes with pet pigs beyond the limited insight that social media provided, I took the opportunity and spent an afternoon with one participant in her home. This allowed me to meet her pigs for myself, see the spaces they live in, and observe part of their daily routines which proved to add richness to my account of human-companion pig relationships.

All interviews with pet pig keepers, excluding the one that took place in the participants' home, were conducted over video or phone call. Whilst being unable to physically observe most keepers with their pigs, often their pig was present during the calls. Many participants took me on a virtual tour of their homes, showing me their pig's living spaces. Whilst a limited view, it gave some insight into the co-living arrangements of humans and pigs.

Some pet pig keepers, perhaps assuming that my research implied expertise in pig care, looked to me for answers to their questions. At times, they sought guidance on legal matters related to pet pigs, and inadvertently shared instances of improper practices, such as feeding kitchen scraps to their pigs. I was often left grappling with a sense of responsibility, as I lacked the capacity to provide definitive answers to their questions and was burdened by their confessions of potentially harmful actions toward their pigs. These encounters not only underscored the misunderstandings prevalent among pet pig keepers but also highlighted the challenges of finding satisfactory solutions in a context where expertise is often limited.

4.3 Data Analysis

All interviews were recorded and transcribed. I transcribed all interviews, allowing myself to gain some familiarity with the data and for initial thoughts to emerge. Along with field notes, all interview transcripts were inputted to qualitative data analysis software NVivo 11, where they were then coded to identify key themes and patterns across these themes.

An inductive approach allows meaning to emerge from the data and participants, rather than researcher-imposed categories (Thomas, 2003). However, the theoretical framework and aims of the research undeniably impact the codes created. Coding data into neat categories is a complex task given the multiplicity of meaning. Determining recurrent themes within

qualitative data is a nuanced task, facilitated when ethnography was conducted alongside interviews due to the ability of the researcher to spend extended time with participants and reflect on topics with the participant outside of the interview setting. In instances where interviews and ethnography were not conducted concurrently, such as interviews with pet pig keepers and many pig rescue spokespersons, traditional markers - such as the frequency of certain mentions - became essential tools for identifying salient themes which may not capture the richness and messiness of relations in practice (MacKian, 2009).

Srivastava and Hopwood (2009. p.77) contend that "reflexive iteration is at the heart of visiting and revisiting the data and connecting them with emerging insights, progressively leading to refined focus and understandings". This iterative approach contributed to a refined focus and deeper understanding of the data. Consequently, the generated codes served as guideposts for key thematic discussions within this research. It is important to note that these codes were not considered as a 'final output' of the analysis but rather as dynamic tools that evolve alongside the research process. In line with the iterative nature of qualitative analysis, the codes generated formed a foundation for subsequent rounds of analysis, further refining and enriching the interpretations as the research progressed.

4.4 Limitations

There are some key limitations to this methodological approach that must be considered before introducing the empirical material. The main limitation is the time constraints imposed on data collection. The time allocated for this project was three years. This combined with concerns over travel due to the COVID-19 pandemic meant that time spent 'in the field' undertaking ethnographic research was therefore limited. Despite this, the time spent in animal research laboratories and a pig sanctuary undoubtedly enriched the empirical data gathered, allowing me the opportunity to explore embodied practices of human-pig relationships. The ethnography undertaken for this research does not claims to uncover definite truths about the pig-human worlds, but as Vannini (2015. p.319) notes "good ethnography is meant to 'show' and not to 'know'". I hope that throughout the following chapters, this sentiment is reflected.

In addition to these temporal limitations, the participant recruitment for interviews is subjected to self-selection bias. For instance, animal technicians with a greater interest in animal welfare may have been more likely to respond to a call for participants in a study relating to pig care than their more detached colleagues. Similarly, pet pig keepers were recruited from a Facebook group related to pet pig care. As such, these individuals may be

more invested in pig care than other pet pig keepers. Another limitation relates to the unbalanced participant categories. Only one pet pig breeder was able to be interviewed for this research. Reflecting this, the empirical chapters of this thesis use this underrepresented group purely as supplementary material to add richness to other accounts relating to pet pigs.

The following chapters provide deep insights into the different sites of human-pig encounters I explored. In these spaces, pigs take on new roles for their species as they leave the farm and disrupt their normative placings. The chapters consider how pigs and humans are uniquely placed within socio-spatial entanglements, with their own contingent (un)ethical potentials. These spaces, outside of the farm where pigs are typically viewed to 'belong', represent contexts where pigs take on new identities for their species. In the final conclusion, I bring together these cases to consider how pig identity is reconfigured across space and the lessons that can be learned for understanding multispecies entanglements.

Chapter 5 Becoming Research Pig: Transient Identities and Affective Relations in the Laboratory

5.1 Introduction

The multiple geographies of the pig opens up multiple ways of knowing and engaging with the pig. This guiding philosophy of the thesis is first explored in this chapter in the context of animal research. Animal research laboratories are complex, affective, multispecies landscapes. Within this space, this chapter delves into the affective geographies of human-pig relationships. Here, pigs become active agents in proximate, intimate relations with their human caretakers. The laboratory, with its unique socio-cultural and ethical dynamics, offers a distinct context for understanding the emotional and affective experiences of both pigs and humans in animal research.

Drawing on ethnographic research and interviews conducted with ten animal technicians (ATs) at two UK animal research facilities, this chapter interrogates the circulation, co-existence, and conflict of affect in these relations. In doing so, it brings to the fore the complex dynamics of caring practices, the ever-evolving identities of research pigs, and the ethical dilemmas inherent in purposeful pig harm and culling. Centrally, it underscores how the conditions surrounding affective relations between pigs and humans in the laboratory become practices of worlding, paving potential pathways toward alternative futures for research pigs, in line with Deleuze's (1988) notion of affect being both productive and inhibitive.

Animal research requires the animal body to be transformed into meaningful scientific data, which necessitates different ways of knowing 'the animal' at various points. Lynch (1988) argues this often requires emotional distancing from the animal by staff. However, hearing the under-represented voices of ATs who provide day-to-day care for animals can reveal the persistence of affective human-animal relationships in the laboratory, despite the transient identities of research animals and the omnipresence of deliberate killing and harm. As highlighted in the literature review (Section 2.2.1), attention to the practices and performances of care alerts us to the ethico-political potentials in the laboratory (Greenhough and Roe, 2011). The dualism between care and control is a prevalent theme in animal research. While care is often seen as an ethical imperative, it can also be used as a

means of controlling and manipulating animals. Within this context, harm, care, and killing not only sit uncomfortably alongside one another but often work together as spatially co-constituted practices (Holmberg, 2011). Navigating these practices creates unique ethical challenges, particularly for ATs (Roe and Greenhough, 2021). This chapter recognises these tensions and reveals how pigs are uniquely positioned within this complex landscape.

Firstly, the chapter argues that the nonhuman charisma of the pig plays a central role in shaping the affective geographies of human-pig relationships and carries both benefits and harms that bring to the fore the dichotomy of care and control in the context of animal research. On one hand, pig charisma, including their gregarious nature and homologous human and pig traits, engenders a distinctive interspecies intimacy between animal technicians and pigs, motivating a commitment to 'meaningful care'. On the other hand, the same traits that promote this intimacy are manipulated to perpetuate conditions of control over pigs used in research. In this space, elements of affective kinship with pigs are practiced alongside the inherent othering of laboratory animals (Sharp, 2019). This is significant, as the use of pigs in research is often morally and ethically justified through discourse that hierarchically positions species based on their assumed personhood and capacity to suffer. For instance, pigs are often positioned lower on scales of moral concern than dogs (Caviola et al., 2019) and primates (Carr, 2022). The chapter then considers how the multiplicity of research pig identities leads to different ways of knowing pigs, creating tensions between researchers, pigs, and technicians surrounding issues including pig welfare and killing. The chapter culminates by reflecting on how these insights into human-pig affective relations may be used to carve out alternative worlds and futures for research pigs.

This analysis provides needed insight into the emotional dimensions of animal research that are often overlooked in public view (Roe and Greenhough, 2021) and reveals the hidden experiences of pigs that are typically absent from public discourse on animal research. By revealing the complexities of human-pig relationships in the laboratory, including the emotional multispecies bonds that are forged alongside the inherent othering of laboratory animals, the findings of this chapter emphasise the need for ethical frameworks to recognise and respect the existence of affective relations between animals and technicians. This recognition raises awareness of the ethical dilemmas and responsibilities in these relationships, prompting critical reflection on how to responsibly navigate them alongside the pursuit of scientific progress.

Beyond the laboratory, the chapter contributes to broader debates in animal geography, opening up new avenues for inquiry into the ethical and emotional dimensions of human-

animal relations in various contexts. The themes of affective, interspecies intimacy and the moral complexities involved in laboratory settings contribute to broader discussions on ethics, agency, and care in animal geography, and prompt critical reflection on how to navigate human-animal relationships across diverse geographies and settings. Further, it provides a unique lens for examining the spatial and relational dynamics of human-animal interactions, challenging traditional dichotomies of nature/culture and human/animal.

5.2 The Research Context

Two animal research facilities were visited and used to recruit participants for this research. Both facilities housed multiple species, including several farmed animal species. The type of research activities undertaken varied between facilities, with one facility (A) mostly focussed on veterinary science research, and the other (B) using pigs primarily as models for human health. At the time of my visit, active studies at Facility A sought to understand pathologies of common diseases impacting farmed animals including Foot and Mouth Disease (FMD) and Porcine Coronavirus (PRCV). Typically, pigs were purchased from a local farmer and brought to the facility at approximately 6 weeks old, unless study requirements stipulated otherwise. A group of pigs not enrolled on active studies and instead used for clean blood supply were also kept at Facility A on a longer-term basis, often for several years. At the time of my visit, the facility housed four female clean blood supply pigs as well as several groups of piglets enrolled on active studies. Facility B had two groups of pigs at the time of my visit. One group of commercial breed pigs were used in a cardiology study. The second group were genetically altered minipigs, purchased from a breeder in Denmark and used in kidney disease research.

5.3 Pig Charisma in the Laboratory

The role of emotion and affect in animal research has been historically overlooked in the literature (Davies et al., 2016). Similarly, the nonhuman charisma of research animals is often neglected in accounts of human-animal relations in the laboratory. The identification of this gap in the literature has the potential to make a significant contribution to the understanding of the experiences of pigs and ATs involved in research, and how their active participation as affective agents may carry implications for human-animal wellbeing in the laboratory environment. In this section, I discuss how pig charisma is implicated in affective AT-pig relationships, simultaneously motivating both their care and control.

> I am invited to accompany Kimberly on a tour of Facility B to meet the pigs. We enter the first room where I am given a paper boilersuit to put over my clothes and a pair

> of disinfected wellington boots. Kimberly tells me that she greets the pigs vocally every time she goes in, as they can be easily startled. We go into the pens through the large metal door, and I see three pigs leap up onto their gate with their front legs. Kimberly greets them with an upward inflection in her voice, which seems to evoke an enthusiastic response. The pigs make short grunting noises, I am told this means they are happy to see us. As they sniff at me over the gate, I sense their curiosity and energy. Kimberly pushes open the gate, gesturing the trio backwards into the pen. They are excitable and Kimberly talks to them, conveying a sense of playfulness and warmth in her voice. She introduces them as Penelope, Nora, and Macy. The pigs' excitement and Kimberly's fondness for them are contagious, and I am left with an appreciation for the charm and personality of the three pigs.
>
> **Excerpt from field notes, shadowing Kimberly - Facility B.**

Lorimer (2007) describes the affective experience triggered in embodied interactions with the nonhuman as corporeal charisma. Such charisma invites novel material-affective relations with the animal, as it opens up opportunities for humans and animals to become increasingly attuned to each other. In the facilities visited for this research, pig subjectivities and agencies were impossible for technicians to ignore, as many developed ‘favourites’ based on the intricacies of individual pig personalities. ATs frequently expressed a preference for working with pigs over other species, particularly rodents and other farmed animals such as sheep. Pigs were perceived as more approachable and easier to form bonds with.

> “[it surprised me] how friendly they are really, you don’t really realise that unless you work with them”.
>
> **Interview with Luke, AT - Facility A.**
>
> “Originally you think “it’s a pig, what can a pig do?” but actually they are quite affectionate animals… the more you work with them the more you know them. You know the animals, and they are quite affectionate. You know they’ve got their own characters; some are playful, some are a bit more laid back”.
>
> **Interview with Nicola, AT - Facility B.**

The majority of ATs had no previous experience working with pigs before being assigned to their current role and did not previously have strong feelings towards pigs, positive or negative. Entering into new relations with pigs and encountering their displays of amiability opened up new ways of thinking about pigs and their agencies for several ATs. The distance

between pigs and people that permeates much of society is reduced in this space. Rather than being raised for meat and other products away from human view, the research laboratory opens technicians up to relating to pigs differently through creating cross-species bonds, and even friendships. In moving from a farm setting to the laboratory, ATs often viewed pigs as decoupled from their potential as food, where they became individuals with distinct personalities and behaviours.

> "I don't call them sausages because that's not very nice! My friend goes 'Oh they're little sausages!' and I say, 'They're not sausages!'"
>
> **Interview with Helen, AT – Facility A.**

I found this comment intriguing, as Helen had previously told me she ate meat, including pork products. The pigs she cared for in the laboratory were Landrace pigs, a commercial breed purchased from a farm that also supplied leading UK supermarkets. Nevertheless, the individual pigs she cared for were viewed through an entirely different lens. Helen confesses to me that she spends more time with the pigs than other ATs, often giving them pet names and calling them her "piggy children", despite feeling like colleagues who prefer to maintain an emotional distance from the animals in their care may perceive this as irresponsible. Helens' reluctance to think of these pigs as meat, and instead view them as pet-like figures in her life highlights how proximate, intimate relations transform pig identity. Through interspecies intimacy, Helen re-categorises these pigs based on their personhood and emotional capacities, rather than their utility as food. It would be wrong to eat these particular pigs, as they have become meaningfully individualised to her.

Building meaningful connections with technicians was a relational process, as much driven by pig agencies as human agencies. Although pigs are known to be anatomically and physiologically similar to humans, day-to-day interactions with the pig foregrounded another mutual affinity; the ability to understand and communicate with humans in effective ways. This reciprocal nature of communication with pigs was highly valued, as ATs felt they could 'get a lot back' from the pigs in their care. These characteristics intersected to create opportunities for a unique bond between ATs and pigs to develop.

> "They're so inquisitive, [pigs] will come over to you and get in your face a bit… they are very interactive. Sheep and cows… they do stay away from people more, I guess they see you as a threat rather than being inquisitive…. I find pigs are more interested in people than other animals are."
>
> **Interview with Clara, AT - Facility A.**

During ethnographic work at facilities, it was rare to hear stories of a bad-tempered pig. Instead, I heard countless stories of individual pigs that were particularly amiable. In Facility A, we spent a lot of time cooing over and playing with the small pigs during feeding times. I sat with technician Clara, and a group of piglets on a study for FMD vaccines after being told that there were a few particularly friendly pigs in one pen. Our presence seemed to excite them, and we were immediately swarmed by a few of the bolder piglets in the group. The rest hung back cautiously before coming over to investigate us. Zack, the AT who has been caring for these pigs since their arrival, peers over the door to tell us "78 loves a good belly scratch by the way". I scanned the ear tags for the number and identified her. True to his words, she approached us fearlessly, promptly rolling onto her side and relishing the attention we happily provided.

Clara would rarely initiate contact with a piglet. She would let them sniff her hand and only then would she extend it further. Despite some piglets becoming easily startled by our movement, Clara was able to win them over through patience and matching their playful energies. There were highly sociable individual pigs who sought out human proximity more than others, such as 78. For these more sociable individuals, having the opportunity to interact with humans was an enjoyable experience. Other pigs were more reserved, even anxious about getting too close to humans. I experienced this with all groups of pigs I met in both facilities. In Facility B, I sat in a minipig pen with other technicians. Whilst several would have no problems climbing into my lap, I witnessed others in the group standing back and observing, not getting too close. I wondered how human presence in the pen impacted the experiences of these pigs compared to their more outgoing counterparts. It was difficult to ignore the more inquisitive piglets who initiated contact and the presence of these playful nonhuman bodies was an enjoyable experience for all ATs interviewed.

When pigs arrive at facilities and become accustomed to their surroundings, technicians spend time petting and playing with them, accustoming the pigs to frequent handling. This daily contact allowed ATs to get to know each pig on an increasingly individualised level. Whilst many participants felt that having emotional bonds with the animals in their care may be discouraged to reduce the emotional toll or 'compassion fatigue' that ATs face (Newsome et al., 2019), the charisma of the pig was difficult to dismiss for many. Instead, engaging in affective relations with pigs was seen as an important part of doing the job of an AT well, in addition to being emotionally rewarding for both pigs and humans alike.

> "[I have] my own little ways of loving them, not a lot of people probably cuddle them and sit with them as much as I do, but I like to do that because the more they like

me, the more they're not sad. So, when they see me, they think 'friend' and not 'someone who is going to hurt me'"

Interview with Helen, AT - Facility A.

"You do get to know them, it's hard not to. I think that if you don't, it's possibly not the right job, you have to be able to love them in a sense or you wouldn't do your best to get their welfare as best you can. So, I think there is a fine line between sensible attachment and over attachment."

Interview with Sam, AT - Facility A.

Sentiments expressed in these two quotes indicate that 'loving' pigs was important in enacting good care. Nevertheless, ATs like Sam pointed out that this led to a delicate balance between allowing emotion to guide good care, and loving animals 'too much' and therefore creating an emotionally challenging environment. Such embodied interactions navigate the tensions of a 'mortal love' due to the inextricability of killing and care in the animal house (Holmberg, 2011). Whilst these emotional bonds were managed to an extent by ATs, the perceived willingness of pigs to engage with their human caregivers motivated affective relations that blur human-animal boundaries of identity, opening up new sensibilities and feelings of care towards the pig. This willingness motivates affective relations that blur the boundaries of identity between humans and animals, aligning with Lorimer's (2007) concept of corporeal nonhuman charisma. Thus, doing the role of an animal technician well involves developing and refining a response-ability towards pigs, which includes fostering relations of trust and, in some cases, friendship. Getting to know pigs in this way fostered responses based on learned tacit knowledge and embodied communication (Haraway, 2008). Such relationships are essential in the cultivation of what can be considered a 'good' laboratory pig, emphasising the intricate interplay between care, emotions, and research practices within the animal laboratory, explored in the following section.

5.4 Good Care, Good Pigs

The idea that good care leads to good science in animal research is a central pillar of the 3Rs (Davies et al., 2018). In this context, affective relations of trust and care between ATs and pigs intended to create a low-stress environment to facilitate achievement of study objectives. These connections between care and science strived to engineer the 'good'

laboratory pig; easy to handle and extract data from, a pig that did not cause problems for staff. Whilst many ATs suggested that some pigs might be naturally calmer than others, becoming the good lab pig was seen as a joint effort between pigs and ATs.

> "If the animal is left to its own natural ways, it will be a very flighty animal, hard to catch. So that's why when I'm in there I am always talking. I'm talking to them. I'm not expecting an answer from them, but I'm keeping them familiar with my voice and interactions with people so it's not a fear factor when someone comes in the room and interacts with them."
>
> **Interview with Zack, AT - Facility A.**

For Zack, an experienced AT with many years of experience in the field, gaining familiarity with the pigs was crucial to allow for a smooth study where animals co-operated with handlers. I joined him one morning to feed the FMD study pigs.

> Before we enter the pen, we must put on a paper boilersuit, gloves, and disinfected Wellington boots to adhere to the stringent biosecurity procedures set out in the study protocol. Zack rinses out the feed troughs and refills them from a bucket full of pig nuts. The piglets line up perfectly at the trough and begin eating. Zack goes behind them one by one and pats gently around their tails. He explains that they will have to have their temperature taken rectally at intervals throughout the study, so it's important that they are used to a person coming up behind them. If they are used to it, the process will be less stressful for the pigs and easier for the ATs. Most pigs did not react to Zack's touch and kept their snouts firmly in the trough. A couple of pigs were slightly startled, lifting their heads momentarily to assess the situation, before deciding that Zack posed no risk and returning to their breakfast.
>
> **Excerpt from field notes, shadowing Zack - Facility A.**

ATs were aware that socialising the animals and allowing them to become familiar with staff would create a smoother study, as pigs were less like to become overly stressed or respond negatively to staff if they had been accustomed to being handled. AT-pig trust emerged as a recurrent theme in all AT interviews, highlighting its essential role in their work with pigs. Building this trust was involved spending time in the pen with pigs, playing and interacting with them. As noted by Brajon et al. (2015), many younger pigs enjoy tactile contact with humans, who can also be perceived as potential play partners and providers of entertainment. Additionally, pigs can recognise and remember humans individually and can associate them with positive experiences (Tallet et al., 2018). Over time, pig-AT interactions

contribute to the development of trust towards humans, which, in turn, results in reduced stress levels during subsequent handling. ATs frequently spoke positively about the social nature of pigs, which they found conducive to building strong bonds with these animals.

Practices of care thus take on a role in creating the "good" lab pig - a docile animal that is easy to handle and extract data from. This is achieved through careful socialisation and building trust, allowing for the necessary control over the pigs while maintaining their wellbeing. This highlights that care and control are not just co-existing in the laboratory but are co-constitutive (Roe and Greenhough, 2021, Giraud and Hollin, 2016). This insight challenges conventional ethical discourses surrounding animal research. Traditionally, ethical considerations focus on minimising harm (control) while providing for animal welfare (care). Acknowledging the co-constitutive nature of care and control implies that ethical frameworks must reflect the nuanced complexities of human-animal relations. Further, implementing these frameworks must be a species-led endeavour. In the case of pigs, human contact can be a source of satisfaction, whereas, for other species, this may induce fear.

5.5 Navigating Care and Control with Research Pigs

In this section, I explore how research pig charisma influences the attitudes and practices of animal technicians in the laboratory. Specifically, I argue that pig charisma creates opportunities for both control and unique interspecies relationships.

The circulation of positive, constructive affects including trust and friendship between pigs and ATs translated into a sense of responsibility to provide individualised care rather than generalised care directed at a collective species level. ATs' individual knowledges of pigs also became invaluable during regulated procedures involving pigs, where they often provided practical support to the veterinary team. In Facility A, I observed as 40 of the PRCV study pigs had blood samples taken. This was done by placing the pig on their back in an 'immobilisation trough' – a V-shaped metal structure used to minimise animal movement - and taking blood from the neck. Several people were required to hold down the pig throughout the process to ensure it was carried out safely and efficiently.

> Helen is keeping an eye on the pigs who have already been sampled and notices that one pig has blood running down her leg. She asks the veterinarian, Sandy, to have a closer look. As the pig roots through the straw, Sandy approaches her from the side and attempts to wipe away the blood. Before she can get close, the pig becomes alarmed and scurries away. A few minutes later, Helen approaches the pig

from behind and Sandy follows. Helen gestures silently for her to step back so as to not alert the pig. Within seconds, Helen swiftly grabs the pig's hind leg and manages to get a firm hold on her. She holds the pig in her arms and speaks to her softly whilst retaining a tight grip. Sandy wipes the leg clean and assesses the wound. Helens' quickly executed movements were careful and precise, creating a short-lived disruption for the pig. Later, Helen reflected on the incident with me.

Excerpt from field notes, observing pig blood sampling - Facility A.

"I can get more on their level and they're more calm, so I got her, and it wasn't too stressful… I think there is a difference in how they are with me to how they are with everyone else, because… I spend more time with them, and I have my own way of making them comfortable. I feel they can recognise faces…I think I'm the favourite of all the pigs because I think I'm the best pig mummy".

Interview with Helen, AT - Facility A.

Building rapport with the pigs allowed Helen to understand how to make a calmer environment, as spending more time with the pigs and finding ways to make them comfortable can lead to a better understanding of their behaviour and needs. By fostering a sense of trust and familiarity, technicians are able to provide meaningful care that enhances the wellbeing of the pigs in their care. This kind of relationship-building is crucial for creating meaningful care for pigs and ensuring their wellbeing. These demonstrations of care-ful practices demonstrate that ATs engage in complex and emotionally rewarding tasks that involve building relationships with the animals they care for. Referring to herself as "pig mummy" reflects a sense of closeness and nurturing in the care Helen provides, a relationship that becomes crucially meaningful in easing pig stress throughout the study duration.

'Tinkering' with care (Mol et al., 2010) allowed ATs to attach meaning to day-to-day practices with pigs. In Facility B, I accompanied two ATs as they fed apple slices to the minipigs and later discussed the importance of choosing the right treat for each pig based on their preferences, especially after a procedure.

"I had a minipig here that didn't like anything. I tried apple slices, oranges, pears… he just wasn't really bothered. The only thing he would really love was banana, so I made sure that there was always banana for him to have when he came out from a procedure".

Interview with Kimberly, AT - Facility B.

Considering how an animal's individual preferences may be accommodated demonstrates a care that is responsive to pig agency. Practices such as these respond to pig charisma and thus recognise and value the individuality of pigs, an important facet of providing meaningful care that goes beyond meeting basic needs.

Paradoxically, pig charisma was also a contributing factor to the becoming of the research pig in the first instance. Pigs come to the animal research facility through multiple means. During fieldwork, the pigs I met were either commercial pigs (Landrace and Large White breeds) purchased from a local farmer, or minipigs specifically bred for research purposes and imported from Denmark.

At Facility A, the majority of the pigs came from one supplier that the facility had used for several years, a pig farmer named Marcus. I spoke with a man named Rick, who oversees the transportation of animals at the facility. Rick explained that when he drives to the farm, Marcus will often have pigs 'reserved' to go to the facility. He selects pigs that he assumes to have a calm disposition, indicating that they might be a good temperament for research. Here, the construction of the laboratory pig begins before the animal enters the facility. This informal selection process is informed partly by the nonhuman charisma of the pig (Lorimer, 2007), which becomes visible through individual demonstrations of docility and sociability. Human and pig agency within these encounters demarcates specific individuals as research animals, who leave behind their counterparts who will be slaughtered for meat in a few weeks' time. The pigs that are selected for their naturally calm dispositions are thought to cope better when faced with potential stressors that are commonplace in the laboratory, including frequent handling, restraint, injections, and blood sampling. Thus, pigs are selected who are assumed will have a higher quality of life than others who may become overly stressed in these conditions. This point of transgression from farm to laboratory serves as a cut by which certain forms of life are brought into being, and others foreclosed (Giraud, 2019). Pig charisma both on the farm and at the research facility has implications for their becoming and experience as research animal.

Pig emotional and affective charisma visibility on the farm plays a key part in this becoming. It is an easy task to point out the myriad of ways in which pig agency is entangled within the various becomings explored throughout this chapter, yet it is not enough to stop here. To do so, would be to undermine the human exertion of biopower with all its violent implications, and fall in danger of framing these becomings as examples of innocent co-productive relations. As Giraud and Hollin (2016) argue using the case of laboratory beagles, whilst

animal agency plays a role in the co-construction of knowledge, this agency is carefully sculpted to ensure animals would suit the research agenda and complete their expected participation. Such mechanisms of control are apparent in the becoming of the research pig in numerous ways beyond selection criteria.

The becoming of the research pig also requires a relationship of trust to be built between the supplier and the research facility. Occasionally, Rick will have to pick up animals from unfamiliar suppliers, who are often hesitant to begin a relationship with the animal research world.

> "They ask me what we're going to do to them, and I explain that they will get five-star treatment. I say we get the knowledge out of the animals, and then his [the farmers] animals will help other animals."
>
> **Conversation with Rick, taken from field notes – Facility A.**

Trust between the supplier and the facility is built both through reassurance that the animals will receive high-quality care, and a utilitarian discourse that constructs the animal as a potential benefit to science (Hobson-West, 2010). In this case, the scientific knowledge gained from these pigs has the potential to protect future farmed animals from disease. These socio-material (infra)structures employ animal agency and hopeful promises for future science to materialise individual pigs as research animals, changing their life trajectories.

At Facility B, the Göttingen Minipigs are purchased from a breeder in Denmark. The breed was intentionally created for biomedical research purposes by cross-breeding three breeds; the Vietnamese Potbelly, the Minnesota Minipig, and the German Landrace (Bollen and Ellegaard, 1997). The resulting Göttingen Minipig is a white dwarf breed, significantly smaller than commercial breeds. To improve traits in the breeding population, estimated breeding values (EBVs) are calculated for each individual pig that predicts the likelihood a pig will pass on desirable traits such as litter size and body weight. The temperament of pigs is also considered, with a behaviour score given to individuals based on their responses to certain situations such as handling. This intends to produce populations that will be less anxious in laboratory settings (Simianer and Kohn, 2010). The process by which pigs become research animal both exploits and engineers a charisma that enables their subsequent control.

These practices carry material inscriptions on the pig as they are continued in the research facility. A group of pigs arrive at Facility A from Marcus's farm, they are a few weeks old. The group have been purchased for a study exploring immunological responses to porcine coronavirus (PRCV), an airborne respiratory disease impacting pig herds across the globe

with the potential to cause huge economic loss (Liu and Wang, 2021). At the farm, each pig has a yellow tag pierced through their ear that shows a unique identification number. At the research facility, the other ear is pierced with a similar tag with a new identifying number to match to data in the study. They would be referred to by this number throughout their time here. These two ear tags serve as material inscriptions on the body, signalling their statuses at one point or another as property and science material. Although it is argued that numbering animals in this way strips away any meaningful, individualised identification (Mitchell, 2011) this does not prevent staff from engaging meaningfully with individual animals. When speaking with ATs in Facility A, numbers were used in place of names. “43 and 48 are such characters, they always seem to chat to me”, Ed remarks as we fill up the troughs with pig nuts one morning. At Facility B, I met pigs who instead were given names upon arrival. Naming pigs at this facility was standard practice, and ATs are tasked with deciding on a theme for the names of a particular group. Name categories included popular female names (regardless of the pigs’ sex), names of cocktails, names of cars, and names of celebrities. Although the commercial breed pigs have ear tags, minipigs instead have incisions made to their ear to create identifiable notches that are recorded against a numbering system, demarcating them as a research subject (Figure 1). Despite this, technicians and pigs engage in responsive, affective relations that carve out their own meanings.

Figure 1 Minipig with identifiable ear notches [image taken by author]

Pig emotional and affective charisma visibility, both on the farm and in the breeding facility, plays a key part in this becoming. Whilst pig agency is intertwined with these becomings, it is essential to recognise the human exercise of biopower with its attendant violent consequences to avoid presenting these becomings as innocent co-productive relationships (Giraud and Hollin, 2016). Such mechanisms of control are apparent in the becoming of the research pig in numerous ways beyond selection criteria, including mutual trust built between animal research staff and animals through training and socialising. Care is taken in the laboratory to create trust between ATs and pigs, in turn engineering a compliant research subject and contributing to the othering of pigs that permits their use in research. Care becomes intertwined with the control of pig bodies, but to conceptualise care as solely a tool for control is too narrow. This misses the genuine moments of affection and concern shared between ATs and research animals and how this is shaped by control. In the following section, I explore how the circulation of constructive affect between ATs and pigs through reciprocal communication encourages a concept of 'meaningful care' that both facilitates control over pigs but is also constrained by control.

5.6 Knowing Pigs Differently

Research pig identities become fluid and responsive to different human practices and ways of knowing the pig. As this chapter has so far shown, ATs who provide daily care for pigs understand them as individuals with visible personalities. However, this way of knowing the pig was not always shared by researchers who were detached from daily pig care.

> "There have been some instances where people who come here to do the research have said things like 'oh it's just a pig', or maybe just not treating it like we would, and things have been said. This is an animal at the end of the day, and it is losing its life for something, so it's not to be treated as if it's nothing."
>
> **Interview with Gina, AT - Facility B.**

At times, this created a lingering discomfort among ATs with the lack of value ascribed to pig life, despite killing and harm being understood as 'part of the job', necessary to create good science (Arluke and Sanders, 1996). Whilst ATs strive to practice a meaningful care that is responsive to and respectful of pig charisma, their care work in the laboratory must also align with the experimental goals. This can create a disconnection between ATs' emotional attachment to the animals and researchers. Several technicians interviewed indicated that their attachments and intimate ways of knowing pigs clashed with researchers' ways of knowing pigs that is more detached from day-to-day care, as discussed in an interview with AT, Clara (Facility A).

> Clara: A lot of the time I find that a lot of us, the techs, find [the scientists] don't understand what goes into the groundwork to get them the results they need… we're kind of taken for granted a bit.
>
> Kate: Do you have an example?
>
> Clara: Well like study-wise we have loads of meetings, before to talk about how studies will go. Sometimes we have scientists changing it, asking us to change things, and it's like maybe they forget it's an animal, a living thing. To them, they are just a number. But for us who work with them, we work with them because we want to, we want to care for them. It's not all scientists, but there are a select few that will be changing study plans that aren't in the best interest of the animal… So, it might be about us taking a stand and saying that's not okay. But we must compromise. Science versus welfare. Making something that works for both. I think the bridge needs to be a bit more sturdy.

Clara's sentiment is echoed by many other technicians who feel that their attachments and intimate knowledge of the animals clash with the more detached ways of knowing that inform decisions made by researchers. In an interview with Zack, we discussed the pressures of making decisions on behalf of animals in cases where pig stress was dangerously high, as is often the case during blood sampling. When blood sampling is done with larger pigs who cannot fit into a immobilisation trough, a rope snare around the neck is instead used to restrain the pig.

> Kate: Can it be difficult to stop a bleed and make that call if you feel the animal is too stressed?
>
> Zack: Yeah, yeah. It can be... let's say I'm holding a pig and bleeding is going well, but the pig has turned purple. We need to get this pig off the rope. She's obviously having breathing issues and isn't getting enough oxygen. If the bleeder hasn't got enough and they're getting it, they say 'Hang on hang on, let me finish, just hold on'. It's like, is a couple of seconds more so bad? But in the animal's eyes, those few seconds are the seconds it needs. ... Then it can be difficult if that person hasn't got enough blood, they have to go and tell pathology or whoever has asked for the sample and say we haven't got it, or we've only got a bit, which obviously makes it difficult. Pathology don't understand what we've gone through to get that sample, to them it's just a sheet of paper. It would be an idea to get them here, to watch how the samples go.

This disconnect between animal technicians and researchers is a recurring theme in the interviews conducted with technicians. Zack's insights highlight that these disconnections result from different perspectives. Whilst Zack feels empathy for the pig, attempting to attune to what the experience of the animal might be and considering this, he notes that the pathology staff who work with the samples extracted from the pig may not have the same corporeal engagement and attentiveness that engenders a responsibility to the animal (Holmberg, 2011). As mentioned earlier, many technicians feel that researchers do not fully appreciate the work that goes into caring for the animals and the importance of respecting their welfare. The result is a tension between the pursuit of scientific knowledge and the treatment of animals, as research staff are disconnected from the plight of the pig that technicians are forced to confront. As Zack suggests, bringing researchers closer to the animals and allowing them to witness the procedures involved in data collection could help foster a greater understanding of the challenges faced by technicians. In this way, building a bridge between the perspectives of technicians and researchers is crucial for achieving

ethical and scientifically rigorous animal research. It is important to acknowledge the expertise and intimate knowledge of animal care provided by technicians and to include their perspectives in research design and decision-making processes. This can contribute to creating a research culture that prioritises animal welfare while still making meaningful contributions to scientific knowledge.

In Facility A, Peter recalls a presentation made by researchers to explain how a study would be run to the animal technicians. The presentation used cartoon images of pigs to illustrate what would happen to them, culminating in an image of the pig with angel wings, ascending to heaven. This portrayal of the pigs' deaths was perceived as insensitive and disrespectful to those who care for the animals. The technicians were able to change the researchers' perspective by inviting them to spend a day working with the pigs.

> "They were really taken aback on how lovely the pigs were… It was nice to see their reaction and after that, we got constant emails… like 'how are my pigs doing? Can you send me some photos?'. All of a sudden, they were *their* pigs, they weren't blood samples anymore."
>
> **Interview with Peter, AT - Facility A.**

This encounter highlights the importance of acknowledging the affective dimension of animal research, which can often be overlooked in the pursuit of scientific progress. By immersing themselves in the daily care of the pigs and experiencing their individual personalities, the researchers were able to develop a deeper understanding and appreciation for the animals. This shift in perspective not only improved their attitudes towards the pigs but also had wider implications for their research, as it helped to ensure that the pigs were treated with respect and care throughout the study.

Empathy and emotional connections can be leveraged to further improve the research animal experience wherever possible. Whilst inoculating pigs with PRCV, ATs became worried about stress levels for one pig in particular.

> The anaesthesia causes the pigs to lose their balance quickly. An AT places them onto the straw, building it up around their bodies to keep them warm and comfortable as they fall asleep. Some are twitching as they are taken one by one and placed in the immobilisation trough. Each pig is given an intra-tracheal injection of the viral agent and has a blood sample taken. After a few pigs have been successfully inoculated, the remaining pigs seem to be slowly waking up as movement increases. Number 77 is in the trough; his legs begin to twitch as the vet

prepares the equipment. The inoculation is completed and blood sampling starts, though it appears the pig is beginning to regain consciousness. An AT observing points out that the skin is beginning to turn a brighter pink and blotches are appearing on his stomach. She gestures to the vet who immediately calls for the sampler to stop.

Excerpt from field notes, observing pig blood samples and viral inoculations - Facility A.

Before these visual signs of stress appeared, inoculating and sampling was a fairly simple process for the anesthetised pigs who were not difficult to manoeuvre and handle. The team were focused on completing the procedures as the pigs required much less restraint than the day before when they were fully awake for blood sampling. The sudden changes in the colour of number 77 brought attention to the liveliness of the animal. Subsequently, the welfare and stress of the individual were brought to the forefront. At this moment, the samples required for the study became a secondary matter of concern for technicians. The agency of Pig 77 illustrated the unpredictable and transient nature of human relatings with pigs and highlighted the importance of skilful attunement to animals in these moments. This underscores the importance of fostering a positive culture of care where ATs are given opportunities and are empowered to speak on behalf of animals, as a constructive culture of care seeks to dismantle the 'them and us' mentality that separates ATs from researchers and instead creates an environment where concerns can be raised and addressed (Gorman and Davies, 2020). Peter describes some studies as being very intense and challenging for both the ATs and the pigs. Despite this, he notes that concerns can be raised and addressed, and changes can be made if ATs are not satisfied with certain aspects of the study.

"On some of the studies it can be very intense and very brutal on the pig, like a lot of the blood samples and that does wear you down. We've had studies where we are blood sampling pigs every couple of days. You're just… yeah, that's a challenge… we raise concerns about studies and anything you don't agree with. You can challenge and you do get feedback if you raise a challenge… We can change things if we are not happy."

Interview with Peter, AT – Facility B.

The stress and suffering of pigs can also negatively affect the wellbeing of the technicians. This circulation of affect across species can create a challenging environment for the technicians who are responsible for carrying out the study but also have a duty to ensure the

wellbeing of the animals. Despite the concerns raised by animal technicians about the potential negative impact on animal welfare during research studies, at times, the study stipulations were strict, and the schedule of the study could not be altered based on concerns of ATs. As Sam noted, the strict nature of some studies can be stressful for both the pigs and the technicians tasked with carrying out the research protocols.

> "When you're not doing the science and have to deal with the ins and outs of what they [researchers] want, it can be stressful sometimes. Like when they want things done, they want this done first and this done after. We had one sampling where one lot of pigs came in for a study and they wanted them to have their bloods and swabs done prior to them being inoculated, which meant they had to be snared twice in a day, obviously very stressful. We were like "Do we have to?" but they insisted on it. We did it, but we weren't overly happy about it. Even the vet said it wasn't great, it's ok but not great."
>
> **Interview with Sam, AT - Facility A.**

Despite their reservations, the technicians often felt compelled to carry out the study as requested, reflecting the tension between their desire to protect animal welfare and the perceived necessity of conducting research. It is clear that while ATs aim to provide the best possible care for laboratory animals, there can be conflicts between their emotional attachment to the animals and the demands of experimental protocols. In some cases, as Sam and Peter's accounts illustrate, these conflicts can result in distressing situations as the atmosphere becomes negatively charged by stress experienced by pigs and humans alike. Thus, unpicking the conditions that give way to shared affective states may contribute to understanding animal and technician wellbeing in conjunction with each other.

This tension between animal welfare and the pursuit of knowledge is an ongoing challenge for animal researchers and technicians alike and highlights the need for ethical frameworks that balance the interests of both pigs and scientific progress. Despite the 'it has to be done' mentality, animal technicians' intimate knowledge of the pigs in their care is crucial in advocating for the animals and ensuring they are treated in a way that aligns with their needs and wellbeing (Greenhough and Roe, 2019). It is thus essential to consider animal technicians' concerns in the review process, allowing them to serve as advocates for the pigs. By taking animal technicians' concerns seriously, research cultures of care can strive to be more attuned to the needs of pigs.

5.7 Pig Deathscapes

The insights into the research laboratory presented here highlight the temporally situated relationships between humans and pigs. Here, I explore the complex meanings and emotions that surround the killing and death of research pigs. This requires technicians to navigate the delicate balance between care and control in the killing of pigs. I explore how disconnections between these two dichotomies can contribute to a deeper understanding of pig death and how this is given meaning in the research setting.

As the pig progresses through their experience in the laboratory, bonds of trust are used to construct a 'good' laboratory animal. Pigs become important as individuals through practices of meaningful care by ATs, an identity in conflict with their potential as crucial samples for biomedical studies. As such, balancing welfare with obtaining good data is a frequent challenge. This works in conjunction with material technologies, including immobilisation troughs, viral agents, snares, holding pens, swabs, and thermometers to extract scientific knowledge from the pigs. These material apparatuses give hope for knowledge production, legitimising the practice of animal culling in the lab. The (dis)connections between care and control play a critical role in understanding the death of pigs in research, and the different ways of knowing 'the pig' translate into different ways of understanding their death.

The culling marks a significant shift in the research pig's identity from a companion to research material, as described in an excerpt from field notes recounting the killing of PRCV pigs in Facility A.

> I join two ATs, Rob and Hannah. They do not provide daily care for animals, as the majority of their work involves assisting the post-mortem team. Together, they pick up one pig and lay him on a steel table. The pig has already been given an anaesthetic and his body flops as they inspect the ear for a vein. They say 5ml is probably enough to cause a fatal overdose, but they are told to use 10ml to make sure they are dead. A vein is found, and Hannah gently slides the needle in. The ears are thin, and I see the blueish colour of the veins slowly lighten as the drugs infiltrate his bloodstream. It is hard to pinpoint the exact moment the pig's life ends. I try and pay attention to the rise and fall of his stomach, but after a few minutes, I notice it has stopped. I'm not sure exactly when. The pig is then wheeled into the adjoining room where two large metal tables are lined with plastic sheets for the post-mortem. Two pathologists are ready and waiting for a body to begin work on. Rob

lifts both front and rear legs and places him on the table, next to Petri dishes that will soon contain his tissue samples.

Excerpt from field notes, observing pig culling and post-mortem - Facility A.

Death is the endpoint of animal lives in the research process, but for scientists, it often signals the beginning of their work. The pathologists and research scientists involved in this study never encountered these pigs alive. Becoming killable is here legitimated by the potential to further understand porcine coronavirus, an airborne respiratory disease impacting pig herds across the globe with the potential to cause significant economic loss (Liu and Wang, 2021). Earlier in this discussion (page 93), I quoted Rick, a transport driver for the facility, who told apprehensive farmers that the facility would "get the knowledge out of" their animals. I was able to witness the moments when this is made a reality.

The pathologist takes a knife and slices through the tissue between the arm and the chest. I'm surprised at how quickly we're inside the body. The pathologist takes three test tubes and lets them fill up with the blood trickling out of the carcass. The tubes are then secured, labelled, and stored. Another body has been laid on the table opposite and the other pathologist begins their post-mortem. He then takes the knife and cuts down between the ribs, to the stomach. In a matter of minutes, the Petri dishes begin to fill up with samples of the pigs' liver, spleen and kidney. The pathologist then opens up the ribs. He has to apply some force and I hear the crack of the bones as the body is opened up. He can now get at the lungs and the heart. Small samples are taken from each with a scalpel. Next, he cuts the jaw and exposes the trachea. Another sample is taken. The body is decapitated, and the pathologist places the head on the table. The blood makes it slide across the steel surface. With a significant amount of force, the pigs' head is then cut into two parts to expose the brain. The pathologist skilfully picks away at the tissue to get at the olfactory bulb and takes a sample which is put into a petri dish. "Are you done with the body?" another pathologist asks. He nods and discards the body into a large bin. Once he is done, the head is put in the same bin. The blood is mopped up and a new carcass is laid out on the table.

As samples are taken from the body, neatly packaged and secured, the pigs become less recognisable. Animality is stripped away as the body is wheeled from the killing room to the post-mortem table. I stay with Rob in the killing room as Hannah takes one body away. "For me, this is the point where they are just science now. It's not an animal anymore" he says. I notice how attentive he is to each

> anaesthetised body, carefully checking for any sign of life before it is taken away. This may be done by applying pressure to the pigs' skin. When the colour does not return, he can be sure they are dead and his response-ability to that pig ends, so he moves on to the next. The pathologists never saw these pigs alive as they are killed before entering the post-mortem room. The relatings they have with these bodies are markedly different to those of the ATs who cared for these pigs, who spent extra time socialising them. Now, they are objects to be worked on as their agency transgresses their bodily barriers. Over the course of nearly five hours, ten pigs are killed and dissected into numerous samples and sentient bodies are rearticulated into scientific material.
>
> **Excerpt from field notes, observing pig culling and post-mortem - Facility A.**

End of study culling is understood as 'part of the job' and necessary to create good science by technicians, yet can often be emotionally challenging. It is crucial to acknowledge the impact of witnessing and playing a role in animal death on technicians, who often face compassion fatigue due to the continuing overturn of animals in the facility (Randall et al., 2021). Whilst many of the technicians interviewed in the facilities visited were not those who carried out the killing of animals, others often assisted by helping transport or restraining animals. The practice of culling transforms the pig into an important source of scientific data, a material object that can be analysed and studied. As a result, the research animal has multiple identities that coexist in the laboratory, both a being that technicians have a duty to care for and a scientific object that must be killed and studied.

> "Sometimes with the little pigs, it's … like a revolving door … It's like three-week rolling studies. Sometimes that gets hard, just because of the quantity. You're driving them to the post-mortem and you're waiting for the gates to open… you just look in the mirror and see into the trailer with a load of little pig faces just looking at you… you think 'What am I doing?'."
>
> **Interview with Peter, AT - Facility A.**

Peter's reflection on his complicit role in the killing of pigs underscores the affective tensions in the AT-pig relationships. The complex, transient identities of the research pig can create a significant emotional burden for technicians, who must reconcile these multiple identities in order to do their jobs effectively.

> Initially, when I first started, I used to go in there and you could tell I would be choked up. There would be tears. You don't get used to it, you never get used to

> killing, terminating an animal. I think you just learn to process it in a different way. It helps to look at it like they are doing their bit for us, so in hopefully two or three years, what they've gone through can be in human trials. Yeah, that's sort of the way…. yeah, you never get used to it, you just learn to cope.
>
> **Interview with Nicola, AT - Facility B.**

Understanding pig death as part of a 'sacrifice' for scientific advancement is often used by technicians as a way to cope with the realities of death (Arluke, 1988, Lynch, 1988). As well as having strong emotional connections with the pigs, ATs also highly values the pigs' contribution to science, having witnessed vaccines tested on the pigs in her care progress to human trials and become available for use in human infants. This inevitability of death, in order to fulfil greater scientific goals, sets temporal limits on Helen's emotional bonds with pigs. I asked her how she felt when pigs were culled at the facility.

> "I love them whilst they are here and then think, okay you need to go now, you've had your time."
>
> **Interview with Helen, AT – Facility A.**

For Helen, caring for individual pigs was inherently tied to caring for a broader collective of both human and animal populations that would benefit from animal research in the future. Thus, caring for individual pigs became a fine balancing act between providing valuable care to the pigs and ensuring that this care was then translated into meaningful research that benefits society.

While technicians recognise the importance of the scientific benefits derived from animal research, they also value the lives of the animals they work with and are affected by the loss of life. Revisiting Peter's example of the disconnection in ways of knowing pigs between technicians and researchers, illustrated when the use of cartoon pigs ascending into heaven inadvertently caused a rift between the two groups (page 98), it becomes crucial that the act of killing animals for scientific purposes is conducted with respect for individual pig life.

The multitude of animals that come through both facilities meant that after death, individual pigs are seemingly forgotten and new groups come in to take their place, demanding AT attention and care. Whilst many ATs mentioned that coping with death in the laboratory was refocusing their attention on new pigs that needed care, occasionally individual pigs were remembered. During my visit to Facility B, I met with ATs in a staff room. Among the notices and health and safety posters on one wall, I noticed a set of three framed photos, placed

horizontally above each other. They show a group of three sows in a pen, with their trotters on the gate. The three photos were taken one after the other in quick succession. I noticed later on another photo on the other side of the room of the same three pigs. Nicola explains that the pigs in the photos had been at the facility for a six-month study and were loved by everyone who worked with them. She fondly described their individual personalities and shared with me stories from her interactions with them. Nicola also recalls the day these pigs were culled.

> "Everybody had such a bond with them. On the day they went, no one spoke. It was a case of just getting in, getting it done, and getting out."
>
> **Interview with Nicola, AT - Facility B.**

The sombre reflection highlights the complexity of affective human-pig relationships in the laboratory. Whilst technicians felt a sense of loss for these pigs, the majority of pigs used in research are not memorialised in this way. Conversely, it is common for photos of deceased companion animals to be displayed by owners navigating their grief. Redmalm (2015) contends that pets become grievable as owners attach meaning to individual personalities and traits. The memorialisation of dead pets further highlights the attribution of personhood and family status to companion animals (Ikäheimo et al., 2022, Ambros, 2010). Nicola described these pigs as having "funny little characters", indicating meaning associated with individual personalities in the laboratory may work in a similar way. The positive experience staff had with these pigs are memorialised on the wall and indicates multiple and complex ways of relating to research animals. As many ATs highlighted the social reciprocity of pigs compared to other animals that are commonly used in research (such as sheep, mice, and cows), I argue that there is an element of 'piggyness' that engenders a unique interspecies intimacy, further complicating discussions surrounding the intersections of death in the laboratory. Nevertheless, the reciprocity in AT-pig relationships does not always translate into symmetrical relationships of power, as demonstrated in the discussion on tensions between care and control. This raises important questions about the ethics of their treatment and whether or not they are being recognised as sentient beings with their own personalities and value beyond their use in experiments by all human parties involved in animal research.

5.8 Alternative Research Pig Futures

I now turn to explore alternative futures for research pigs, acknowledging that barriers to pig welfare are also barriers to animal technician welfare. I question how alternative ways of caring for research pigs may be embedded into current ethical frameworks governing animal

research and discuss the role of ATs in advocating for changes to improve pig welfare. I suggest rehoming as a possible avenue for integrating respect for pigs into the ethical duties that research facilities have towards their animals. In turn, this encourages a broader reflection on human responsibility towards pigs.

Animal technicians have a unique perspective on the lives of research animals and can play a crucial role in advocating for their welfare. Commitments to care through various tinkerings (Mol et al., 2010) to create new avenues for pig realities disrupt the normative modes of care available for pigs. Animal technicians can highlight new possibilities for the treatment of research animals that go beyond standard practices. In Facility A, four female Duroc pigs are kept as 'clean' stock, meaning they are not used in studies and instead occasionally used to obtain blood samples. They are housed in groups of two in adjoining pens, inside a barn with access to a large outdoor field lined with electric fencing. These are the only pigs across both research facilities that have any outdoor access, as studies require stringent biosecurity measures to ensure no cross-contamination occurs. I join Clara in her morning duties, who is responsible for their husbandry.

> Clara and I place feed in the troughs and line them up near the opening to the field. The pigs grunt and kick at the gates of their pens, eager and waiting. We let them out and all four run pass us to get to the feed. After they have finished eating, three of them head straight out into the field. One remains in the archway, overseeing the rest. "She always does this, every day. I think she shocked herself on the fence a few weeks ago and is a bit wary now" Clara says. They are left to enjoy their outdoor access until the afternoon feed when they are brought back inside for the night.
>
> **Excerpt from field notes, shadowing Clara - Facility A.**

The stock pigs have not always had outdoor access, instead, this was pushed for by technicians. I spoke to Zoe, who had previously cared for a group of stock pigs and was instrumental in gaining outdoor access for them.

> Zoe: I got to know each of these pigs... I did a lot of sampling with them, and I ended up doing lots of training. I just got really into trying to improve their welfare. So, I just think I found it quite rewarding because these pigs... weren't allowed outside or anything like that. So, I worked on making that happen ... which is really nice and it's just really rewarding actually like making that happen, and then letting them outside. Just all that work, you know?
>
> Kate: How did you make that happen?

> Zoe: Erm, I spoke to a vet who was here, he kind of said that there's no reason why they can't go out in the field, and I didn't realise. I think I just thought, well, they're inside. Like, yeah, they're here for research. Their life span is quite short, it's kind of like that's it... but he opened my eyes a bit and said, actually they can. Then I was like, well that is it. Then I'm making that happen. If they can have that, then they absolutely should have that.

Lack of outdoor access is generally considered to compromise pig welfare (Ludwiczack et al., 2021) and was frequently mentioned by ATs as a significant barrier to providing pigs with appropriate care. Technicians understood that this was not always possible due to disease transmission risk. The pigs described by Zoe here are used only for clean blood supply and are not enrolled in ongoing studies that require such strict biosecurity measures. In questioning status quo practices and advocating for a more naturalistic environment, Zoe was able to shift the borders of care through her connections with individual animals which encouraged her to speak up for their needs.

Exploring alternative ways of caring for research pigs has the potential to improve both pig and technician welfare. For instance, Zoe's sense of feeling rewarded for improving the lives of animals in her care is indicative of the potential for alternative approaches to help alleviate compassion fatigue among technicians who are bound by the institutional constraints of animal research. One area where this tension is particularly evident is in the culling of animals outside of study requirements. While end-of-study culling is generally accepted as necessary to create good science, culling of animals outside of study requirements is often viewed as ethically questionable, and has the potential to lead to feelings of frustration and moral distress among animal technicians.

The emotional toll of death in the laboratory is further complicated by the efforts of technicians to build bonds of trust with the pigs in their care, with compliant and trusting pigs less likely to be deemed difficult to sample and culled as a result.

> "Pigs might be culled if they can't be sampled, and we don't have a business need for them… it's a waste of life."
>
> **Interview with Zack, AT - Facility A.**

However, the decision to cull pigs is also influenced by practical considerations. For instance, when the stock pigs become impractical to use for obtaining clean blood samples at ad-hoc intervals, they may be culled. This might occur if pigs were frequently lame or needed repeat painkillers that could interfere with their blood samples. A stock pig might

also be culled if they had too much weight around their neck, making it difficult to physically obtain blood samples. At this point continuing their life becomes a financial decision.

The negative impacts of such decision-making on both animal and technician wellbeing and flourishing warrants a discussion on the alternative afterlives of research pigs. I suggest there may be alternatives to culling at this point. Where euthanasia is not justified on the basis of welfare grounds, rehoming may occasionally be a viable avenue that would reflect a broader culture of care that respects animals' inherent value (Palmer et al., 2022). The National Centre for the Replacement, Refinement and Reduction of Animals in Research (NC3Rs) state that "careful consideration should be given at the project planning stage to the fate of the animals at the end of the programme of work (e.g., euthanasia, rehoming, release)" (NC3Rs, 2017, p.14). Rehoming can also be implemented to advance the application of the 3Rs, namely refinement.

The rehoming of pigs presents a number of challenges related to potential disease transmission, plus difficulties in finding suitable housing and willing owners for long-term care. It is also important to recognise the difficulties in rehoming larger animals such as pigs compared to other species such as dogs and rodents who may already have companion animal status. Discussing these difficulties with technician Clara highlighted that speciesism may play a role in deciding which animal species get rehomed in research.

> "I understand a lot of the time dogs in research can be rehomed, and other ex-research animals… but that's speciesism. People would rather rehome a dog than a pig".
>
> **Interview with Clara, AT - Facility A.**

Thus, challenging norms around culling in animal research also presents an opportunity to bring species such as pigs further into moral consideration. Between 2015 and 2017, at least five pigs were rehomed from animal research facilities, despite the health risks in rehoming research animals due to the potential for infectious disease spread (Skidmore and Roe, 2020). I argue that greater consideration of rehoming pigs that are not enrolled on long-term studies and where euthanasia is not justified on the basis of welfare grounds should be given for three key reasons.

1. Rehoming opens up ways of creating ongoing flourishing for research pigs.

2. Rehoming benefits ATs who find unnecessary culling emotionally challenging and expressed desire to 'give back' to the research animals in their care wherever possible.

3. Rehoming challenges views that research animals are disposable objects rather than living, sentient beings.

In cases where rehoming is a viable avenue, pursuing this would reflect a broader culture of care that respects the inherent value of pigs (Palmer et al., 2022). In turn, this would ease the discomfort expressed by animal technicians who feel that individual life is not respected broadly across animal research and can avoid the uncomfortability of culling in these cases (Scotney et al., 2015).

In the case of pigs used for clean blood supply, rehoming may be viable as they are not directly subjected to infectious disease. Discussions with vets at Facility A indicated that once animals arrived at the facility, they were treated as 'potentially infectious', creating a barrier to the furthering of their lives. In order to embed respect for animals further into the culture of care, thought must be given to the possibilities for life after research. This may be achieved by directing funding towards providing sanctuary for research animals and reconfiguring the boundaries of life permitted for research animals. This not only opens up ways of creating ongoing flourishing for research pigs but also can present benefits to animal technicians who find this unnecessary killing emotionally challenging. It would allow a sense of 'giving back to the animals' and can benefit both human and animal welfare.

> "Obviously scientifically if they've been infected by something [rehoming is] not possible and I get that. Often, they want tissues which they can only get if the pig is dead … I'd like to think if they could be [rehomed] it would be beneficial for my mental health and would be nice for the pigs to live out however long they had left."
>
> **Interview with Sam, AT - Facility A.**

Therefore, this research brings into question the ethical duties of research facilities in providing or funding sanctuary for retired research pigs where this is possible. Careful planning and communication between researchers, caregivers, and animal welfare organisations are crucial for addressing concerns and challenges around rehoming. In the context of rehoming laboratory primates, Fluery (2017) argues for research grant proposals to give consideration to primate retirement funding, as early financial planning can ensure the continued care of primates in their life after the laboratory. I argue that similar consideration can and must be given to pigs in cases where their participation in research does not compromise their long-term welfare. As Skidmore and Roe (2020) highlight, the rehoming of laboratory animals has numerous benefits not only to research staff and animal wellbeing but also in easing public concerns around animal research.

Whilst this unique example identifies ways of improving the experience for individual animals, ending the discussion here leaves us trapped in a web of relationality that does little to change the structure of entanglements (Giraud, 2019, Arcari et al., 2020). Ultimately, this upholds an anthropocentric framing that recognises pigs as having a degree of micro-agency within human-animal relations but does not critically consider how these influences lived experience. By considering individual animal experiences without critically examining the larger entanglements and structures that shape them, we risk reinforcing an anthropocentric perspective that prioritises human needs and desires. This approach fails to address the systemic issues that contribute to the exploitation and suffering of animals in research and limits our ability to envision alternative ways of co-flourishing. Instead, we must recognise the complex and interconnected web of relationships that exists between humans, pigs, and the larger environment, and work towards creating more just and equitable systems of care. To develop alternative ways of living that promote the ethical treatment of pigs, it is necessary to acknowledge the need for non-anthropocentric responsibility, as argued by van Dooren (2016). This requires an iterative process of (re)engagement with the world to gain deeper insights into the ethical complexities and ambiguities that arise from our actions (Barad, 2007). In the context of animal research, the implication is that focusing solely on the welfare of pigs in the laboratory whilst ignoring broader entanglements is insufficient to bring about meaningful change. The treatment of pigs in laboratory settings is not just a product of institutional ethics, rather, affective relations in animal research cannot be isolated from the intricate connections between humans, pigs, and the wider environment.

5.9 Conclusion

This chapter has provided an in-depth exploration of the complex affective dynamics between human and pig actors in research laboratories, foregrounding how care becomes an affective world-making practice. Drawing on ethnographic research and interviews with animal technicians in two UK research facilities, the chapter explored the intertwined and co-constitutive nature of care and control in the context of research pigs. This research, addressing the gap in understanding the emotional and affective experiences of pigs and animal technicians, carries significant implications for our comprehension of human-animal relations within laboratory environments. The discussion of caring practices, the construction of research pig identities, and the challenges surrounding pig deaths and killing have emphasised the need for ethical frameworks that balance the interests of pigs and scientific progress. Finally, the exploration of alternative futures for research pigs has highlighted the role of animal technicians as advocates for the animals and encouraged a

broader reflection on human responsibility towards pigs. The research presented in this chapter contributes to a more comprehensive understanding of affect within animal research and invites a reimagining of the worlding practices that forge alternative pathways for pigs in laboratory practices. The chapter thus envisions new modes of engagement with nonhuman others that prioritise the wellbeing of both pigs and people in animal research.

The affective characteristics of human-pig relationships, including the unique challenges faced by ATs in providing care, were examined, with a focus on the nonhuman charisma of pigs that engenders a distinctive interspecies intimacy between ATs and pigs, leading to a commitment to 'meaningful care'. Providing meaningful care to pigs not only benefits the animals themselves but also the ATs who care for them. Such a ‘care-ful’ environment allows for the circulation of constructive affect, which can promote connections between good science and the enhanced wellbeing of both animals and humans. For instance, finding improved ways of caring and making meaningful changes to pig experience gave technicians a sense of giving back to the pigs. In spite of this, pig charisma and intimacy are also implicated in perpetuating conditions of control over research animals, creating tensions and moral complexities between ATs, researchers, and pigs. The close relationships between ATs and pigs can also make it challenging to avoid affective atmospheres that circulate fear and stress. This indicates that the very sensibilities shared through care are necessarily implicated with harm and the associated affective encounters, which can contribute to lower wellbeing for both humans and animals.

Additionally, the chapter also explored the transient identities of research pigs and the impacts these carry on the (dis)connections between care and science in the laboratory (Davies et al., 2016). Consequently, this chapter recommends that animal research facilities create opportunities for researchers who are detached from daily animal care practices to connect with animal technicians and the animals involved in their studies.

These insights may inform alternative futures for research pigs and emphasise the need for ethical frameworks that consider the emotional and affective dimensions of human-animal relationships in animal research. The chapter has highlighted that barriers to pig welfare are also barriers to animal technician welfare. I suggest rehoming as a possible avenue for integrating respect for pigs into the ethical duties that research facilities have towards their animals. In turn, this encourages a broader reflection on human responsibility towards pigs. In cases where rehoming is possible, instilling this into policy can be shown as a commitment to advancing the 3Rs.

Through storying the lives of pigs in research, this chapter has considered how humans and animals are mobilised alongside the socio-material apparatus of the laboratory in the becoming of the research pig. The findings shed light on the hidden experiences of pigs in animal research. Bringing attention to the mobilisation of animal agency within these entanglements highlights how life is experienced for the pig and troubles the distinction between the subject/object binary as pigs occupy transient positions as scientific material and sentient individuals imbued with personhood. Beyond the laboratory, the chapter challenges traditional dichotomies of nature/culture and human/animal, providing a unique lens for examining the spatial and relational dynamics of human-animal interactions in diverse contexts. This has broader implications for animal geography and prompts critical reflection on how to responsibly navigate human-animal relationships in various settings.

Chapter 6 Becoming Pet Pig: Love and Dominance

6.1 Introduction

In a world where pigs are predominantly seen and encountered as a source of food, a growing trend of pig-keeping for companionship rather than food production offers a novel way of approaching the human-pig relationship. These relations challenge conventional ideas rooted in speciesism about what animals are deserving of love and companionship. They reflect that pigs are transcending boundaries of identity and subsequently occupying new spaces in relation to the human, shifting their political and ethical status. Through the lens of love and dominance, this chapter aims to explore the complexity of affective relationships in the becoming of the pet pig.

Pet pig-keeping as a phenomenon provides an opportunity to explore the active role that pigs and humans play in shaping and navigating novel multispecies relationships. An animal typically farmed for human consumption and often associated with negative connotations in everyday language (Stibbe, 2003), the companion pig as a subject of focus provides a unique opportunity to explore how love transcends societal norms that delineate which human-animal relationships and intimacies are acceptable, and which are not. This disruption to normativities associated with human-animal intimacy presents a queering of pet-keeping (Chen, 2012). In this context, I posit that such queering can encourage novel radical ethical and political modes of relating to pigs, which are brought to the fore through intimate, affective relationships that make visible pig personhood. Pet pig-keeping as a phenomenon offers insights into the dynamic relationships between pigs and humans but concerns about their welfare and the challenges of ownership persist. Consequently, in 2010 the RSPCA released a position statement expressing their concerns about pet pigs, as their specific needs can be challenging to meet (RSPCA, 2010).

Despite these issues, pet pig-keeping presents an opportunity to explore novel forms of multispecies kinship and deepen our understanding of living with pigs. The recognition of pigs as companions rather than food-producing animals necessitates a radical rethinking of the pig. Such discussions around categorisations of animals and their associated place in society are central to the study of animal geographies. This chapter considers ‘what love does’ (Morrison et al., 2012) in these interspecies relationships, whilst also acknowledging the social, ethical, and political tensions that emerge in navigating pig love within a societal context that places pigs as food-producing animals, and increasingly recasts pets as commodities (Nast, 2006). This

interplay of love and dominance in our relationships with companion animals highlights the urgent need for a critical examination of power dynamics in these interspecies relationships (Tuan, 1984). Interrogating relationships of companionship between humans and pigs contributes to discussions surrounding animal categorisations, but also encourages a re-evaluation of our current relationships with pigs.

Through the unique narratives of companionship and pet-keeping presented here, the agency of pigs is made visible, giving a platform to their gregarious nature, intelligence, and personhood. As Oliver (2021., p.123) posits that urban chicken keeping might be thought of as a "dedication to experimenting with alternative modes of multispecies living", pet pig-keeping also crosses socio-cultural boundaries and troubles the place of the pig in society. I draw from interviews conducted with twelve pet pig keepers interviewed who have built close, emotional bonds with pigs through navigating interspecies friendship and love. Alongside pet pig keepers, an interview with a pet pig breeder and animal rescue organisation spokespeople are also used. I pay attention to love in particular as a spatial, social and political phenomenon and argue that in the context of human-pig pet-keeping relationships, pig love disrupts normativities associated with cross-species intimacy.

As demonstrated in the previous chapter, pig transgression demands new affective connections and modalities of care as pigs become known as individuals. In this chapter, I build on this argument by exploring how this process of worlding occurs within the home, where the pig becomes companion. This chapter charts how pigs become family, share emotional bonds with humans, and dismantle subject-object, edible-inedible, killable-unkillable dualisms that govern animal life. I argue that these insights from human lives shared with companion pigs not only open space for a multispecies care based on recognition of pig personhood and agency, but also necessitate a radical rethinking of the pig as worthy of greater moral concern. However, I apply a critical lens to an otherwise romanticised account of human-pig relationships, and tease out points of contention in navigating love, care and radical multispecies kinship. I focus analysis on the (un)ethical potentials of love in this multispecies context, recognising the ethical challenges that emerge from lingering anthropocentrism and speciesism in the context of human-pig companionships. I identify multiple social, ethical, and political tensions relating to the commodification of pet love (Nast, 2006) and navigating pig love within a societal context that places pigs as food-producing animals, often ignorant of the potential for affective human-pig kinship. I suggest that entering companionable relations with pigs opens up new possibilities for ethical relatings with pigs, yet these relations operate within non-innocent entanglements that require cosmopolitical reflection.

6.2 Rethinking Pigs

> I struggle to find the house, the directions on my mobile have taken me to a busy road filled with cars, separated from a row of mostly terraced houses by a wide pavement. After finding a dirt track that takes me to the back of the houses, I am welcomed through the back door by Kath. As I walk into her suburban garden, I feel a thousand miles away from the afternoon school traffic I had just been stuck in on a grey afternoon. The garden is a modest size and mostly grassy. A large wooden structure is sectioned off and I hear the familiar sound of grunting pigs coming from within.
>
> **Excerpt from field notes, visiting pet pig keeper Kath.**

Recent research suggests that both pet pigs and dogs exhibit a similar level of attention towards humans (Pérez Fraga et al., 2023). This interest in humans and demonstrations of affection by pigs have contributed to their increasing popularity as pets. Despite this, pigs are legally classified as livestock animals in the U.K. This classification demarcates pigs as animals for human utility and are as a result often assumed to hold diminished moral relevance (Loughnan, 2010). This further legitimises their utilisation by humans. Pet pigs disrupt these orderings and become 'out of place' in the domestic sphere, transcending societal norms associated with human-farmed animal relationships. Here, I explore how pigs are enrolled into affective relationships within the home as they become pet.

All pet pig keepers interviewed had an outdoor space for their pig, and gardens similar to Kath's were described to me. All pigs were also granted indoor access to varying degrees. Some were allowed to sleep inside the family home and others were only allowed inside at certain points of the day. Nevertheless, all participants described an emotional relationship with their pig. Several participants spoke about being called 'crazy' by family and friends for pursuing such a relationship with a pig, an animal perhaps viewed as 'out of place' in the home. Many embraced this identity, similar to the 'crazy cat lady' stereotype who holds a love for cats that exceeds 'normal' human-cat relationships (McKeithen, 2017). All pet pig keepers interviewed were also women. Whilst pet ownership is not usually associated with a significant gender difference (Herzog, 2007, Marsa-Sambola et al., 2016), seven participants followed a vegetarian or vegan lifestyle which is reported to be more common in women than men (Rosenfeld, 2020). Noteworthy, many of the women interviewed had male partners who lived in the house and frequently shared caring responsibilities for the pet pig, perhaps indicative that men are less willing to engage in online pig forums or speak openly about their relationship with their pig.

During interviews, pigs were frequently described as part of the family. Three overlapping reasons for purchasing a pet pig became apparent in the interview data. The first of these was

the uniqueness of the pig as a pet, as participants enjoyed the idea of having a pet no one else had. The second motivating factor related to aesthetic or 'cute' factors, reflecting the aestheticisation of the pet industry (Nast, 2006). The third motivation was tied to a vegetarian politics (seven participants did not eat meat, and one meat-eating participant did not eat pork) and a desire to care for an animal assumed to be misunderstood and mistreated in society. For most participants, these factors intersected with each other.

> I just always found them really cute and really sweet… maybe it's that they're just an affectionate animal that maybe in my head shouldn't have been. Like no one thinks about going and rubbing a cow's belly because it's a farm animal.
>
> **Interview with Linda, keeper of one pet pig.**

For Linda, the aesthetic and personable qualities of pigs combined with their uniqueness as a farm animal-turned-pet led her to want her own pet pig. The spatial transgression of the pig is poignant here, leading to the pig being encountered as unexpectedly affectionate. This point of identity transgression was valued by participants frequently. Linda felt this made her pet an unusual choice, as she mentions that farmed animals are not typically associated with giving or receiving physical affection. For others, this point of transgression was given value as participants were highly aware that their own pigs lived markedly different lives to their conspecifics on commercial farms. Carter and Palmer (2017) argue that animal transgressions reconfigure the ethical potentials of human-animal relationships by disrupting anthropocentrically upheld socio-cultural barriers that demarcate animal categorisations. Following this, I argue that becoming family highlights a point of transgression where the pig becomes companion and family, leaving behind the normative pig identity as a food-producing animal. Consequently, the pig becomes 'in place' within the home and 'out of place' on the farm. This has an array of ethico-political implications for pig lives.

In conceding to their desires for a pet pig, keepers then had to integrate the pig into their lives and homes in a process of 'becoming family' (Irvine and Cilia, 2017). Research on popular pet species indicates that pets are increasingly considered part of the family, elevated to a family member status (Fox, 2006, Power, 2008). Interviews indicated that pet pigs also become important members of the family in a similar way. Many participants were either childless or had older children who had left home. Pet pig keeper Louise explains how she and her husband have created a unique family with their pig Elsie, where she describes their relationship with Elsie as emotionally similar to a parental relationship.

> "She relies on us a lot for affection. She really craves that human connection… the way she is connected to us in terms of reliance, and she looks for comfort to us. So, in that was a similar relationship that you would have with a child."
>
> **Interview with Louise, keeper of one pet pig.**

Louise's view of her relationship with Elsie highlights that the affection shared between human and pet is also linked to care. The apparent need for human attention demands responsiveness from Louise in order to meet Elsie's needs. As in the human case, love and care are interlinked (Lynch et al., 2009). This responsiveness to pigs' needs and desires became integral in the process of 'becoming family', requiring work from keepers that is strongly linked to love and affection in these human-pig relationships.

> "Just like a dog is really, they become part of the family. They are affectionate, I don't know it's just like your pet dog, it's part of your life. They're your friends, aren't they? Sounds sad but they are. I think my house would be very lonely without the animals, I wouldn't live here on my own, it would be too lonely, so they're like my company as well".
>
> **Interview with Janice, keeper of one pet pig.**

Janice was not alone in treating her pig, Walter, like a member of her family. Describing the pet pig as "just like a dog" indicates that the pig has the potential to become an important family member in a similar way to other popular pet species (Charles, 2016). Nevertheless, whilst several participants also had dogs, and considered both their dog and pig to be part of the family, many described having a different type of relationship with both. Pigs were often thought of as easier to communicate with than dogs due to their intelligence and reciprocity towards humans.

> "They're very human-like, if you look at a pig, they've got human eyes. You speak to them more like a human than you do a dog because it looks like you've got a human looking back at you…. I think part of me does think she can understand what I'm saying".
>
> **Interview with Maya, keeper of one pet pig.**

> "I think cats and dogs are a lot more willing to please, whereas pigs are a lot more independently minded… pigs are more clever… you can bond with them more on a human level than you can with a dog or a cat. I think a dog or a cat, you can love them you can cuddle them… but you don't get that like same level of intelligence in a way".

Interview with Louise, keeper of one pet pig.

Here, participants describe a more reciprocal relationship with their pig than their dog, as participants felt that their pet pig demonstrate a greater ability to understand the human. Also noted in the animal research context (Chapter 5) as a driver of emotional bonds between humans and pigs, this reciprocity creates a complex level of interaction. Louise notes that her pigs' behaviour differs from cats and dogs who aim to appease their keepers whereas the pig acts on their own volition, a quality that garnered respect from owners.

Further, the comparisons drawn between pig and human by these participants indicate that species borders become blurred in this pet-keeper exchange. Maya's remarks about the pig having human-like qualities is particularly interesting. The humanness portrayed through the eyes of the pig creates recognition and response as the pig becomes *someone* returning the gaze. Maya's thoughts intersect with Lévinas's work on the ethics of the face, postulating that face-to-face relations are ethically significant, amplifying the vulnerability in the face of the Other, and, hence demand a response (Lévinas, 2002). Whilst Lévinas is sceptical of applying this to human-animal relations, a 'humanness' is recognised in pigs despite the alterity of the human and nonhuman. Maya's comments highlight that the affective qualities and humanness recognised in the face of the pig aligns with this idea of the ethical face, echoing Lévinas's ideas in an unexpected context. This illustrates that affect circulates in a reciprocal manner within pet pig relationships, creating an embodied, felt connection between bodies that dismantle boundaries of Human/Other.

For some participants, such as Maya, their pet pig has played a crucial role in enhancing their mental wellbeing due to the reciprocal nature of their relationships. Maya spoke with me about how her mental health had improved since having her pig Orla, who helped her cope with loneliness.

> "Before I had Orla… I had a breakdown and it stemmed from me being really lonely. The kids were at school, my husband changed jobs and I wasn't getting any interaction with anyone… I just think she is good for me. I used to talk to myself a lot, but now I talk to Orla. I sound crazy but it's true".

Interview with Maya, keeper of one pet pig.

Maya's experience underscores the unique interplay of emotions and connections in these human-pig relations. Orla's companionship provided Maya with the emotional support of 'someone to talk to', forging a bond of connectedness through both pig and human agencies. Participants frequently explained that they felt their pigs could sense their emotions and would intentionally attempt to comfort them. Sandra explained how she felt her pig, Dusty, provided

her comfort in difficult times, for instance, through the loss of her dog. Several participants similarly surmised that their pigs could attune to their emotional state and provide emotional comfort. In some ways, participants felt that love and care were reciprocated in a bi-directional relationship between human and pig.

> Kate: What does love mean in your relationship?
>
> Louise: I think it means like, just connecting with her on a deeper level than... like a basic relationship, not just I feed you and take care of you. It's like, when I am around you I feel happy and I can tell that she feels happy.
>
> **Interview with Louise, keeper of one pet pig.**

Here, the experience of having another body to interact with created a relational, multispecies care-scape. The affective reciprocity and charisma of pigs was highly valued and contributed to the building of positive emotional relationships within the home, demonstrated to facilitate animals' transition into and acceptance as a member of the family (Cohen, 2002).

Regardless of the motivation for wanting a pet pig, the process of becoming pet served to allow pigs to become the subject of care, love, and moral concern. Entering into these relationships elevated pigs to higher moral standing, where attributing "moral value marks a boundary between ethically considerable persons and inconsiderable things" (Lynn, 1998., p.285). Whilst pigs were considered members of the family like other companion animals frequently are, pet pig-keeping presented a unique ethical challenge due to the pigs' status as livestock. In loving their pigs, participants had to consider where to draw the line, if at all, between edible and inedible pigs.

6.3 Edibility, Affection, and Identity

Loving pigs departed from a normative pet love in a way that transformed animal categorisations, opening up new ethical understandings and ways of multispecies flourishing with pigs. Companion pigs appear to stand in direct contradiction to normative societal understandings of pigs as food animals. In becoming pet and entering home, the pig transgresses spatial and ethical identity borders and become out of place.

> "Some people think 'oh my god I can't believe you have a pig as a pet'. Like you have to explain that they're actually quite clean ... People just think they roll around in shit all day and that's not true".
>
> **Interview with Vicky, keeper of one pet pig.**

Societal perceptions of pigs as unclean, lazy animals prop up an assumption that pet pigs offend the supposedly pure and private realm of the home. Drawing on Mary Douglas's (1966) book '*Purity & Danger'*, Robin et al. (2017) similarly explore how pet rats are spatially constructed to be 'out of place' in the home. Like pet rat keepers, the pet pig keepers interviewed for this research were keenly aware of the stigmatisation that pigs face. Discrediting claims that pigs are dirty through their lived experience of living with pigs allowed keepers to challenge such stigmatisation. Rather than creating a distinction between pet pigs and farm pigs, participants disrupted the idea that pigs in the home were 'out of place'. Instead, pigs became 'in place' through becoming entangled in new hybrid ontologies built through affection and love.

The affective relationships forged between participants and their pet pigs transgressed animal categories that demarcate pigs as edible or inedible, killable or unkillable, person or thing. Regardless of whether pig keepers identified as vegetarian/vegan or not, no participants considered their pigs to be 'edible'. For those participants who did eat meat, their pig became morally elevated above other pigs used for food production. Owners who adopted vegetarian or vegan lifestyles considered no pigs to be edible and described an empathy towards their pigs. Sandra, a meat-eater, represented the former belief and explained her annoyance at comments that construct her pig, Dusty, as edible.

> "A guy shouted over at us the other day 'I'll have a [bacon] sandwich' like trying to be clever…He was like 'it's just a joke', but I don't like it, don't make jokes about her".
>
> **Interview with Sandra, keeper of one pet pig.**

'Bacon jokes' were frequently heard by participants, creating varying levels of discomfort. Within these jokes, pigs are inherently tied to their potential as meat. In everyday life, the animal is lost in the language we used to describe meat. As Carol Adams (1990, p.51) argues, "our culture further mystifies the term 'meat' with gastronomic language, so we do not conjure dead, butchered animals, but cuisine". For instance, 'pig', instead becomes 'bacon', 'pork', 'ham', or 'sausage'. Through such language, meat is separated from the animal. The pigs at the brunt of these jokes are family members and will never become meat. Disrupting the fate of the pig by becoming pet challenges perceptions towards the pig and their assumed place in society, in Barad's (2007) terms, representing a practice of worlding.

Keeper of one pig, Beth comments that for those people who make such jokes, "It's probably the only thing they can say because they don't know anything about pigs other than they are meat. It's the only joke they make". Her observations foreground the pig pet-keeping relationship as transformative, challenging perceptions of pigs that place them as meat, as

edible things. Encountering the pig as a companion in these relationships created unease with 'bacon jokes', that categorised pigs as inanimate, edible matter was not in line with their personal categorisations of their pig, who had elevated status due to their emotional relationships. For others, constructing a pet-owner bond with a pig constructed all animals as inedible. Rachel became vegan after purchasing her pet pig, Romeo.

> "So, whereas people have dogs, and it doesn't change their perception about the meat market, having Romeo has made me appreciate that farm animals should be, to us, just as meaningful and have a loving life just as much as a dog or a cat or a rabbit…I get really upset now when I see cows in one of those lorries on the motorway, you know where they are going. So, I think that's the difference to having what people perceive a standard, domesticated animal or pet, to then something different. I think you just perceive the whole thing to be different".
>
> **Interview with Rachel, keeper of one pet pig.**

Rachel distinguishes how a relationship with a pig becomes markedly different from a relationship with what she describes as a 'standard, domesticated animal' in navigating ethical perceptions of animals. Rachel notes that whilst Romeo is placed as a farm animal, this should not infringe on his ability to flourish and to create meaningful bonds with others. Coming to this moral understanding of Romeo shifts the significance of other farmed animals as a result, as empathy grows when she is confronted with cows headed to the slaughterhouse. This relationship was transformative. As Lauren Berlant describes love as a transformative, political tool that can allow us to open to new forms of relationality, or "one of the few places where people actually admit they want to become different" (Davis and Sarlin, 2009, p.8), entering into affective pet-keeping relationships with pigs opens up a new way of seeing farmed animals. Loving pigs forces a recognition of their moral standing in everyday life and unveiling potential for changes to the place and status of pigs in society.

Similar sentiments were expressed by all participants who did not eat meat. For these participants, caring for their own pigs reinscribed their eating practices. Intelligence was frequently cited as a valued characteristic of pigs, further reaffirming beliefs that the species are mistreated in society. For many owners, the emotional and cognitive intelligence of the pig further condemned the farming of pigs and placed the pig within the same boundaries of moral concern that dogs are frequently afforded. Angela, the keeper of three pet pigs, felt very passionate about her veganism and reflected this in the love her family hold for their pigs.

> "The love we have for the pigs is almost like an empathetic love because when I look at them, I think, oh my gosh you're so disrespected in society and abused, it just literally

> saddens me, whereas dogs are respected and if you hurt a dog, you're a scumbag. If you hurt a pig, you're just doing your job… The love and empathy we have for our pigs goes kind of beyond having a normal pet if that makes sense. Just because of the passion, and the visions I see of pigs being abused and on slaughter trucks and that. It kind of makes me have a deeper respect for the pigs I've got."
>
> **Interview with Angela, keeper of three pet pigs.**

This 'empathetic love' described by Angela points to an intimate relationship that hinges upon pig transgression. Here, respect is granted to dogs on the basis of their companion animal status that does not typically extend to farmed animals such as pigs. Angela perceives that using pigs as food is unjust and their mistreatment troubles her, yet being able to have pigs as pets allows them to enjoy the life that she believes they deserve. For some participants like Angela, pigs are an oppressed and mistreated species within the animal-industrial complex. These beliefs ignited a particular type of empathy that came to the fore when entering into companionable relations with a pig, relations that are usually foreclosed to their species counterparts. Maya and her family chose not to eat meat soon after bringing their pig, Orla, into their family. During our interview, Maya explains how getting to know Orla has encouraged her to reflect on the experiences of her farmed pig counterparts.

> "Orla, if she lies down and you move, she will jump straight back up, they're always really aware. They're like a prey animal and she gets frightened really easily if there is a noise she doesn't know, she will get frightened. So, if you think about taking a pig to slaughter, it's horrible".
>
> **Interview with Maya, keeper of one pet pig.**

Lori Gruen (2015) describes empathy as a sensitive awareness and responsiveness to the human or animal other. Gruen uses the concept of 'entangled empathy' to describe how engaging in relationships with others calls our responsibility to their unique "needs, interests, desires, vulnerabilities, hopes, and sensitivities" (2015., p.3) and applies this to care ethics in human-animal relationships. This ethical perception enables a person to identify what holds moral significance in a given situation. The relation between keepers and their pigs in this context allowed them to become attuned to the needs of their own pigs. In the home, companion animals are often appreciated for their individuality (Swabe, 1999), whereas the individuality of the farmed animal can often become invisibilised as the collective needs of a larger herd become prioritised (Buller, 2013). The space of the home and transgression of the pig from farmed animal to companion animal foregrounds the individual pig and their vulnerabilities, leading some participants to re-evaluate the moral status of pigs. Empathy is a

guiding principle in how to care for pigs for keepers like Angela, explored in the following section regarding decisions made around veterinary treatment. These affective encounters transform animal categorisations, opening us up to new ways of flourishing with pigs as companions. These affective attachments are thus political, constituting the building blocks that rebuild worlds (Berlant, 2011). Though entering into a companion relationship with pigs, both pigs and humans become enrolled in a political project that has the potential to change the moral status of pigs through the legacy of affective co-relations.

6.4 "It's Not Just a Pig"

The relations between companion pigs and their keepers explored in this chapter let us think with and about pigs differently. Becoming pet, becoming loved, reveals new ways of living and flourishing with pigs, although this also came with challenges for participants.

Whilst most participants either had not needed to contact a vet for their pig or were happy with the service their vet provided, a small number of participants felt that pigs were treated differently from other pets. As pet pigs are a relatively new phenomenon in Britain and still legally classified as livestock, veterinary care arguably has not adapted to treating pigs as companions, rather than livestock. Such challenges were revealed in an interview with Kath, where she described an interaction with a vet after her pig, Bertie, had a seizure.

> "I called the vet out and the vet they sent me was just horrific. So rude… I asked him to leave…. started questioning my husbandry skills… I just felt he was really judging how I lived with them. I turned to him and said, 'you're a vet for commercial pig farmers and you have the audacity to turn around and question what I'm doing with my pigs?' … He could see their coats were a bit greasy because they had sun cream on and he said, "it's just a pig" and that's when I said "you need to go". It's not just a pig."
>
> **Interview with Kath, keeper of two pet pigs.**

The insistence that Bertie is 'just a pig' arguably ignores the affective relationships possible between pig and human and instead perceives Bertie as a replaceable, insignificant object. This resonates with similar sentiments expressed by animal technicians in the previous chapter (page 96). In both contexts, the phrase "it's just a pig" emerges as a source of tension between different ways of knowing and engaging with the pig. In the laboratory setting, technicians experience discomfort in the disconnections between their close, emotional attachments with pigs and the researchers' often utilitarian approach. This echoes the frustrations expressed by Kath in the pet pig-keeping context. The parallel narratives highlight a struggle to challenge

societal placings of pigs and underscores a need to recognise the alternative lives of pigs as they enter into new affective relations with people.

In this context, particularly where pet pig keepers experience a distrust of veterinarians and often turn to the internet and social media groups for answers to their veterinary questions (as several interviewees confessed to), veterinary practice with companion pigs becomes a "noisy epistemological place" (Anderson and Hobson-West, 2022. p., 497) as different knowledges compete for legitimacy. The role of veterinarians in this evolving field of companion pig veterinary care hinges upon the adaptation to the multiplicity of the pig and becomes an important facet of the transformative potential of love in pet pig-human relationships. Facilitating trust with keepers and reorienting expertise from farmed animal practice to companion animal practice is a priority in this developing field. This is challenging due to hesitancy in changing societal views of pigs and challenging the status-quo in veterinary practice (Anderson and Hobson-West, 2022), Donald (2018) argues that the role of affect and emotion is often downplayed in the Code of Professional Conduct (CPC) for veterinary professionals in the U.K. To better navigate ethical challenges in veterinary medicine, she argues for greater attention to be paid to "the emergent geographies of animals-in-the-making" (p. 472). Such attunement to more-than-human emotional geographies can provide an opportunity for development of care that is conscientious of the given social context, where pigs become companions.

Kath was not alone in having experienced ambivalence from vets who questioned their ability to take care of a pig. Due to the limited number of pigs seen by general practice veterinarians, their care can be challenging (Carr and Smith, 2021). Further, in a survey of smallholder and pet pig owners in the UK, 40% of participants 'wished their veterinary surgeon knew more about pigs' (Gillespie et al., 2015). These challenges to care present a potentially tense veterinary landscape for pet pig keepers. Janice explains how attempting to register her pig, Walter, with local veterinary practices was met with antagonism.

> "They probably just thought I was like Paris Hilton or something going to get a little minipig for my handbag. They probably just thought I didn't do my research, but I have done… I mean there are people who don't do their research and get their kids one for Christmas, and then it's dumped like a puppy at Christmas!"
>
> **Interview with Janice, keeper of one pet pig.**

Whilst Janice's remarks reflect a growing problem of unwanted and abandoned pet pigs, perhaps linked to difficulty in accessing appropriate and accredited care information[3], these experiences reveal some disregard of pigs as companion animals and further reflect the ambivalent place of pigs in society. Instances such as this reveal that affective relations between humans and pigs carve out new arenas for care. This kinship is political, creating space for new ways of encountering the other (Berlant, 2011). The consequences of political kinship for pigs, where pigs are understood as more-than-food and active agents in shifting emotional human-animal relationships, present inconsistencies with the legal and ethical placing of pigs in society as livestock. "It's just a pig" implies resistance to these kinship relations and places the pig as unworthy of a particular level of care, working as a barrier to hopeful practices of worlding where pigs are treated as companion animals. Whilst farmed animal welfare is commodified to create a market premium attached to the animal after slaughter (Buller and Roe, 2014) and is practised with the knowledge that the animal will be slaughtered, companion animal welfare is practised with the hope of ongoing flourishing for the animal. Kath's relationship with Bertie, combined with her vegan politics, build a world in which pigs are to be respected as companions. Thus, this should be translated into the veterinary care available. The continued categorisation of pigs as animals to be farmed proves a barrier to their care as companions. However, the case of companion pigs provides an avenue to build veterinary knowledges based on their ongoing flourishing, further explored in the context of pig rescue in Chapter 7. The transgression from farm to companion nevertheless creates an array of ethical contentions, that I now explore in the commodification and creation of the pet pig.

6.5 Commodifying Pet Pigs

Pigs kept as pets are typically smaller than commercially bred pigs. Selective breeding has allowed smaller pigs to be bred over generations, making them more attractive as companion animals that can live in the home. Smaller pigs are not only more practical as household pets but arguably are also perceives as 'cuter'. Evidence suggests that if an individual perceived an animal to be cute, the less likely they are to want to eat the same animal, perhaps due to the feelings of empathy elicited by cute animals (Zickfeld, 2018, Ruby and Heine, 2012). The downsizing of commercial pigs into companion pigs engineers an entirely different pig, one that is removed from potential as meat. The pig that is created as a result is supposed to be loved, yet it is worth critically reflecting on whom this love benefits and whom it does not. I have thus

[3] some participants reported that finding appropriate pet pig care information from accredited sources was a challenge and instead sought information on dedicated pet pig social media forums.

far explored how keepers of pet pigs perceive their relationships with pigs and the benefits of companionship, and emotional support humans can glean from these entanglements. Nonetheless, this leaves little room to discuss the arrangements that permit space for this love to develop. Here, I focus on the wider structures that create the loveable pet pig.

It is crucial to explore how consumer demand and preferences are being met in this industry. Pet pigs may be selected for certain aesthetic qualities such as unusual markings, that often increase the purchase cost of the pig. A breeder of pet minipigs interviewed also mentioned the importance of personality traits in selecting pigs to breed from.

> "For instance, Maggie is a really chilled-out pig. Her and Jack had litters, and over time you can see the traits through their lineage. Not just their features, but their characteristics as well as their looks and their behaviour. With certain pigs I've definitely been like "I'm not gonna breed from you anymore because you're a bit of a moody pig".
>
> **Interview with Claudia, pet pig breeder.**

This process engineers a specific type of pig. Beyond aesthetic qualities such as size, colour, and markings, the potential of a unique companion is harnessed. This exertion of human power over animal bodies is entangled within neoliberalist logic of consumer culture that has recast pets as commodities (Nast, 2006). Whilst research has demonstrated how pets such as dogs and cats are mobilised in the so-called 'cute economy' (Maddox, 2020), to the authors knowledge, little has been written about the commodification of pet pigs.

Interviewees within the pig rescue context suggest that unscrupulous breeding practices may be having an impact on pet pig health. One rescue worker described how breeding pigs to be smaller over generations, sometimes by breeding the runts of a litter, had impacted some of the pigs in her care.

> "All our pigs snore, and everyone goes "aww listen to the piggy snoring!" ...and I'm saying don't! It's not cute to listen to a pig snoring, the pig is snoring because of what we have done to them. You know, only need to look at their faces. Most of our pigs can't see very well, they've got teeth sticking out all over the place, their bodies are too big for their legs... they are so unhealthy, so unhealthy".
>
> **Interview with Keira, worker at animal rescue organisation.**

Observations like these underscore that affective relations, or the desire for affective relations, are not inherently benevolent and can perpetuate practices that are harmful for pig welfare. During ethnographic work volunteering at a pig sanctuary in 2021 I met Margot, a small pig

around five years old. I immediately noticed her short snout, and skin folds that covered part of her eyes. I wondered how this impacted her daily life. Could she see? Could she breathe properly? Margot was exceptionally friendly, and one afternoon I sat in her pen stroking her as she laid down on her side next to me. Whilst she seemed happy enough to be receiving affection from me, her laboured breathing concerned me. I know little of Margot's history and lineage, other than that she was purchased as a pet and subsequently given up to the sanctuary by her keepers. My encounter with Margot and conversations with animal rescue representatives regarding breeding practices provokes question surrounding the extent of health issues linked to breeding small pet pigs. At the time of writing no research explores the health and welfare implications of pet pig breeding practices. However, the concerns highlighted here mirror those regarding unscrupulous dog breeding, particularly in brachycephalic breeds. Brachycephalic dogs characterised by shortened snouts, such as English and French bulldogs, have experienced a growth in popularity in recent years. Brachycephalic conformation creates specific health and welfare problems for individual dogs, yet demand for flat-faced dogs propels continued breeding (Packer, 2021). Spencer et al. (2006) contend that such specialty breeding of pets thus constitutes an instrumental use of companion animals, as human desire for 'cuteness' outweighs potential impacts on the individual animal health. Such insidious manifestations of human domination over companion animals and their subsequent material inscriptions on the body are directly linked to companion animal commodification. The commodification and manipulation of pig bodies within the pet pig industry thus reaffirm the human-animal binary in this way. This dominance is of course deeply woven with the affection humans hold for pets (Tuan, 1984).

In addition to the breeding practices and the creation of a pet pig, it is essential to consider the welfare implications of the living arrangements for pet pigs. Whilst pet-keeping is often portrayed as a story of the blurring of human-animal boundaries and the active role of animals in multispecies entanglements, it is important to critically examine the power relations and welfare considerations involved in these arrangements.

6.6 Pet Pig Welfare & Legislation

In addition to the material inscriptions on the body of pet pigs that commodification brings, there are unique welfare challenges of caring for pigs within the home. Here I discuss how common issues with pet pigs pertaining to biosecurity and welfare are navigated by keepers and their pigs. These issues include incongruence between biosecurity legislation and the realities of pig-keeping in the context of the home, destructive and aggressive behaviours in pigs, as well as pet pigs being kept as solitary pigs despite the vast amount of research emphasising the

social needs of pigs. I discuss how these issues manifest and highlight how they disrupt the potentially transformative human-pet pig relationship. These tensions impact affective bonds between humans and pigs and, in some cases, lead to pet relinquishment. I suggest that education for pet pig keepers relating to key welfare issues is lacking in the UK, and that legislation on keeping pigs as pets must adapt to the unique nature and complexity of pet pig-keeping to avoid welfare challenges.

Contrary to typical pet ownership, pet pig ownership is subject to a number of regulations keepers must follow. The legal classification of pigs as livestock means that pet pig keepers must abide by the same legislation set out for pig farmers. The Animal Welfare Act (2006) protects farmed animals from 'unnecessary suffering' and outlines a duty of care that makes clear that persons responsible for an animal must ensure their welfare needs are met through taking reasonable actions. These include a suitable environment and diet, housing with or apart from other animals according to species needs, ability to exhibit normal behaviours and protection from pain, suffering, injury, and disease.

6.6.1 Biosecurity in Pig-Human Homes

Amid regulatory guidelines, keepers often found legislation on pig-keeping to be redundant for the context of pet pigs.

> "You had to make sure you followed the strict guidelines on how you prepared their food. You're not supposed to do it in your own kitchen, but I'm not really sure where else to do it. You're not allowed to feed them scraps or anything."
>
> **Interview with Carmen, former keeper of one pet pig.**
>
> Kate: Do you get information from DEFRA about biosecurity?
>
> Angela: I have but it is irrelevant to us because they tend to talk about herds, so it doesn't apply to us… but at the moment, they don't come into contact with any other animals or pigs. They don't go out.
>
> **Interview with Angela, keeper of three pet pigs.**

Existing regulations for keeping pigs in the UK are designed for pig farming in agricultural contexts, and often do not align with the realities of pet pig keeping. Regulations state that it is illegal to feed pigs kitchen waste to avoid spread of disease. Following these regulations in the home environment is often difficult for pet pig keepers.

> Kath shows me her 'pig area', a back porch where all food destined for the pigs can be stored and prepared away from the kitchen where human food is prepared. Kath takes biosecurity very seriously; I suspect more so than most. Many other pet pig keepers have confessed to me that they do not follow laws around feeding pigs. Kath tells me that the legislation relating to pig-keeping can limit their activities, for instance, she cannot take her pigs on day trips away like she can with her dogs, as any walking route needs to be pre-approved by APHA. Despite the limits imposed on Kath and her pigs, she explains that she tries to follow any rules diligently, as she would 'never forgive herself' if Bertie and Buddy were taken away from her because she didn't follow the law correctly.
>
> **Excerpt from field notes, visiting pet pig keeper Kath.**

The tensions between regulatory codes of practice and the practical realities faced by pet pig keepers underline the necessity for more context-led regulations. As mentioned by Angela, these laws are often perceived as 'irrelevant' in the context of the home, as pigs are kept in a domestic environment and not in a large herd where disease can spread quickly. Despite this, Gillespie et al. (2015) suggest that the pet pig and smallholder populations pose a potential risk for the spread of zoonotic disease. The research surveyed 313 pig keepers with less than ten breeding sows in England, 37% of which reported that they kept their pig(s) as pets. In general, there was a lack of knowledge regarding animal movements and feeding of domestic food waste. 17% of respondents had not registered their animals with DEFRA, a legal requirement.

I argue that biosecurity is understood and interpreted differently across space and in relation to pig identity. It is argued that commercial farmers are motivated to practice good biosecurity for the good of the farming community (Shortall and Brown, 2020), and have access to a wider array of information due to membership to commercial organisations (Correia-Gomes et al., 2017). Such knowledge networks are not readily available in the pet pig community.

The challenges of biosecurity in the pet pig context may be situated in existing literature. Douglas (1966) argues that societies create borders and boundaries to structure themselves and to keep things 'in place'. Anything that does not fit into this system or threatens its' integrity becomes 'matter out of place'. Dirt and disease can be seen as threats and rather than existing independently, must be seen in relation to the meanings that construct the boundaries that exclude it. Drawing from this theoretical framework, Robin et al. (2017) argues that rat owners construct their pets as different from wild rats, as their status as pet meant they become permitted members of the home, a bordered space free from connotations of disease and dirt. However, these perceptions resulted in lack of engagement with public health advice regarding a zoonotic disease outbreak of Seoul hantavirus in pet rats in 2012, as the advice was centred

around the message that rats are an inherent disease risk, whereas owners perceived disease to be 'out of place' within their homes (Robin et al., 2017).

Several zoonotic diseases present in pigs pose a risk to both human and animal health (Sriskandan and Slater, 2006, Renou et al., 2007, van Reeth, 2007). African Swine Fever (ASF) and porcine epidemic diarrhoea (PED) are recent examples of diseases that circulate globally, having catastrophic impacts on pigs and farmers. ASF has been reported in wild, farm, pet and smallholder populations across Africa, Asia, and parts of Europe (DEFRA, 2022). ASF is not zoonotic, but is a highly contagious pig-pig disease with a high mortality rate, killing almost all infected pigs (Galindo and Alonso, 2017). Considering these risks, the uncertainty of biosecurity legislation and their applicability to the context of the home expressed by participants of this research indicate a need for clear biosecurity and zoonotic education in this community. Yet, such an approach must be cognizant to the challenges pet pig keepers face due to the incongruence between regulations designed for commercial farming and the realities of pet pig-keeping in the context of the home. A context-led approach that is built around an understanding of the multiplicity of the pig should account for the nature of relations between pigs and humans in the home and develop educational initiatives tailored to this.

6.6.2 Pet Pig Welfare Issues

Interviews with animal rescue organisations experienced in taking in unwanted pet pigs highlight that the lack of attention to the specific needs of pet pigs has led to several cases of pigs being rescued from inappropriate housing. Inadequate guidance and oversight for keeping pigs as pets have resulted in several rescue cases.

> "[there should be] tighter regulations in what kind of land they're going to, they should never be allowed to have a pig in a flat or a two up, two down, or a three-bed semi, because they haven't got the land for them. It's the wrong environment".
>
> **Interview with Julie, animal rescue charity founder.**

The current Code of Practice for the Welfare of Pigs (DEFRA, 2020) references the Welfare of Farmed Animals Regulations 2007. The regulations state that a pig must have enough space to turn around, lie down, rest, see other pigs, and maintain a comfortable temperature. Such regulations do not refer to, or transfer well to, the setting of the home. The adaptation of regulations to be context-specific, accounting for the diverse environments pigs may find themselves in, could greatly improve their welfare. Existing legislation primarily views pigs through the lens of animal agriculture, missing the nuances of pigs' relational and evolving

identities as companion animals. It is essential to consider and accommodate the multiplicity of the pig to ensure their welfare.

Whilst the challenges that pet pig keepers face in navigating the regulatory landscape of pig care highlight the need for context-specific pig-keeping guidelines, it's equally crucial to delve into how pet keepers navigate and address pig welfare issues that become apparent in the pet pig-keeping context. Issues such as destructive and aggressive behaviours in pigs and keeping them as solitary animals, despite research emphasising their social needs , have a profound impact on the human-pet pig relationship. These tensions often disrupt the affective bonds between humans and pigs, sometimes leading to pet relinquishment.

> "His behaviour was changing, and when we'd been out for a walk, he wouldn't want to come in, but I couldn't stand around for hours for him… If I say he was becoming an inconvenience to me, that sounds really nasty, but I just knew I wasn't giving him what he needed. In my heart I knew he wasn't happy a while before I let my head realise he wasn't happy… he became aggressive to me and that was really all to do with being outside … It just got to the point where I knew he was so frustrated that he couldn't do what he wanted to do."
>
> **Interview with Carmen, former keeper of one pet pig.**

Pet pigs are often observed to show aggressive behaviours directed at humans, with no significant differences found between male and female pigs. As a result of this, Tynes et al. (2007) suggest that companion animal veterinarians should educate keepers on these potential issues and recommend that pigs should be kept in pairs or groups, as social isolation can contribute to pig stress. Feelings of guilt overshadowed Carmen's decision to rehome Charlie as it became clear he was not as compatible with her life and work schedule as expected. The belief that Charlie's behaviour was related to limited access to the outdoors highlights that Charlie's innate desires were not being fulfilled within the spatial confines of the home, and Carmen's work schedule meant she could not allow time for Charlie to have access to outdoors when he chose to, leading to conflict in their relationships and disrupting the boundaries of the multispecies family.

> "I just thought if I loved him and gave him all I could give him and he would be part of the family, that would be enough for him, and it would be fine."
>
> **Interview with Carmen, former keeper of one pet pig.**

When Carmen first adopted Charlie, her decision was rooted in the optimistic belief that owning a pet pig would provide her with a loved and cherished member of the family. This hope for a

strong affective attachment that benefitted both Charlie and Carmen's family hindered the flourishing of this relationship as Charlie's behaviour became increasingly difficult to manage. Lauren Berlant's (2011) writing on 'cruel optimism' can be used to elucidate the tensions in this pet-keeping relationship. Cruel optimism refers to the idea that hopes for particular desires and attachments can ultimately obstruct the very flourishing and fulfilment they seek, as the desired object or situation becomes an obstacle rather than a source of flourishing. As such, this tension in the pet-keeping relationship inhibits constructive affective connections.

Carmen's decision to rehome Charlie can be seen as a recognition of the cruel optimism hindering Charlie's wellbeing. Rehoming was done as an act of care, as Carmen describes that she was careful in selecting a new home for Charlie. After declining a request from a local family to take him due to fears that he would be left on his own for long periods of time, Carmen found a suitable home that, in her words, "ticked the mental list in my head for everything I wanted for Charlie". Through rehoming Charlie, the networks of care transcended both the spatial boundaries of the home, and the temporal boundaries of the human-pet bond.

In addition to aggression, pigs are inquisitive and will explore their environment by behaviours such as chewing, which may be perceived as destructive in the home (Jackson and Cockcroft, 2007). The charisma of pigs complicates love in the context of pet pig-keeping, as demonstrations of their piggyness become problematic in the home environment. Displays of aggression from pet pigs towards human keepers are typically more commonly observed in pigs housed on their own (Tynes et al., 2007). Pigs are social animals and it is often advised against keeping one pig housed alone as this can be a cause of frustration for the pig (Spencer, 2014). This may contribute to aggression and the relinquishment of pet pigs by their keepers (Woods et al., 2019). Despite the recognition that socialisation is an important facet of pig welfare, many pet pigs are sold individually.

> I think it would have been really beneficial to get another pig for her. I think she relies on us so much because we are like her herd. Being alone for her is really difficult. If we need to, we can leave her alone in the backyard for a day, but we try not to because she gets very stressed out if we leave her alone for too long. Sometimes, when she gets stressed, she will try and destroy things.
>
> **Interview with Louise, keeper of one pet pig.**

Louise sees her relationship with her pig as a strong affective connection but recognises that her humanness stands as a barrier to replacing the social bond of another pig. In some ways, the human-pig boundary is blurred in the human-pig pet-keeping relationships, but at times their distinct alterity become a cause of vulnerability for the pig. Several participants also had other

pets in the household with their pig. Janice reflected on the relationship between her dog and pig.

> "I know [pigs] probably should be in pairs or in a herd kind of thing, but I think he gets loads of attention. He's got the dog, the dog gets on with him fine. Erm, initially when he came, they had a few little wars. It was a case of working out who's boss."
>
> **Interview with Janice, keeper of one pet pig.**

Whilst anecdotal evidence from participants suggests that pigs and dogs can live together relatively harmoniously, the social compatibility of dogs and pigs is unpredictable. Almaraj et al. (2018) has pointed out that whether a dog and a pig can live together without conflict often hinges on the unique personalities and temperaments of the individual animals. Whilst some pairs may form close bonds without conflict, others may experience power struggles, particularly as the pig matures. This uncertain terrain in pet pig-dog relationships adds complexity to the affective dynamics within multispecies households and raises questions about the potential consequences of such multispecies interactions on pig welfare and wellbeing.

Participants who kept one pig often viewed themselves as their pigs' main companion. During interviews, I encouraged participants to consider their relationship from their pigs' perspective. Most participants thought that their pigs did have some form of bond with them, demonstrated through displays of affection. Some were hesitant to project overly anthropomorphic interpretations, instead suggesting that their pigs' bond with them was based on food provision. Whilst anthropomorphism may be perceived as a threat to the scientific integrity of understanding animal behaviour, Dawkins (2012) argues that it may be used as a tool for 'getting at' animal subjectivities. Although this must be done with caution to not lead to "pure and unbridled speculation" on what animal behaviour might mean (p.21), anthropomorphism has advanced fields such as cognitive ethology by allowing animal emotions and experience greater power. To varying extents, interviewees often used their own interpretations of pig behaviour as evidence of an emotional bond.

> I think she considers us like someone that feeds her, but I also think there is more to it than that. There was one time where I was away for a week. The moment I got back she ran from the backyard and was so happy to see me… like, a deeper relationship than just food.
>
> **Interview with Louise, keeper of one pig.**

It is difficult to determine whether Gracie, Louise's pig, truly 'missed' her keeper when they went away. Anthropomorphism sceptics might point out that as Gracie is a solo-housed pig, she might crave company more so than other pigs that live with others of the same species. As such, Gracie has learned to depend on her human caregivers to fulfil her natural desires.

The solo housing of pet pigs provokes a questioning of the relationship between love and domination, as emphasised in political concepts of pet-keeping (Nast, 2006; Tuan, 1984). It is unclear whether bonding with a human or dog in the home can satisfy the social needs of pigs adequately. This brings into question the ethical obligations of pig caregivers in the context of pet-keeping. As pet-keeping can be thought of as power-laden space where human influence is exerted over animal life, the breeding and selling of pigs as pets necessitate a critical examination of their welfare, particularly when they are housed individually. The commodification of animal life to meet human demand for companionship compromises an innocent pet love and demands critical reflection on the potentially negative implications of romanticised human-animal relationships.

Understanding these sometimes-paradoxical nature of relations through a lens of affective dynamics underscores the need for a more nuanced ethical framework that shifts focus from human desires to a greater recognition of pig personhood and lived experience. The issues presented raise concerns about power relations and control within the human-pig relationship. The idea of the pig as a loving companion can sometimes overshadow the need for adequate welfare standards and considerations. It is imperative to ensure that the physical and emotional needs of the pig are met and that the decision to bond the pig with a specific individual or animal is made with the pigs' best interests in mind. This challenges not only the bi-directionality of the human-animal bond in pet-keeping but also casts doubt on the notion that love alone inspires genuine care. In this context, love becomes entangled with the wider commodification of animals, at times eclipsing the essence of meaningful care.

6.7 Conclusion

The pet pig provided a unique case study to understand how a farmed animal, used as a food product by humans, can be welcomed into spaces such as the family home where they may be considered 'out of place' (Philo and Wilbert, 2000) and loved as a member of the family. This chapter has explored the becoming of companion pigs within human homes and the multifaceted nature of love that underpins these relationships of worlding. It has interrogated the complexity of affective relationships in the becoming of the pet pig, considering the ethical potentials and political challenges of love in this context. These challenges manifest for the pigs

themselves, their keepers, the veterinary experts entrusted with their care, and the regulatory bodies tasked with overseeing their welfare.

In response to the first research question guiding this thesis regarding affective human-pig relationships and their contribution to understandings of animal categorisations across space, this chapter has shown that relationships with pet pigs serve as a lens through which to examine the shifting boundaries of species identity. The affective encounters within these relationships not only redefine the categorisation of pigs but also have political implications. They lay the foundation for potential changes in the moral standing of pigs through affective co-relations. When humans enter into companion relationships with pigs, both parties become part of a larger political project capable of reshaping the way we view pigs. Through these relationships, the boundaries between edible and inedible, pet and livestock, person and thing, are reconfigured, inviting us to reflect upon the ethical implications of these shifts. Love for pet pigs is often hopeful and transformative, leading to new understandings of pigs. Yet, this love can also lead to ethical challenges under the conditions of cruel optimism (Berlant, 2011). These challenges often centre around issues of veterinary care, the commodification of pigs, and the potential for love to overshadow the necessity of ensuring the wellbeing and ethical treatment of these animals. For instance, the welfare issues that manifest in pet pig households often emerge from the optimism that initially brought humans and pigs together. The hope for a harmonious co-existence can inadvertently amplify the vulnerability of the pig. In such cases, love and care have indeterminate outcomes on pig welfare. By exploring the emotional and ethical dimensions of these relationships, we gain a deeper understanding of how affect functions within the context of animal-human interactions.

Understanding affective dynamics of the human-pig relationship within the context of the home is of paramount importance. The insights laid out in this chapter underscore the need for a nuanced ethical framework that places pig wellbeing and personhood at the forefront, shifting away from anthropocentric pet-keeping relations. Further, the chapter has demonstrated that as these alternative pig lives become entangled with regulations and veterinary care, an inherent awkwardness emerges. Considering how pet pigs enter into different relations of care than their species counterparts in commercial agriculture, necessitates a different approach to welfare legislation and veterinary care tailored to pigs that is context-led, rather than species-led. This can recognise and respect the affective relations between humans and pigs, as well as the specific risks to pig health and welfare relevant to the home environment. Further, this chapter highlights the urgency of improving keeper education to promote responsible pet pig ownership.

Despite these challenges, the chapter foregrounds that the affective bonds between humans and companion pigs challenge established norms and offer novel avenues for multispecies flourishing across species. Multispecies love becomes a catalyst for ethical re-imagination and social change, inviting us to reconsider our interactions with pigs and to recognise their shifting identities and capacities as they occupy spaces of companionship with humans.

Chapter 7 Becoming Rescue Pig: Affective Communities

7.1 Introduction

> "You're the wonders of the world. You're the ones who have escaped through this horrendous net… they tell a survivor's story. Hopefully, by telling their story, people make kind choices".
>
> **Interview with Ben, farmed animal sanctuary founder.**

Every year, around 10 million pigs are raised in the UK solely for human consumption. The vast majority of these pigs are slaughtered before they reach six months old. In the above quote, Ben reflects on the pigs in his sanctuary as escapees of a 'horrendous net'. This net refers to the socio-political-legal structures that demarcate pigs as commodities and thus legitimise their objectification (Twine, 2012). In escaping from these structures, pigs become survivors and ambassadors for their species, able to create new affective engagements with the world.

As I delved into researching rescue pigs, I learned that every pig had their own unique story that led to their life in rescue. Some were piglets bought from farmers markets by concerned members of the public. Others were commercial pigs given up by farmers. One pig was found abandoned, wandering around a town centre. Several were previously pet pigs, relinquished by their caregivers who were unable to provide the care and attention they needed. Some pet pigs were forcibly taken by animal welfare organisations from unsuitable accommodation. One piglet found his way into sanctuary after a bystander intervened to save him from being used as bait in a dog fight. Upon arriving at a rescue, the pigs become part of often small communities of people working to change their worlds. These 'coming to rescue' stories are more than tales of rescue and refuge; they are narratives of world-making. Within these stories, pigs have embarked on transgressive journeys and undergone profound identity (re)constructions.

Gillespie (2022) argues that farmed animal sanctuaries are sites of alternative politics of animal flourishing. In this chapter, I explore how a new politics of pig flourishing emerges within the transformative spaces of pig rescue, as pigs forge new bonds and connections with both human caregivers and fellow pig residents. Drawing on a combination of interview data from workers and volunteers at various animal rescues and sanctuaries in the UK, as well as ethnographic work at one pig sanctuary, I argue that these organisations form affective communities, prioritising the cultivation of meaningful connections between pigs and humans through

practices of empathy and attunement. In previous chapters, I have discussed how humans become attuned to the needs of pigs, yet this attunement often happens within rigid socio-political structures that dictate the lives and deaths of pigs. In contrast, listening to pigs within the rescue setting is a practice that is actively invested in dismantling the structures that curtail pig agency and is used as a tool to build affective communities where pigs are given greater agency in shaping their lives. In turn, this offers a glimpse into the possibilities of shared worlds with pigs that are not built on their subordination to human control and instead aim to foster their autonomy.

The communities of pig rescue are bound by shared affective bonds, forming a strong sense of interconnectedness and solidarity. As Hutchinson (2013., p.127) writes in her work on affective communities as security, "emotions are a mechanism through which political identities and communities are shaped and sustained. They are part of the social fabric that binds communities together". Moreover, the affective community is driven by a shared hope of political potential (Zink, 2019). This solidarity emerges from a political and ethical commitment to the flourishing of pig and human lives. Yet, cognizant to the broader context, affective communities must be understood as situated within histories of species power relations that create a tension between the shared hope for future pig flourishing and the realities of pig exploitation and commodification within the animal-industrial complex. These histories of species power relations carry deeply entrenched hierarchical structures that seek to derail the transformative potential of affective communities. Yet, it is precisely within this tension that the political potential of affective communities emerges, as they seek to create their own heterotopic spaces for pig and human flourishing. In other words, affective connections both arise from and reify the disparities within human-pig entanglements.

Throughout this chapter I explore the transformative journey of becoming a rescue pig in affective human-pig communities. By making pigs encounterable, individuality is given centre stage in the stories told by pig rescue and ultimately aims to challenge beliefs about pigs and disrupts their assumed position in industrialised meat culture. Within these spaces, the goal of ongoing pig flourishing requires tinkering with existing structures and knowledges to enact heterotopic spaces where alternative human-pig relationships can be practised. The chapter argues that affective solidarities with pigs aim to be responsive to pig agency and resistance to allow pigs a voice in decision making. Despite the shared goal of creating positive and productive human-pig connections that contribute to the ongoing flourishing of all human and nonhuman members of the community, the chapter examines the barriers to these connections that emerge from entrenched species power relations. Firstly, I provide contextual information on the pig rescue organisations that were involved in this research and discuss the concept of ongoing pig flourishing within these spaces.

7.2 Pig Rescue and Ongoing Flourishing

> Jacqui, the sanctuary founder, explained that the pig sanctuary had started as an accident. Originally, she had her own four pet pigs on the land behind her farmhouse. A local woman who knew of Jacqui's pigs had asked her if she could take six more pigs who were due to be euthanised if they could not find an appropriate home. From these serendipitous beginnings, the sanctuary is now home to 35 pigs of different breeds and sizes, as well as several guinea pigs, chickens, and a cat.
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> **Excerpt from field notes, visiting the pig sanctuary.**

All of the pig rescue organisations involved in this research were charities and relied on public donations. While many organisations depended on volunteers for day-to-day operations, some also employed paid staff. Most of the organisations were involved in rescuing multiple companion, farmed, and wild animal species. Others were focused entirely on farmed animal species. Two described themselves as pig sanctuaries, though occasionally took in other animal species in need when possible.

Whilst animal rescue and sanctuary organisations are similar, there are a few important differences to note. Animal rescue organisations typically provide temporary accommodation for animals who have been abandoned or abused, and often seek to rehome animals as soon as possible. Sanctuaries, on the other hand, provide forever homes for their resident animals. The distinction between sanctuaries and rescues can nevertheless become blurred, especially when it comes to pigs. For instance, many rescues interviewed do not provide a pig rehoming service due to the practical difficulties in rehoming pigs to appropriate guardians and instead provide long term care. Despite this, some sanctuaries will rehome pigs if they deem the proposed guardian experienced enough to provide satisfactory care for a pig. This ensures the sanctuary has space to take in new pigs in need[4]. Furthermore, sanctuaries are often run with a vegan or vegetarian ethos and take an active stance against animal agriculture. On the other hand, many animal rescues choose to distance themselves from such animal rights movements and instead focus solely on responding to animals in need. Unless stated otherwise, 'pig rescue spaces' will be used in this chapter as an umbrella term describing both sanctuaries and rescues.

Despite these differences, I contend that affective engagements between pigs and humans in pig rescue spaces are centered around the concept of 'ongoing flourishing'. Welfare scientists

[4] A lack of space to take in new rescue pigs (particularly unwanted pet pigs) was frequently cited as an issue among animal rescue organisations during interviews.

have used ‘flourishing’ to describe having many positive experiences throughout life and very few severe negative experiences. Centrally, the concept focuses on the ability to exhibit species-specific natural behaviours as an integral facet of welfare (Browning, 2019). For pigs, such behaviours include foraging, play, exploration, familial interaction, and nesting for sows (Špinka, 2006). It is suggested that most pig farms worldwide fall short in providing opportunities for pigs to exhibit these behaviours (Lawrence et al., 2018). The conventional notion of flourishing in the context of animal agriculture centres on improving positive experiences for pigs until their slaughter at around 6 months old. In this sense, flourishing is a temporally bound concept tied to the economisation and commodification of pig bodies. Little work attends to farmed animal flourishing outside of the animal agriculture context. Kymlicka and Donaldson (2015) highlight how residents of farmed animal sanctuaries are entitled to care “designed to benefit animals for their own sake, and to support their flourishing, insofar as possible, for the duration of their natural lives” (p.55). Flourishing in this context instead refers to the *ongoing* flourishing of animals, where their individual needs, desires, and wellbeing are prioritised and supported, free from temporal limitations on pig life imposed by the animal agriculture industry. It encompasses the creation of environments that enable pigs to thrive, engage in natural behaviours, form social connections, and experience agency and autonomy throughout their lives. This understanding of flourishing challenges the conventional narrative that confines pigs to a predetermined trajectory of optimal growth and slaughter. By creating these spaces for farmed animals and being open to relationships whereby animal preferences are given consideration, humans may be better placed to interpret their desires, allowing some level of nonhuman participation in decision making. Whilst these spaces could allow greater species-specific flourishing, there is possibility for power imbalances to emerge as a select few individuals make decisions on behalf of animals. This can result in hierarchical structures that are difficult to challenge (Giraud, 2019). Nevertheless, this context allows us to ask questions about what animal desires might be in terms of their social lives, activity preferences, and so on. The chapter posits that pursuing ongoing flourishing for pigs involves rescue organisations forging affective communities with pigs, where all members are given a ‘voice’ in decision making. This requires learning with pigs, a process where response-abilities are continually (re)shaped and are become transformative of material and embodied relations across the species divide (Haraway, 2008).

Foucault’s concept of heterotopia is useful to approach spaces of pig rescue in considering the political-ethical potentials for pig life outside the agri-food context. These are spaces where different kinds of social ordering with humans and animals are tried out (Hetherington, 1997), as explored in Chapter 2. In the case of the pig rescue, this is a space where alternative ways of living with pigs can be tried and tested, often with the aim of creating less hierarchical, power

imbalanced relationships decoupled from the agri-food context (Donaldson and Kymlicka, 2015, Scotton, 2017). The spaces of pig rescue thus become sites of experimentation and exploration of ongoing flourishing for humans and pigs. It is through these heterotopic spaces that the pig rescue becomes transformative, challenging dominant norms and envisioning alternative possibilities for human-pig relations. Unlike the immateriality and placelessness of utopias, the heterotopic sites of pig rescue are spatially bounded, situated within a broader socio-political context that places conditions upon ways of living with and relating to pigs. Nevertheless, even when human-animal relations are situated within a context that aims to be non-exploitative, as is the case in many animal sanctuaries, ultimately humans make decisions on behalf of animals (Donaldson and Kymlicka, 2015). Efforts can be made to understand the requirements and needs of animals drawing from shared embodied experiences, as well as ethology and animal welfare science. Nevertheless, the absence of shared language and the interdependency between animals and humans may leave open space for power imbalances (Donaldson and Kymlicka, 2011).

I now turn to explore how the pig rescue space is set up to allow for pigs to enact species-specific behaviours, acknowledging the challenges and complexities that arise in creating such spaces and nurturing affective communities.

7.3 Creating Space for Pigs

The material space of the pig rescue is home to an affective multispecies community. The physical space itself must be designed to meet the needs of pig residents, humans, and any other species that each pig rescue houses. In this section, I interrogate how the material space of pig rescue is purposefully designed to address the needs of both humans and pigs in the community. While striving for a notion of 'freedom' that goes beyond human-centric ideas, pig rescue organisations must navigate the ethical complexities of ensuring the safety of the pigs in their care. However, these decisions also raise ethical ambiguities, as determining safety for animals unable to articulate their desires requires careful consideration, and questions of who is welcome in the community come to the fore.

Many of the pig rescue spaces interviewed had large areas specifically designed for pigs to live in a herd, allowing them to live with others in an outdoor setting and express natural behaviours.

> "We've tried to model it on what would be a wild boar environment. So, you know, there is plenty of woodland for them to root around in, there's natural foraging opportunities ... different trees for them to scratch up against and nest building opportunities as well which is really important".

Interview with Kelly, animal rescue charity manager.

In spaces such as these, there is a commitment to ensuring that the environment is species appropriate. Outdoor pasture for pigs is associated with several welfare benefits including more opportunities for natural behaviours such as foraging and exploration and greater freedom to form social structures according to preference (Pietrosemoli and Tang, 2020). In the EU, majority of livestock pigs are raised in intensive conditions, with the exception of many breeding sows and piglets who are reared in outdoor systems (European Food Safety Authority, 2007). In the UK, this equates to approximately 60% of sow and fattening pig herds kept indoors (Woods, 2019). Indoor systems create challenges for pigs to organise social hierarchies and often results in increased frequency of observed aggressive behaviours and tail biting injuries (Maes et al., 2020).

The decision to mirror a wild boar environment prompts a reconsideration of the pigs' identity in the rescue space. It signifies a conscious effort to restore or allow for a more natural expression of pig behaviour and instincts, moving away from the typical environment of the commercial pig. This shift challenges established norms of pig identity, which are tied to histories of domestication, commodification, and human utility. The design of pig environments was also often further focussed on individual pigs needs. The pig sanctuary I volunteered at took a different approach to housing, choosing instead to house pigs in smaller groups rather than in a large herd (Figure 2).

Figure 2 Pig pens at the Pig Sanctuary [image taken by author]

The sanctuary is home to around 35 pigs, housed in pairs or small groups across approximately 15 pens. Each one has a hut in the middle lined with plenty of straw, where the pigs sleep. There is also a trough for food and water. Some pens have a concrete slab in front of the huts. One of these pens is home to Bonnie and Chrissie, two elderly pigs with mobility issues. Jacqui, the sanctuary founder, installed the concrete block after noticing that they had become withdrawn. She worried that they had become unwell, however, after observing their behaviour she noticed that the pigs were struggling to walk over the muddy ground and as a result, spent more time in their hut. The concrete slab has allowed them to move with greater freedom throughout their pen.

Excerpt from field notes, touring the Pig Sanctuary.

The sanctuary's attunement to the needs of the pigs is signified through the observation of the pigs' behaviours and subsequent intervention. Another sanctuary founder, Max, described in his interview the 3-acre paddock that accommodates the needs and preferences of the resident 50 pigs. Max emphasises the importance of proper fencing to prevent escape attempts by the pigs, requiring an entire perimeter enclosure reinforced with concrete footing, posts every six feet, tin sheets, and scaffold boards. Whilst the sanctuary wants to provide the pigs with as much autonomy and freedom as possible, this must be done with careful consideration and trade-offs to secure the long-term protection of the pigs. The fencing is an example of this. This enclosure and curtailment to pig agency simultaneously becomes an act of protection affirming the sanctuary's commitment to the wellbeing of its pig residents. Furthermore, this challenges notions of freedom that are rooted in human-centric values and opens up a broader conversation about the complexities of animal autonomy (Browning and Veit, 2021). As Abrell (2021) argues, animal sanctuaries face challenges in implementing ideals of freedom in practice, as they must navigate the complexities of balancing animal freedom with concerns for their safety and wellbeing. In this context, the sanctuarys' act of enclosure is an ethical stance that acknowledges the entangled relations between humans and animals, and the moral responsibility to safeguard the wellbeing of pigs that humans have brought into existence.

Within the fencing of Max's sanctuary, the pigs have access to separate houses, some of which are traditional pig arks, whilst others are designed and built by the sanctuary team to provide larger and more comfortable shelters compared to commercially available structures. Large straw bales are dotted throughout the field, which the pigs play with and create resting spots with. As such, 'freedom' can be thought of as freedom to express natural behaviours and exercise choice, rather than a human-centric ideal of freedom as free from captivity (Browning and Veit, 2021).

On an aesthetic level, the sanctuary appears to parallel outdoor pig farms. However, the sanctuary strives to create an affective community that fosters the ongoing flourishing of pig lives, where their needs and desires are respected and nurtured. This intention shapes the ethical landscape of the sanctuary, where the agency of pigs is not entirely suppressed but rather negotiated with care and respect. From this perspective, acts of control such as the implementation of fencing, becomes an expression of care. As such, a care-ful boundary is drawn with respect and a commitment to safeguard the long-term wellbeing of pigs. In this context, control becomes a mechanism of care, enabling the sanctuary to provide the pigs with the freedom to express their natural behaviours and make choices that shape their daily lives. Chapter 5 also notes the interconnections between care and control within the animal rescue context, yet across the different spaces of human-pig worlds the conditions of care and control differ. Whilst this work by sanctuaries is entangled in broader power relations of human control

over animals (Abrell, 2021), the sanctuary's commitment to an affective community underscores the recognition of pigs as individuals with unique needs and desires, transforming acts of control into expressions of compassion and respect.

In creating a space that secures long-term wellbeing for pigs, the provision of a natural, outdoor environment is fundamental. Nevertheless, this also presents challenges to pig health and welfare. For instance, outdoor pigs can be more vulnerable to parasitic infections (Pietrosemoli and Tang, 2020). As highlighted by Jessica, founder of a pig sanctuary, managing disease risk within a sanctuary setting can be a complex ethical matter, particularly for vegan sanctuaries due to the presence of other animals, such as rats, that may contribute to disease transmission and raises questions about the sanctuary's inclusivity.

> “They [the pigs] could contract [disease] if you're not careful about having a clean environment and reducing the numbers of rats, which is a bit of a contentious issue really, for a vegan sanctuary”.
>
> **Interview with Jessica, pig sanctuary founder.**

Affective engagements determine the positioning of bodies in relation to specific societal ideals and thus govern the inclusion, or exclusion, of certain bodies in particular spaces (Tolia-Kelly, 2006). As Jessica states, the presence of other animals and the associated risk of disease presents an issue for vegan sanctuaries, who then must decide which animals are made welcome in the sanctuary and which are not. Vegan sanctuaries must navigate the delicate balance between upholding their ethical principles of compassion towards all animals and making decisions that ensure the wellbeing of the pig residents. The sanctuary’s commitment to providing a suitable environment for the pigs is entangled with the practical complexities of managing disease risk from co-existing with other animal species. Whilst helping feed the pigs one morning during my fieldwork, I became aware of the complexities of managing an unpredictable, multispecies environment alongside a commitment to pig health and wellbeing.

> I am stood in a pen with a group of elderly female pigs helping with the morning feed. I notice that several crows had positioned themselves around the pen, occasionally flying onto the pigs’ backs. Sometimes, the pigs became startled by this, but they are not as quick as some of the younger pigs at the sanctuary and cannot move away easily. I look up and notice plastic birds placed strategically in the trees overlooking the pig pen, that volunteer Mary tells me are intended as crow deterrents. She says that the crows will peck at the pigs, sometimes leaving painful sores that the volunteers must

then put antiseptic cream on to prevent infection. "We love all animals here… except the crows" she explains to me.

Excerpt from field notes, volunteering at the Pig Sanctuary.

The sanctuary is also aware that crows could potentially pose a disease risk, not only to the pigs but also to the chickens who also reside at the sanctuary (at the time of my visit there was a high risk of avian flu in the UK). These encounters between crows and pigs add layers of ethical complexity to the caregiving practices in the sanctuary. Caring for the pigs requires scaring the crows away and disrupting where they chose to fly and sit. Thom van Dooren (2014) highlights the importance of attending to these encounters and their potential to shape multispecies worlds and relationships. In this sanctuary, an imagined future where pigs are secured ongoing flourishing legitimise the present practices of making crows unwelcome in this space, leading to an unsettling discomfort in the care practices. In this context, a focus on affect sheds light on the social organisation of spaces and the power dynamics involved in deciding which animals are allowed to belong in the sanctuary. A Spinozian-inspired ethics acknowledges that such decisions are not black and white, rather they require a balance between openness to different beings and the consideration of practical limitations and boundaries (Thanem and Wallenberg, 2014). It highlights the complexities of managing inclusivity while prioritising the wellbeing of the pig residents, ultimately influencing decisions about co-existing with other animal species. Thus, creating space for pigs in rescue is not a straightforward task. Commitment to creating an affective community that prioritises the wellbeing of the pigs means that the boundaries and practicalities of care must remain open to ongoing exploration and adjustment. This cosmopolitical approach suggest that spaces and practices within the sanctuary become subjects of experimentation (Latour, 1996). Further, navigating human and animal relations whilst prioritising the wellbeing of pigs over other species underscores the intricate nature of affective (dis)connections in the sanctuary, demonstrating how decisions are entangled within the broader context of human-animal power relations. This openness to the complexity and futures of co-existence extends to the management of the pigs and their social dynamics, addressed in the following section.

7.4 The Social Lives of Pigs

The opportunity to socialise is an important facet of pig flourishing. Evidence suggests that disrupting social groups, either by splitting up pigs or by crowding many together, increases stress indicated by behaviours such as tail biting and may even contribute to a higher disease risk (Proudfoot and Habing, 2015). Much of the literature on social behaviour in pigs is intended to provide insights to reducing aggressive behaviour that jeopardises pig welfare in an

agricultural context and that may result in financial loss for the farmer. There is a significant gap in our understanding of pig socialisation beyond this commercial context, leaving unexplored the opportunity to recognise pigs as agentive beings with rich inner social lifeworlds.

The social lives of pigs in commercial farming are frequently shaped by economic and practical considerations. Under UK legislation, piglets must be at least 28 days old before weaning, though this can be earlier if their health and welfare is compromised (DEFRA, 2020). However, free-ranging pigs typically wean their piglets when they are between 60 to 137 days old (Jensen and Recén, 1989). In natural settings, pigs will also form sounders – small groups comprising adult females, their offspring, and other juvenile pigs sharing a home range (Marchant-Forde and Marchant-Forde, 2005). Conversely, individual pigs on the farm are often mixed into new, unfamiliar groups which can lead to fighting and tail biting, potential stressors for pigs (D'Eath and Turner, 2009, Camerlink and Turner, 2017). Whilst some efforts are made to alleviate stress by grouping pigs appropriately on the farm, this is done to minimise economic loss and produce a quality meat product. This specific construction of the pig is materialised at the expense of a pig whose social desires are given higher priority.

Describing sanctuaries as “frontiers of interspecies friendship”, Scotton (2017. p.99) argues that allowing farmed animals to socialise with both other animals and humans where appropriate is a basic right related to welfare. As described in the previous section, the physical spaces of pig rescue are often designed to facilitate natural social behaviours. By prioritising the social needs of pigs, pig rescue spaces challenge the prevailing norms associated with pig housing and lead to new ways of understanding pig social worlds. Paying attention to these spaces can help us to understand what pig wants and desires may be, adding to discussions on how animals may be accorded a greater voice in decisions that ultimately dictate their lives (Westerlaken, 2017). Furthermore, the pig rescue space makes visible interspecies friendships that may otherwise be curtailed in many commercial pig production settings.

Pig rescue spaces often keep pigs together if they arrive at the rescue in a pair or group, allowing them to maintain established social hierarchies and meaningful connections with fellow pigs. Jacqui invited me on a tour to meet the pigs, where she told me about the friendships and bonds between different pig residents.

> We move through the wooden pens, stopping at each one where Jacqui tells me more about each group of pigs. Daisy and Ginny, two feisty large white/boar cross pigs. The sisters have always lived together, and although they occasionally bicker, they “love each other really”, Jacqui attests. Ruth and Betty, two ‘best friends’ who have shared the same pen for years. Harry and George who were paired together by the sanctuary as piglets, and now have a life-long friendship. Despite Harry weighing approximately three times as

much as George and towering over him, George is in fact 'the boss' of the pen. Each pen of pigs had their own unique and intricate social worlds, which Jacqui seemed to know all about.

Excerpt from field notes, touring the Pig Sanctuary.

The pig rescue serves as a space where we can learn about pig social preferences. Spending time with the pigs at the sanctuary and watching the intricacies of their social life play out, I wondered what social relationships meant to them.

I approach the pen home to a group of male pigs. A wooden hut lined with a bed of straw sits in the middle of a muddy patch, the result of the groups' rooting behaviors. Their home is marked out by a wooden fence reinforced with wire mesh. The pigs arrived at the sanctuary at four months old and have now spent six years together. One of the pigs, Harvey, has arthritis. Jacqui believes he may also be suffering from a form of Parkinson's disease. His mobility is limited, particularly when it is cold like today, and his legs often shake and tremble as he moves.

As I reach the fence surrounding their enclosure, I see the four pigs curled up in their hut. One by one, their heads perk up in curiosity. They're inquisitive and come trotting over to the fence to greet me, playfully jolting their snouts up at my arm. Harvey is a little slower than the rest, and his legs tremble a little as he tries to steady his balance. When he eventually gets over to the fence, the other pigs move out of the way and let Harvey have one of the limited spots in front of me. Harvey softly grunts as he inspects my hand.

I also observe similar behaviours at mealtimes, when the group always left a spot open at the trough for Harvey, even though he took a few more minutes to make his way out of the hut than the rest. Jacqui says that even though he is slow, Harvey is still a respected member of the group.

Excerpt from field notes, volunteering at the Pig Sanctuary.

Jacqui's remarks, acknowledging Harvey's continued respect within the group despite his difficulties, reflects an awareness of the pigs as sentient beings with their own emotional experiences. The mutual understanding of the social dynamics within the group underscored the significance of recognising and respecting the agency and wellbeing of each individual. Social bonds are important for pig welfare, though without anthropomorphising, it is difficult to speculate the value and meaning of these relationships to the pigs themselves. Engaging in what Johnston (2008) refers to as a 'responsible anthropomorphism' nevertheless may

elucidate the embodied worlds of pigs. This practice entails a mindful consideration of the animal's needs, desires, and preferences through the lens of co-relationality and the knowledge derived from day-to-day interactions with individual animals. By engaging in responsible anthropomorphism, humans can endeavour to bridge the gap between human understanding and the inner lives of pigs. All of the volunteers at the sanctuary spoke about individual pigs they had built friendships with during interviews. Being physically among the pigs during these interviews allowed embodied understandings of human-pig relationships to come to the fore. The following is an excerpt from a walking interview with one of the sanctuary volunteers, Mary.

> Kate: Do you have a favourite pig here?
>
> Mary: No! [nodding head jokingly] .... Yes, Dotty, but don't tell the others! She knows my voice, I come to see her first when I'm here and she runs out to see me. I'm the only one who she allows to give her a belly scratch, she doesn't do that for anyone else. But there's some pigs here who don't like me either, I'm not sure why.
>
> [we walk over to Dotty's pen, and she quickly comes running up to the fence where we stand]
>
> Mary: She's just lovely, isn't she?
>
> **Walking interview with Mary, volunteer at the Pig Sanctuary.**

These accounts highlight the embodied aspects of human-pig relationships that often go unnoticed. The bonds human caregivers built with pigs had months, and even years to develop in some cases. Many interview participants recognised that some pigs had people they preferred to interact with, noted in their behaviours. Volunteers were profoundly aware that their bonds with pigs were relational, and respected the pigs who did not seek out a bond with them. This acknowledgment of the pigs' independence and autonomy transforms the power balance, shifting away from the conventional model of utilitarian human-pig relationships. This understanding shapes the character of human-pig interactions in the sanctuary and allows volunteers to develop a heightened understanding of the social needs of individual pigs.

Pigs are inherently social animals, and the dynamics of their socialisation can be complex. Mixing unfamiliar pigs can be difficult, and rescues must make decisions on how to socialise pigs who come to the rescue alone. In some sanctuaries, a large field is used to house all pigs, though a new arrival is often socialised individually with another pig identified as being particularly friendly before being introduced to the rest of the main herd. These introductions are carefully monitored by volunteers and staff. In other pig rescue spaces, the physical layout of the rescue means pigs are trialed with a pen-mate rather than living in a large herd. The

challenges of socialising new pigs are unique to the pig as well as the rescue space. For instance, adult boars are often difficult to socialise as they will fight to establish hierarchy, potentially resulting in serious injuries. Max describes his approach to this challenge.

> If an adult boar comes into us… we would build an area for them and put them into the separate area where they can spend their life in sight and sound of other pigs. But you can't mix adult boars with castrated pigs because they'll fight. Adult boars will always fight and wound each other significantly, so you just can't do it. Neutered pigs, they will still fight… But 99 times out of 100 they won't inflict any significant damage. But they will definitely fight, and it can be quite horrible to watch, but you have to let them establish the hierarchy.
>
> **Interview with Max, farmed animal sanctuary founder.**

Max attempts to fulfil the social needs of boars by housing them in close proximity to other pigs, but within their own pen to protect the safety of all pig residents. Yet, with castrated adult males, the risk of fighting is assumed to be worthwhile to allow the group to establish a hierarchy. From experience, Max knows that this is unlikely to end in serious injury. This approach signifies a desire to provide pigs with an environment where they can exercise their agency and form social bonds, even if it entails some level of human involvement to maintain the safety of all residents. Aggression is also a major welfare issue in commercial pig farming, often worsened by frequent mixing of unfamiliar pigs, lack of sufficient space and enrichment (Peden et al., 2018). While many farmers self-report a high regard for animal welfare, they often must navigate animal welfare among a web of priorities including securing profit margins and ensuring meat quality (Peden et al., 2018). Without the welfare of pigs linked to their commodification, sanctuaries provide a place where focus shifts to the wellbeing of individual animals, allowing them to live lives defined by companionship, respect, and an environment that nurtures their social nature.

In another farmed animal rescue, manager Grace tells me about a pig who lives in a pen on his own. Abandoned as a piglet, Johnny was rehomed to a family but was handed back to the sanctuary due to unwanted destructive behaviour when left alone. According to Grace, Johnny "hates people, hates other pigs". Attempts to mix him with other pigs have been challenging for the rescue, resulting in injuries to other pigs.

> We've tried to mix him. We've had pigs with cheeks hanging off because he's just not happy. And so yeah, he's on his own. We'd hope that we could get him mixed, but we've tried with all our different groups and pairings and he's just socially awkward. That's what we say, anyway.

Interview with Grace, animal rescue charity manager.

For some pigs, being housed alone may be the preferred option. Research conducted with piglets indicates that those who are reared in poor conditions with a barren environment and little opportunities for socialisation are more likely to exhibit social stress and aggressive behaviours in adulthood (De Jonge et al., 1996). Furthermore, D'Eath (2005) suggests that socialised piglets are better equipped with social skills that allow them to navigate social conflicts in later life. Given the diverse 'coming to rescue' stories, it is plausible that many rescue pigs may carry social or developmental issues stemming from previous social traumas. In this case, while Johnny lives alone, his pen is designed to back on to another pen in an attempt by the sanctuary to fulfil his social needs. Furthermore, anecdotal observations from volunteers and staff at the rescue indicate that Johnny also exhibits preferences in human interactions, favouring certain individuals over others. Within pig rescue, pig identity and the intricate web of human-pig connections are rich, multi-layered experiences influenced by the unique life stories and personalities of individual pigs.

In the context of affective communities within pig rescue, it is crucial to acknowledge that positive and productive connections do not solely rely on pigs being emotionally responsive to humans. Rather, the concept of productivity in these connections should encompass the recognition and respect of the pigs' autonomy and individual preferences. This idea aligns with the broader theoretical perspective of agency and autonomy within human-animal relationships. Scholars such as Haraway (2008) have emphasised the importance of acknowledging and valuing the agency of animals as active participants in their own lives. Haraway's notion of response-ability suggests that human beings should be attuned to and responsive to the needs and desires of animals, even if this means giving them space or privacy when they choose to be alone, as in the case of Johnny. By integrating these theoretical insights into the understanding of affective relations within pig rescue, it is clear that productive affective connections are not necessarily determined by humans' desire for emotional responsiveness from the pigs. Instead, productive connections emerge when the sanctuary respects and supports the pigs' wishes and autonomy, providing them with the freedom to express their natural behaviours, seek solitude when needed, and form bonds with others on their own terms. By prioritising the social needs of pigs, pig rescue spaces exemplify the potential for productive affective circulations between both pigs and people. These encounters challenge prevailing norms that often prioritise economic productivity and utilitarianism in human-pig interactions. In turn, new insights into pig social worlds and alternative approaches to human-pig relationships that foster ongoing flourishing and wellbeing are explored.

7.5 Mourning, Remembrance, and Grief

In contrast to the friendships between pigs and people, death also becomes an important lens through which to explore the complex dynamics of human-pig relationships. In spaces of pig rescue, death is not the routinised event it may be in animal agriculture and animal research. Understanding the social lives of pigs and attuning to their lifeworlds meant that pig caregivers bear witness to the ways in which death impacts pig communities.

Jacqui had a deep knowledge of all the pigs in the sanctuary. During our conversations, she shared a story with me about a pair of female pigs that lived at the sanctuary a few years prior, Pepper and Rose. The pair were inseparable, spending every moment together in their pen. After several years of friendship, Pepper passed away due to illness. Jacqui recounted Rose's distress that manifested through a loss of appetite and a persistent, mournful whining. Despite efforts from the rescue to comfort her, Rose did not return back to her normal self. A week after Pepper's passing, Rose died unexpectedly. Jacqui firmly believed that she had died of a broken heart. Whilst the exact cause of Rose's death remains uncertain, whether due to a broken heart or the overwhelming stress of losing her companion, the space of the sanctuary makes these social bonds visible and meaningful. These stories animate pig lives in meaningful ways and enable us to think about them differently. Jacqui cared for these pigs personally every day and possessed an ability to connect with them. As such, Rose's distress and mourning at the loss of her friend was visible to her. Throughout the sanctuary, notices hung above pens conveyed these tacit knowledges to visitors (Figure 3).

Figure 3 A sign hung up outside a pig pen [image taken by author]

Similar accounts were common across spaces of pig rescue, as caregivers recognised the impact of loss upon pig social lives.

> "There will be times that you'll see that one that was a pair, and they've lost their pair, you'll see that period of time when they're a bit lost themselves."
>
> **Interview with Ben, farmed animal sanctuary founder.**

Accounts such as these animate pig lives in meaningful ways and enable us to think about them differently. Such intuitions and ways of relating to animals, becoming attuned to their lifeworlds become an important skill in rescue, forming an entangled empathy that can work towards the flourishing of the pig (Gruen, 2015). These ways of attending to animal subjectivities allow communication of needs and desires from pigs to human caregivers, making space for animals to express a degree of agency in decision-making that influences their lives (Donaldson and Kymlicka, 2011). This practice of attunement challenges existing hierarchies that place animals as incapable of experiencing emotion and allows pigs to become agents in the construction of knowledge. Beyond the recognition of the grief experience by pigs themselves, death also impacts the wider human community of these spaces.

> As I explored the sanctuary grounds, I came across a large memorial on the side of a wooden barn. It featured several pictures of pigs, alongside other animals including guinea pigs, dogs and cats who had passed away with their names below each photo. "We put them up here so they're never forgotten" Jacqui says. I asked if her original four pet pigs are up there and she points out their photos to me. At the top, there is a depiction of a rainbow bridge. The bridge is lined with colours of the rainbow, and footprints and hoofprints along it. The text above the image reads "never forget, that in between hello & goodbye, there was love. So much love."
>
> **Excerpt from field notes, volunteering at the Pig Sanctuary.**

The 'rainbow bridge' depicted in the memorial is a common metaphor used by pet owners to describe the place where companion animals go after death, and where they will one day be reunited with their human owners. In place of a cemetery[5], this material space imbued with the memories of past residents captures the emotional interrelations of the affective community and provides a space for reflection and remembrance. The metaphor of the rainbow bridge signifies an enduring community, even after death. Further, the writing on the memorial highlights the emotional nature of the journey that humans and animals undertake together at

[5] In most cases, it is illegal to bury the bodies of pigs in the U.K.

the sanctuary, from their arrivals to their goodbyes. As the memorial proudly displays, “so much love” is experienced within the lives of the animals, reflecting the depth of affection and connection experienced by humans in their interactions with animals at the sanctuary, challenging conventional notions of human-pig relationships that are rooted in utilitarianism. In writing about a pet cemetery, Lorimer (2018) notes that the space of pet burials becomes imbued with the intimacies, responsibilities and loss experienced in pet-keeping. In this way, it becomes a place where the dead are ‘put to work’. Despite the small physical space of the cemetery, the stories and lifeworlds that linger among the grave markers hold a wealth of symbolic meaning. Similarly, the stories of all the pigs who have lived here are immortalised in memory. These memories give voice to the ethos of the sanctuary, in Jacqui’s words, “we want to show people that they are more than just a pork chop”. Through amplifying the alternative lives of pigs, the sanctuary site serves as a powerful challenge the normative placing of pigs as livestock.

Death changes the affective geographies of place, having impacts on the community as well as individuals. Central to understanding the responses to death is relationality (Maddrell, 2015). For many, meeting pigs in the sanctuary space was a fundamentally transformative encounter. I had heard countless stories during my time at the sanctuary and during interviews with other rescue organisations, of volunteers and visitors who had met pigs in a sanctuary who had changed their perceptions on pigs and other animals, experiences that often led to adopting vegetarian and vegan lifestyles.

> It was about 8am on Saturday when I joined volunteer Frank for the morning feed, I hadn’t met him before. We got to know each other and chatted as we walked through the pens, filling up the troughs with the mixture of pig nuts, chopped fruits, vegetables, and bread. Frank explains that he became aware of the sanctuary through a friend. He’d never worked with animals, but he always loved them and had many pets of his own at home. We approached each pen and called out the pigs by name, most came happily trotting out despite the cold. Others were less inclined to get out of their huts. Frank suggested we make life easier for them by climbing into the pen and scattering their food right in front of the hut. He took sympathy on some of the older ones who struggled with arthritis and joint issues. We stopped to chat more outside of Betty and Bonnie’s pen. “Being here actually made me vegan. One of our old pigs, Lilly, died in my arms here. She was in my arms, looked up at me in my eyes, and I looked in hers. A few moments later, I felt her pass. I thought that could have been my mum, it could have been a friend. That was the moment that tipped me over the edge, we were going out to dinner that night and I couldn’t face the meat. Haven’t touched it since”.

Excerpt from field notes, shadowing volunteer Frank at the Pig Sanctuary.

This intimate moment with Lilly stuck with Frank and fundamentally changed his relationship with food. The recognition of personhood behind Lilly's eyes in her final moments resonated with Frank as he related it to the loss of a family member or friend. In this moment, the human-animal binary became blurred for Frank as he recognised similarities in his bonds to both people and pigs. By extension, meat took on a wholly different meaning arising from his close ethical encounter with Lilly and the other pigs he cares for at the sanctuary. He explained to me that although he considers himself vegan, he will eat the eggs laid by the hens at sanctuary. "I know where they've come from, and they're happy hens, I can see that". Frank's experiences with the animals here navigate his own ethical terrain in his encounters with food. Similar anecdotal stories of volunteers who had transitioned to vegetarian and vegan diets as a result of their interactions at their animal rescue were recounted to me during interviews.

These encounters with pigs suggest a transformative potential of human-pig relationships within the spaces of pig rescue. The experiences of both humans and pigs in these communities underscore the capacity for individual animals to evoke emotional responses and disrupt established hierarchies within industrialised animal agriculture, demonstrating the multifaceted identities of pigs and the diverse geographies they inhabit.

7.6 Growing Old

Inspired by photographer Isa Leshko's (2019) book "Allowed to Grow Old – Portraits of Elderly Animals from Farm Sanctuaries" which showcases photographs of elderly animals residing in farmed animal sanctuaries across the United States, here I consider how the pig rescue space becomes a unique space for ageing pigs. The book includes pigs like Teresa, a thirteen-year-old Yorkshire pig. Teresa was rescued as she was on the way to a slaughterhouse at six months old. As she grew into an adult pig at a sanctuary, Teresa began to struggle with arthritis, a common ailment among pigs rescued from factory farms due to breeding that predisposes them to excessive weight gain. Teresa's story serves as a poignant reminder of the physical toll and health challenges faced by farmed animals. In his interview, sanctuary founder Jack noted that many of the pigs he cares for show lingering signs of their commodification.

> "The most common thing is arthritis. We tend to get that more in commercial pigs because farm animals have been selectively bred for a reason. Bred to produce tonnes of eggs, or tonnes of meat, or tonnes of meat. In the case of pigs, they have been bred to grow very quick and produce cheap meat and the consequences are very big pigs that haven't evolved to be that way and as they get older, they become far less mobile

> and very arthritic. So, most commercial pigs by the time they are 7 or 8 it's time to euthanise them because they are so arthritic."
>
> **Interview with Jack, farmed animal sanctuary founder.**

Within the sanctuary, aging pigs who previously lived on farms may find a unique space for ongoing care. However, the legacy of their categorisation as food animals often leaves these elderly pigs with significant health issues, such as arthritis. Whilst sanctuaries are dedicated to providing care and supporting these pigs as they grow old, they are confronted with the consequences of the industrial categorisation of pigs as meat-producing animals. As such, sanctuary pig care must navigate the tensions between the hope for idealistic care and the realities of the societal placings of pigs as food.

In providing arenas for alternative pig futures, other challenges also arise. Veterinary care knowledge is arguably ill-equipped to manage the unique health and welfare needs of these animals who are not destined to be human food, unlike their species counterparts (Gillespie et al., 2015). Therefore, these spaces of human-pig companionship provide an arena for developing new veterinary knowledges. Nevertheless, these knowledges are often hindered by entrenched species power relations.

> "[When the sanctuary began] I knew nothing… it was a case of learning as you went along, sometimes to the detriment of animals. Even back then, we're talking 25 years ago, it hasn't really moved on much if I'm honest when it comes to pigs. Vets knew how to breed pigs, fatten pigs, and kill pigs."
>
> **Interview with Ben, farmed animal sanctuary founder.**

Ben's statement highlights a concerning reality regarding the state of veterinary knowledge and care for pigs beyond their lives on the farm, a concern also visible in the pet pig context (Chapter 6). Within pig rescue communities, there was often frustration at the quality of veterinary care available for their pigs, care that would be commonplace should a dog or other companion species be the patient. Interview participants suggested that this lack of veterinary knowledge was due to the pig commonly being viewed as a commodity, resulting in a cost-benefit analysis where the potential financial costs of treatment are weighed against the value of the pig itself.

> "there's not loads of research out there in terms of treatment. Because they don't live for that long… you know, a lot of farmers are just like 'I'm not paying for that'."
>
> **Interview with Grace, animal rescue charity manager.**

The lack of dedicated research into treatments for common ailments in adult and elderly pigs arguably reinforces the perception that pigs are expendable commodities rather than sentient beings deserving of comprehensive veterinary support throughout their lives. Consequently, both pig rescue organisations and pet pig keepers often held distrust for farm veterinarians.

Jessica, pig sanctuary founder, recalled an instance where a resident pig became unwell. Disappointed with advice from a veterinarian to administer antibiotics, the sanctuary team decided to carefully observe the pigs' reactions to various foods and environmental factors. Through this attentive process, they discovered that the pig had allergies to certain materials used in her bedding. Equipped with this knowledge, the pig was given new bedding and her symptoms eased. When viewed in the broader context of antibiotic use in veterinary practice, the approach taken by the sanctuary becomes even more intriguing. Antibiotics have been used routinely in the livestock industry since the 1950s, with the dual aim of maintaining animal health and boosting productivity. However, the rising levels of antimicrobial resistance in both human and veterinary medicine have raised significant concerns over the overuse of antibiotics. This issue is particularly pertinent in farmed animals due to the risk of zoonotic transmission from animals to humans (Coyne et al., 2018). Notably, financial cost has been identified as a significant influencer of antimicrobial use, impacting the decisions of both veterinarians and farmers (Coyne et al., 2014). The sanctuary decision to forego antibiotics represents a shift away from these conventional practices, instead emphasising an individualised, holistic approach rooted in attentive care and observation of individual pigs. In doing so, they offer a critique of the prevailing practices in commercial pig farming and highlight the potential benefits of disrupting the status-quo in pig care.

Similar dissatisfaction with veterinary advice was voiced by other sanctuaries, who often pursued their own treatments or enlisted the help of other veterinary professionals. This was exemplified in my conversation with Ben, where he discussed an incident involving Treacle, a pregnant pig who suffered a broken leg.

> "When my Treacle broke her leg… a farm vet on site examined her, no pain relief, knowing her leg was broken, said, "she needs to be killed, now". I said, well we wouldn't kill a horse who broke their leg, we have had several horses with broken bones… we use unorthodox treatment … we persevere. He never administrated any pain relief to a creature that had broken a bone, could you imagine this?"
>
> **Interview with Ben, farmed animal sanctuary founder.**

When discussing Treacle's case, Ben made it clear that the sanctuary has a euthanasia policy, requiring that animals will be put to sleep if there is minimal chance of recovery, and if the

decision is deemed to be in the best interest of the animal's wellbeing. In Treacle's case, Ben opted to seek the expertise of another vet. The new vet agreed to try an alternative approach and fitted Treacle with an external fixator on her broken leg to support healing. Whilst such treatments are commonplace in companion animal practice, they are rarely employed for pigs due to the associated financial and time commitments, as well as the practical difficulties of keeping a pig in a sanitised environment during healing. Treacle had to be kept in a clean environment for twelve weeks to prevent infection, requiring staff to provide extra enrichment and spend time socialising with her. As a result of the sanctuary's efforts and collaboration with a willing veterinarian, Treacle not only recovered from her broken leg but also gave birth to eleven healthy piglets, showcasing the potential for positive treatment outcomes when pigs receive the same level of care as companion species. In standard practice, veterinary visits for individual pigs experiencing pain would often not be considered economically viable. In a survey of UK veterinarians, only 37% agreed that they knew a sufficient amount about pain in pigs and how to treat it, and 52% reported that they stay informed with recent literature on pain relief for pigs. The survey further showed gender and age differences in attitudes towards pain in pigs, with younger females giving higher pain scores than male and older veterinarians (Ison and Rutherford, 2014). The lack of expertise, combined with financial constraints in pig veterinary practice may contribute to situations where pig rescue spaces take alternative approaches, as seen in Ben's account of Treacle's care, to ensure that pigs receive appropriate treatment, challenging the traditional norms of pig care.

Aware that veterinarians were often not equipped with the knowledge or expertise to treat illnesses seen in elderly pigs, sanctuaries often experimented with preventative treatments. For instance, one pig sanctuary trialled different turmeric remedies as a preventative treatment for arthritis, found in many of their pigs who had been commercially bred. The pig sanctuary's experience with such ailments in elderly pigs was even drawn upon by their own farm veterinarian.

> "Like with the arthritis, they [the veterinarian] know we have a lot of pigs with that and they ask what supplements we give, what works and so on. So, they can share that with other owners".
>
> **Walking interview with Jacqui, pig sanctuary founder.**

By actively engaging with these veterinarians and exchanging valuable insights gained through hands-on experience, these pig rescues are committed to fostering the long-term wellbeing of pigs. Through these collaborative efforts, they aim to bridge the knowledge gap and open new avenues for adult and elderly pig care. This collective endeavour has the potential to

significantly enhance the understanding of pig health and welfare, ultimately benefiting all pigs, both within sanctuaries and beyond.

Through the exploration of pig care beyond their conventional roles as commodities, significant gaps in veterinary knowledge and care for adult and elderly pigs have come to light. In the face of these challenges, pig rescue organisations have emerged as spaces of hope, actively working to bridge the knowledge gap and improve the wellbeing of these sentient beings. These commitments to care through various 'tinkerings' (Mol et al., 2010) to create new avenues for veterinary knowledge disrupt the normative modes of care available for pigs. These forms of care emerge through spatial transgression beyond the farm and indicates a shift in pigs' identity, resituating them within broader entanglements of humans and farmed animals as animals deserving of care. This care benefits them as individuals and respects their inherent right to life, rather than care tied to a commodity logic. The profound experiences and insights gained through their dedicated work challenge the notion of pigs as commodities, inviting us to envision a future where pigs are valued beyond their economic worth. I argue that drawing from the collaborative efforts of sanctuaries and veterinarians holds value. It is through these collective efforts that we can truly create spaces of ongoing pig flourishing, transcending the boundaries of their commodity status and embracing compassion and respect that can extend to all farm animal species. Care practices in this context actively navigate through this uncertain ethical playing field, or 'tinkering' to work towards a shifting notion of 'good care' in a cosmopolitical landscape (Mol et al., 2010, Stengers, 2003).

7.7 Ambassador Pigs

Within the community of rescue pigs, some pigs have a large role to play as ambassador animals for their species. Whilst the 'ambassador pigs' of the organisations I met with throughout this research were rarely specifically chosen for their role, salient connections between humans and certain pigs become useful as resources to create intrigue and support for the rescue organisation and their missions. In Chapter 5, I discussed the importance of charisma in research pig and animal technician relations. In both contexts, charisma fosters meaningful connections, but in rescue it is able to be harnessed as a powerful tool for change and advocacy. Visitors often find themselves drawn to gregarious and outgoing pigs.

> "Jeremy… there was not a day that went by where that pig didn't smile at you. He looked at you and looked into your soul. This incredible pig. He's even now tattooed on so many people's arms and legs and shoulders because he touched so many people's lives. He was so incredible… he had a long and happy life with us".

Interview with Ben, founder of farmed animal sanctuary.

The allure of charisma in pigs is intertwined with their ability to establish rapport with humans, as discussed in the animal research context (Chapter 5). Reminiscing with Ben about Jeremy the pig, it became clear that it was more than rapport in cultivating these close relations. As Ben wiped the occasional tear from his eye speaking about past pig residents of the sanctuary, a sense of deep intimacy was conveyed. The profound establishment of intimacy and relatedness between individuals and pigs in the sanctuary context hinges on their status as a farmed species, typically slaughtered at 6 months of age without opportunity to forge long term personal affective connections with humans. Jeremy and the multiple human volunteers and visitors that met him conjured an alternative trajectory of intimacy within the heterotopic space of the sanctuary.

In the following section, I discuss how affective engagement with one particular pig and her piglets became implicated in the reimagining of pig-human worlds through a multispecies demonstration of resistance against dominant industrialised meat culture. Within the transformative nature of pig rescue, I also draw upon Lori Gruen's concept of entangled empathy to unveil the intricate web of emotional connections and solidarities that emerge within spaces of pig rescue. By examining these entangled affective relationships, I provide an insight into the processes through which affective solidarities are nurtured and fostered between humans and pigs in this setting.

7.7.1 Matilda's Resistance

In the late Spring of 2021 in the woodlands of a small village in Nottinghamshire, a dog walker came across an unusual sight. Nestled among leaves and branches was a large female pig, surrounded by a litter of ten piglets. A few days prior to the discovery, the pregnant sow had escaped from a nearby farm, a pork supplier for a leading British supermarket. She had burrowed beneath the farms' electric fencing and sought refuge in the wooded area where she gave birth to her piglets. Concerned about the family, the dog walker (a recently turned vegetarian) reached out to a local animal rescue charity. The charity visited the pig, whom they named 'Matilda' and her piglets regularly to ensure they had access to food and water. Matilda had a ring through her nose, given to her during her time at the farm, preventing her from rooting and foraging for her own food. The charity aimed to secure the safety of the pigs, yet due to the legal classification of farmed animals as property, they needed to first convince the farmer to allow them to take 'his' animals. As news of Matilda's story spread, supporters world-wide rallied to campaign for the farm to release Matilda and her piglets into the care of the animal rescue. A petition was created, generating over 5000 signatures, and a planned protest led to

Matilda and her piglets being granted a forever home at a vegan animal sanctuary. In 2022, one year after the porcine family gained permanent sanctuary, animal rights activist and filmmaker Jusep Moreno created the film “When Pigs Escape” to document Matilda’s story.

Matilda’s nest building behaviours and seeking isolation are commonly observed natural behaviours in farrowing sows, 58% of UK sows are kept in farrowing crates for approximately a week before giving birth and up until piglets are weaned (RSPCA, no date). This limits the sow’s movements and prevents them from exhibiting their natural behaviours, thus compromising their welfare (Johnson and Marchant-Forde, 2009) The DEFRA Code of Practice for the Welfare of Pigs (DEFRA, 2020) states that their aim is for farrowing crates to no longer be necessary, however, alternatives must protect sow, piglet and stockperson welfare. Opponents to a ban have concerns about the economic impact it may have on the pork industry. For instance, a ban on sow stalls in 1999 led to an increase in cheaper pork imports from countries without a sow stall ban, resulting in a dip in the UK pork market (Levitt, 2018). There is currently a drive to research viable farrowing alternatives for commercial use, yet the trade-off between sow and piglet welfare combined with economic feasibility create a distinct barrier to implementation (Baxter et al., 2018). This highlights that the higher economic costs of welfare can limit the potentialities for improvements to be implemented. Thus, the commodity logic at play that partly determines the viability of welfare initiatives through a discourse of economic feasibility creates specific material conditions for animals, such as the continued use of farrowing crates for sows. This underpins the boundaries of animal flourishing on the farm. After 4-6 litters, the sow is usually sent to slaughter as she is no longer productive (Pedersen, 2018). Failing to produce more piglets, along with lameness and reproductive issues are common reasons why sows are culled (Grandin, 2016). Her productivity and killability are visibly linked, creating a boundary to her ongoing flourishing which is held in place by a discourse of economic productivity. The piglets she does have on the farm are weaned earlier than their wild counterparts. In the UK, welfare regulations state that piglets must not be weaned before 28 days old, unless this threatens the health of the sow or piglet (DEFRA, 2020). In organic systems, piglets may not be weaned until 6 weeks (Maes et al., 2020). Shortly after weaning, pigs are moved to rearing units. They will stay here until transported for slaughter, typically when they reach 80-120kg at 5-8 months old (Pedersen, 2018).

This story of Matilda's escape and subsequent rescue reflects the complex and often hidden lives of pigs. Whilst rare, such stories of farmed animal escapees have caught media attention in the past. A pair of five-month-old pigs that escaped from an abattoir in 1998, named by the media as the “Tamworth Two” were eventually recaptured and spared from slaughter after huge public attention. These stories can often be read as singular disruptive acts (Bear and Holloway, 2019), a story of the ‘lucky ones’ who escape their fate through resistance. I argue such a

descriptive framing of animal resistance does little to develop an understanding of the situated entanglements that challenge hierarchies of power between species (Gillespie, 2015), and fails to capture the ongoing and transformative nature of resistance. Instead, resistance is a multispecies, ongoing, and affective achievement. Resistance shifts the socio-spatial conditions of pig life and opens up new affective engagements between humans and pigs, reconstituting pig identities and forging new futures that stand in opposition to socio-political-legal structures that restrict the conditions of animal agency through their commodification.

Incorporating narratives of resistance and rescue within the framework of affective relations serves as a challenge to prevailing assumptions about pigs in an industrialised 'meat culture' (Potts, 2016). The majority of livestock pigs in the EU are raised in intensive conditions (European Food Safety Authority, 2007), depriving them of opportunities to express natural behaviours (Pedersen, 2018). This stark contrast between the reality of pig farming and popular representations of the rural idyll perpetuates the "alluring fiction of the farm" (Buller, 2013., p.160) that obscures the individual lives and capacity for suffering of each animal. The concept of the 'absent referent', utilised by Carol Adams in her book, 'The Sexual Politics of Meat' (1990) can be used to explain this diminished visibility of the individual pig in industrialised animal agriculture. As livestock production becomes more intensified, animals are de-individualised, existing simultaneously as sentient beings and commodities. The commodification and economisation of animal bodies hide their vitality and liveliness, facilitated through physical and linguistic separation. Language plays a crucial role in distancing the public from the reality of slaughter and framing pigs as economic objects. Through descriptive terms such as "stock" and "units", or "processing hall", butchering the animal is hidden from imagination. As Stibbe (2003) notes, language is used to create absent referents of pigs in the real-world pork industry through re-defining animals in terms of their functioning (such as 'weaner' or 'finisher' pig). This reduction of individuality becomes more pronounced with larger herd sizes and advanced agricultural practices, ultimately rendering animals as mere 'things'. The decimation of the individual is a central feature of industrialised meat culture, perpetuated through hidden practices, linguistic objectification, and the prioritisation of economic profit over animal welfare.

How do acts of resistance by pigs, like Matilda, serve as routes to understanding the affective power of human and pig communities in shaping opportunities for pigs beyond their commodification and objectification? Animal resistance can be thought of as acting in defiance of human orderings. A focus on animal resistance can provide an opportunity to understanding animal lifeworlds and can position animals as active agential subjects in creating these worlds (Gillespie, 2015). However, animal agencies can often rely on descriptive accounts of animal acts of resistance, without critical reflection on the social, political and legal structures within

which these acts are situated (Gillespie, 2015, Bear and Holloway, 2019). Through the case study of Matilda and her piglets, this exploration of pig resistance challenges beliefs about pigs and disrupt their assumed position in contemporary 'meat culture' (Potts, 2015). Rather than framing animal resistance through descriptive stories of animals in need of rescue, here I discuss Matilda's resistance as an ongoing process beyond the act of escape, instead emerging from an ethical and affective engagement with the needs of the animal in the sanctuary. The profound affective power of collaborations between humans and animals thus plays a pivotal role in challenging and disrupting the commodification of nonhuman life.

Without human intervention, the story of Matilda and her piglets would have ended differently. It is not the fact that humans stumbled across Matilda that is significant, rather it is *who* stumbled across her that holds significance. The dog walker who fatefully found the family of pigs had transitioned to vegetarianism a year prior. Her brief statements to journalists indicated empathy to Matilda's situation, as she "couldn't stand the thought of them going back to wherever it was" and that she felt that "she had earned her freedom…she needed to have the piglets somewhere safe and went and did that" (quoted in BBC article, Lowbridge, 2021). Perhaps another farmer had been walking in the woods and found the pigs, and subsequently contacted the local farm they had escaped from. Or perhaps another member of the public discovered the family and alerted the authorities. In a parallel incident in Buckinghamshire, UK, three cows escaped from a farm and were found strolling through a nearby village. The concerned residents contacted the police, who swiftly organised for the cows to be returned to the farm (Perrin, 2023). These cows did not become emblematic of a triumphant escape, nor did they evoke a collective campaign for their rescue from the farm or emerge as the lead subjects of a documentary film highlighting their acts. What then, made Matilda's story stand out?

The dog walker attributed Matilda's acts to the intention of saving her piglets from life on the farm, a brave action that earnt her freedom. Had the dog walker held different views on animal agriculture, perhaps Matilda's actions would not have been interpreted this way. However, the dog walker's feelings of response-ability to Matilda in helping her secure her freedom from the farm serves as a deliberate cut in world-making practices, carving out a new space of becoming for Matilda. As a result of the dog walkers' action, Matilda and her piglets became known as individuals with their own stories. Regardless of whether animals act with intention, whether Matilda dug beneath the fence and built her nest in the woods was her acting with the intention of finding safety for her piglets or not, the action in itself is resistant to the system in which Matilda was kept. Resistance, as Gillespie (2015) notes, is an unwelcome trait in farmed animals, and often ends in their death as a means to suppress their defiance.

The dog walker's decision to contact the sanctuary in response to Matilda's resistance is of significance. Furthermore, the response from the sanctuary was to recognise Matilda's actions as resistance to her commodification**.** In the absence of such recognition and the ensuing cultivation of affective solidarity, Matilda and her piglets may have been returned to the farm. Thus, Matilda's resistance was a multispecies achievement, fulfilled through agential powers of both humans and pigs to alter the conditions of Matilda's life. Matilda's story provides a valuable contribution to theorising how affective engagements with animals and interventions can make agential cuts that determine the trajectory of an animal's life through forging productive affective connections across species.

7.7.2 Matilda's Legacy

Instead of being taken back to the farm, Matilda and her piglets became the centre of a campaign spearheaded by the sanctuary to allow them to be relinquished by the farmer. In turn, they became ambassadors for their species counterparts. The campaign took place in response to legal tensions; Matilda was classed as property of the farm, meaning that the sanctuary had to seek the permission of the farm to take the family. Constructing Matilda as acting with intentionality ascribed her with inherent value as an agential individual, rather than a being whose value derives from what she can provide to humans through her commodification and objectification was central to the sanctuary's campaign that reached audiences worldwide. Making Matilda an encounterable pig, rather than a nameless pig with no story disguised within the herd, was a key tactic. Creating a narrative about Matilda allowed her to become visible to the public.

The narrative constructed about Matilda's focused heavily on her actions as a good mother, doing her best to presumedly protect her piglets from a short life on the farm. This focus on Matilda's maternal instincts was evident in the social media outputs from the sanctuary's campaign. One post stated that "she's a mother just trying to keep her babies safe, and we want to help her to do that", with an accompanying photograph shows Matilda in the nest she made in the local woodlands, as her piglets nursed from her. The sanctuary's post framing Matilda's actions as the actions of a mother leverages empathy through emphasising familiar concepts of maternal care, seeking to challenge the conventional objectification of animals which leaves little room for the visibility of their inner family worlds. Whilst this could be criticised as an anthropomorphic attribution to Matilda's actions, anthropomorphism can serve as a cognitive mechanism that enables individuals to relate to and empathise with animals by attributing familiar emotions and intentions (Tam et al., 2013). The portrayal of Matilda as a caring mother has implications for our understanding of what it means to be a pig. By emphasising Matilda's maternal instincts and her efforts to protect her piglets, this representation disrupts narratives

that reduce pigs value to their economic productivity. For instance, the piglets were frequently described in the campaign as her “babies”, contrasting to their referent terms had they been born within the confines of the farm, perhaps as “weaners” that define pigs by their function. By removing such language that places pigs as commodities to be utilised by humans (Stibbe, 2003), the language used by the sanctuary (re)imagines the pigs as a family, capable of experiencing inner lifeworlds and forming attachments. This serves to avoid language of objectification that invisibilises pigs within industrialised animal agriculture (Adams, 1990) and instead animates the individual lives of the pig family. However, shifting language is only part of inciting affective engagement with Matilda as an encounterable individual.

‘When Pigs Escape’, the film documenting Matilda’s story, contains some human narration but is largely reliant on original sound from footage of Matilda and her piglets. Sounds of the piglet’s soft grunts, pig bodies nestling together in the straw, the grass blowing in the wind, birds chirping in the sky, and trotters splashing in the mud create a vivid, sensory narrative. Gallagher (2016) argues that sound is an affective force that attunes us to the materialities of other bodies. Through the films emphasis on the sounds of pigs and their environment, the viewer is granted an ear in the family’s sonic atmosphere. Pigs use a variety of vocalisations to communicate with each other. For instance, changes in the frequency and pitch of grunts are used by sows to tell piglets when to feed from her (Jensen and Algers, 1984), and when to switch from massaging the udders to suckling (Algers and Jensen, 1985). By highlighting these sounds in the film, the audience is invited to engage with the multisensory experience of pigs' communication and existence. This emphasis on sound and its spatiality not only enriches the narrative of Matilda and her piglets but also encourages a deeper appreciation of the sensory dimensions of pigs’ lives. It prompts us to consider the significance of sound in their social interactions, their relationship with the environment, and their embodiment as sentient beings.

In addition to sonic affect, the film's frequent use of close-up shots mirrors similar visuals within wildlife television, where close-ups are often used to foster emotional involvement and intimacy with nonhumans. The film particularly focuses on close-up shots of the expressive snouts of the piglets as they explore novel smells in their new paddock at the sanctuary. This visual technique draws attention to the individuality and agency of the piglets, highlighting their sensory exploration of the new environment at the sanctuary. Through these close-ups, the film invites viewers to recognise the pigs as sentient beings with their own experiences, desires, and lifeworlds, challenging the prevailing perception of them as commodities. Bousé (2003) questions whether close-ups in wildlife films can truly engender a sense of psychological intimacy with animals comparable to our experiences with human characters. This raises questions as to whether the role of a close-up is to reveal an animal's emotional state or merely to invite viewers to project their own emotions onto the animal. Further, it is unclear whether a

species classified as a farmed animal for human utility inspires similar emotions to viewing a wild animal, that may generate a romanticised sense of exoticism and wilderness.

Whilst the use of close-ups may not provide a comprehensive understanding of pig experiences or emotions, the camera allows viewers a sense of intimacy with the pigs on screen and taps into the affective dimensions of moving imagery, which Lorimer (2013) emphasises as a fruitful route to meaningful engagement and ethical response to nonhuman animals. Redmalm (2011) draws on Lévinas to highlight that the face is where the Other's presence is most vividly manifested. He argues that encountering the animal face to face can transcend language and work to build affective engagement across species and power differences. The close-up shots of the pigs' face in the film emphasises the inner worlds of the Other and attempts to engage a moral responsibility towards the pigs. It is the sensorial and affective aspects of these moving images that endows them with their captivating and evocative power, triggering embodied senses of response-ability (Lorimer, 2013) and can shape viewers' affective engagements with the on-screen pigs.

Attention was also given to Matilda's nose ring in the film. Many farmers choose to use nose rings to limit damage done to pastures through rooting, which can upturn the soil (Maes et al., 2020). This can cause pain when the pig attempts to perform natural behaviours, presenting a welfare issue (Horrell et al., 2001). A scene in the film displays the sanctuary founder taking out the nose ring. The process is not straightforward, as Matilda is wary of humans coming too close to her. He approaches her in the barn, speaking to her and allowing her to lie down comfortably before reaching for the nose ring. He strokes her face, slowly gripping the ring with pliars to avoid startling her. A cut is made into the metal as she jolts back and squeals. He allows her to get comfortable again and pushes the ring out of her nose. The next shot shows a close up of her snout, with a hole that bears the memory of the ring.

In contrast to many visual materials commonly used in animal activism (Fernández, 2020), the film does not focus on suffering of the pigs. Rather, it celebrates their lives outside of their commodification, allowing insight into the possibilities of pig lives beyond their potential as food. Nevertheless, the film documents the death of one of the piglets following a hernia shortly after arriving at the sanctuary. The camera shows the piglet away from his siblings, shivering in a pile of straw before volunteers transport him to the vet. The screen then turns black before slowly fading into a shot of a group of volunteers standing in an open field. The scene is largely silent, but the sound of a shovel scraping against the dirt echoes as viewers come to the realisation that the piglet did not survive. A hole is dug to bury the piglet and he is carefully lowered down into the earth, wrapped in cloth and flowers are places above his body. The burial is significant as the bodies of dead farmed animals are typically cremated if they die within the

farm, a practiced rooted in biosecurity concerns. The act of remembrance calls into question the conditions in which pig lives are made grievable.

Reflecting on the 2001 foot and mouth disease (FMD) epidemic in the UK, Convery et al. (2005) emphasises the time and place of death in disrupting the emotional geographies of human-farm animal relations. In Cumbria, the region worst hit by the epidemic, approximately 39,000 pigs were culled alongside hundreds of thousands of sheep, cows and other farm animals and their bodies buried in mass graves, creating emotional and traumatic experiences for rural communities of farmers. In this context, the emotional geographies of humans-farm animal relationships were disrupted by the outbreak, contributing to a collective sense of loss and grief that is typically not felt in the context of routine slaughter. The grievability of Matilda's piglets' life, despite the incomparability to the scale of death as a result of the FMD outbreak, reveals the intricate dynamics of affect and emotional geographies in shaping our responses to animal deaths. The piglet's death occurred at the 'wrong time', disrupting the envisioned trajectory of his life in long-term sanctuary. The affective engagement with the piglet's death challenges the conventional hierarchies that dictate which pig lives are deemed grievable and which are not. It underscores the power of individual stories and the capacity for intimate encounters with animals to evoke emotional responses and disrupt the prevailing norms of industrialised animal agriculture. The film invites viewers to question the underlying structures and ideologies that render some animal lives disposable while privileging others. It suggests that the perception of pig grievability is not solely determined by the magnitude of death, but also by the relational and affective connections established with individual pigs.

By shedding light on the ethical implications of human interventions, Matilda's story creates a legacy that invites us to re-evaluate the hierarchical boundaries between humans and pigs. In this way, the narrative surrounding Matilda and her piglets amplifies the message that understanding and empathy can reshape the complex tapestry of human-pig relationships and carve out alternative futures.

7.8 Conclusion

The above discussion has followed the stories of pigs in rescue, exploring how the pig rescue space structures pig life with respect for pig desires, whilst also managing this in a broader context of multispecies entanglements. The chapter brings to light the agency and freedom that pigs can experience within the context of rescue spaces, providing a heterotopic platform to explore alternative modes of co-existing with pigs that aim to challenge asymmetrical human-animal power relations. However, the chapter has also considered the challenges and barriers in enacting these heterotopic spaces. These challenges relate to speciesism and practical

challenges in meeting the care needs of abandoned and unwanted pigs, as described in existing literature pertaining to farmed animal sanctuaries (Abrell, 2021).

The spaces of pig rescue discussed in this chapter become heterotopic spaces where ongoing pig flourishing, both in material and social terms, challenges established notions of animal categorisations. Within the pig rescue, multispecies relations and practices continually evolve as subjects of experimentation. Critically exploring these practices allows conceptual links to be built between understanding multispecies affective relations and the co-creation of alternative human-pig futures (Westerlaken, 2020a). This chapter has teased out how this is done in practice in the spaces of pig rescue.

Pig rescue spaces generally aim to secure ongoing flourishing of pig residents by attempting to understand and respect pig needs and desires. Throughout the chapter, I have recounted stories that illuminate how attuning to the pigs' movements and vocalisations can lead to novel understandings of pig worlds. Such embodied practices allow pigs and humans to communicate preferences through embodied attunement. This attentiveness to the movements and social lives of pigs have allowed caregivers to adapt pig environments to better suit their needs, and thus represents ethical boundary work in the becoming (Puig de la Bellacasa, 2017). Nonetheless, it is crucial to acknowledge that these practices exist within a complex ethical landscape and instead are entangled in species power relations and histories. Consequently, ongoing pig flourishing in these spaces must work to dismantle the current borders of pig care, such as the limited veterinary knowledge surrounding elderly pigs. The chapter has demonstrated how efforts from pig rescue spaces are imperative to dismantling such borders to ongoing pig flourishing, a political project that must be advanced if we are to seriously reconsider current human-pig arrangements.

Calls for this political project are amplified in this chapter, that tell the stories of individual ambassador pigs, such as Matilda, that are utilised to advocate on behalf of their species. Whilst portraying animal experience responsibly and accurately in academic study is an ongoing challenge within animal studies (Shapiro, 2020). I argue that presenting counter-narratives of pig lives outside of their role as food is vital to disrupting human-animal power binaries that construct pigs as absent referents in hegemonic meat culture.

The exploration of affective human-pig relationships within pig rescue spaces has the potential to reshape ethical and social implications related to our interactions with pigs. They offer a glimpse into the possibilities of shared worlds with pigs. As we continue to understand and nurture these affective bonds, we are presented with new opportunities for multispecies flourishing between humans and pigs. The lessons learned from these relationships can inspire

us to advocate for better treatment and understanding of pigs not only within spaces of pig rescue, but also in broader society.

Chapter 8 Conclusion

This thesis has provided a novel exploration into the affective dynamics of human-pig entanglements across three spaces of encounter: the animal research laboratory, the home, and the animal rescue. The relationships formed in these three diverse contexts are inherently political, crafting spaces for alternative encounters with the Other (Berlant, 2011). The implications of world-making practices where pigs are regarded as more than food, and as active agents reshaping human-animal emotional relations, contrast with the legal and ethical classification of pigs in society as livestock. Through examining the dynamics of becoming with the pig in unconventional contexts, this thesis challenges prevailing perceptions of pigs and their societal roles. Becoming with the pig in these alternative sites of encounter represents a practice of 'worlding,' which redefines the boundaries of our shared worlds by recognising the multifaceted connections between humans and pigs. Through the expression of affect, human-pig worlds are made and unmade.

Across these spaces of encounter, pigs become known as individuals, subjects of care and concern. What differs is the social, political and material structures that (re)produce these relations. The thesis has developed a more-than-human understanding of ‘affective dynamics’ in human-pig relationships that encapsulates the broader socio-material conditions and histories that nurture, or impede, the transformative potential within these relationships, underscoring the idea that affective relations are far from ‘friction-free’ (Woodward and Lea, 2010).

To conceptualise the complexity of human-pig relationships, I have argued for an understanding of the multiplicity of the pig as an embodiment of dynamic and evolving relations. The thesis has made clear that the pig cannot be uncoupled from space. This guiding principle moves beyond the idea of the pig as an unchanging, static identity, an idea that often creates a ‘one-size-fits-all’ approach to our understandings of the complex lives of animals and their needs. Rather, understanding the pig as a multiple recognises the relational achievements of pigs and humans as they transgress space. Indeed, as I turn to summarise the thesis and its’ contributions, I am reminded of pet pig keeper Kath’s words – “it’s not just a pig” (Section 6.4). The stories of pigs woven into the chapters of this thesis have underscored this sentiment. Beyond deepening our understanding of the socio-spatial aspects of human-animal relationships, I have argued that such a dynamic understanding of the pig holds profound potential to catalyse ethical and political change. Yet, practices that aim to change human and animal lives often inadvertently privilege some species over others, often leaving an ethical ambiguity in alternative worlding(s) with pigs.

I will now consolidate the central themes explored in this thesis, delving into the research questions that guided the project and the implications of the findings. I will detail the contributions this thesis makes to the fields of geography and animal studies, considering the impact on shaping future research.

8.1 Challenging Animal Categorisations

The first research question guiding this thesis asked how a focus on affective human-pig relationships could contribute to understandings of animal categorisations across space.

This thesis has clearly shown that human-pig relationships transcend simple, rigid categorisations of 'human' and 'pig', and instead has presented a more complex narrative. Whilst the field of animal geographies has extended understandings of animal categorisations and their fluidity across space (Buller, 2016), this research has taken a specific focus on how affective relations challenge normative categories of pigs as livestock to produce alternative identities. By doing so, it contributes to a broader conversation on the practices of worlding in human-animal relations (Westerlaken, 2020b), emphasising that affective relations actively participate in shaping shared multispecies worlds.

Through affective encounters across the spaces of animal research laboratories, homes and animal rescues, the thesis illuminates the multiplicity of the pig. This challenges static and one-dimensional animal categorisations, instead showcasing the pig as a dynamic being in a continual relational process of becoming with humans and their shared environments. Each empirical chapter has demonstrated how the fluidity of the pigs' identity is guided by shifts in care, love, empathy, and respect.

Chapter 5 noted that in animal research, the charisma of the pig was a contributing factor to the emotional bonds between animal technicians and the pigs in their care. As technicians got to know pigs through embodied care, individual pig personalities became increasingly visible, emphasising the dynamic and reciprocal nature of the human-pig relationship possible in animal research. Nevertheless, in the laboratory pigs oscillate between being understood as sentient individuals and scientific objects. Achieving a nuanced understanding of the pig in practice requires intentional efforts to foster empathetic engagement with pigs, particularly in cases where researchers may be detached from the liveliness of the animal. The recommendation for increased connections between researchers and the animals in their work emphasises the necessity of acknowledging the pig's multifaceted identity. Beyond the laboratory, the findings presented in Chapter 5 extend to traditional dichotomies of

nature/culture and human/animal, providing a unique lens for examining the spatial and relational dynamics of human-animal interactions in diverse contexts.

Chapter 6 demonstrated that in the home, pet pigs embody the identity of cherished companion often far removed from imagined ideas of farmed pigs. Pet pig-keeping relationships provoked a reconsideration of the pigs' moral standing, challenging the categorisation of pigs as livestock. These affective attachments in pet pig relationships are inherently political, constituting the building blocks that rebuild worlds (Berlant, 2011). Nonetheless, the continued categorisation of pigs as animals to be farmed presents a significant barrier to their care as companions, particularly in regard to their veterinary care. This discrepancy highlights the persistent challenges in overcoming established categorisations, indicating that despite the transformative potential of affective relationships, broader changes are necessary to fully challenge and reshape animal categorisations across diverse contexts.

In chapter 7, similar challenges were identified within the context of animal rescue. Here, the pig becomes detached from the commodification in the animal agriculture industry and instead becomes part of an affective multispecies community working to secure the ongoing flourishing of pigs as respected individuals. Unlike the conventional notion of flourishing tied to the temporally bound context of animal agriculture, where positive experiences for pigs are optimised until their inevitable slaughter (Browning, 2019), pig flourishing in the rescue setting becomes an ongoing commitment to prioritising individual needs, desires, and wellbeing. It encompasses the creation of environments that allow pigs to thrive, engage in natural behaviours, form social connections, and experience agency and autonomy throughout their lives. While pig rescues dedicate themselves to providing care and support as these pigs age, they grapple with the consequences of the industrial categorisation of pigs as meat-producing animals. This categorisation stays with pigs in their life beyond animal agriculture, manifesting in health issues such as arthritis due to their genetic predisposition to gain weight quickly. The care provided must navigate the tensions between the hope for idealistic care and the realities of the conventional categorisation of pigs as food. In presenting counter-narratives of pig lives outside of their role as food, such as the story of escapee pig Matilda, a crucial disruption occurs across human-animal power binaries. These narratives challenge and deconstruct the prevailing societal constructs that position pigs as mere absent referents within the dominant meat culture (Adams, 1990). By highlighting alternative narratives of pig lives, the chapter argues for a fundamental shift in perspectives, urging a reconsideration of the ingrained categorisations that have confined pigs to roles defined solely by their utility.

In light of these findings, the thesis advocates for collaborative efforts between social science and relevant animal welfare organisations to address current gaps in veterinary care for pet and

rescue pigs, to ensure that the impact of affective relationships between humans and pigs is reflected in their care and ultimately contributes to broader systemic change in veterinary practice. Such impactful collaborative research has the potential to ultimately reshape the established categorisations that currently limit the care provided for pigs across space.

Across these chapters, the case studies presented serve to show that the pig is not just a pig; rather the pig is in constant 'becoming' through its interactions with humans and spaces. The recognition of this multiplicity is vital for reimagining potential pathways towards more ethical and harmonious coexistence with our porcine companions. Thus, human-pig affective relationships contribute to a dynamic understanding of animal categorisations across space, emphasising that relations are not static but ever-changing and complex.

8.2 Affective Dynamics and Lived Experience

The second research question posed asked how the co-existence of conflicting affective relations impacts the lived experiences of pigs and humans. Through the lens of 'affective dynamics' the thesis has explored how co-existing affects can work in productive or inhibitive ways, following Deleuze (1987). In many ways, the thesis suggests that these often-conflicting affective forces can never be unravelled to be separate, but rather must be managed together and navigated.

The thesis has explored how affective relations and practices surrounding care, love, and community between humans and pigs create atmospheres of companionship, empathy, and reciprocity. Affective relations are thus transformative in human-pig relations, continually reshaping lived experience. Yet, entrenched species hierarchies can privilege the human and reproduce relations of power. For instance, Chapter 5 has explored how care and intimacy in the laboratory are important tools that reproduce relations of human control over the pig. The chapter demonstrated how the circulation of positive affect, including trust and friendship, fosters a sense of responsibility among animal technicians. This translates into individualised care, challenging the practice of generalised care directed at a collective species level. Paradoxically, the charisma of pigs also becomes a pivotal factor in their becoming as research animals, where the pigs' charisma and willingness to engage with humans can be manipulated to engineer a research subject that is easy to control (section 5.5).

Similarly, Chapter 6 discusses the inextricable nature of love and domination in relationships with pet pigs. Drawing on Tuan's (1984) theories on the interplay of affection and dominance in human-pet relations, the chapter explores how pet pigs can occupy a dual existence as both loved companions and as 'lively commodities' (Collard and Dempsey, 2013). Crucially, it is the

hope for a loveable pet that perpetuates the socio-material conditions of pet pig commoditisation. Whilst becoming pet reshapes pig identity from farmed animal through bonds of love and kinship (Charles, 2016), the physical downsizing of commercial pigs into companion animals becomes a critical focal point, raising questions about the engineered loveable pet pig. This section critically reflects on the motives and beneficiaries of this love, examining how consumer demand and preferences shape the burgeoning pet pig industry. The commodification of pet pigs, driven by aesthetic qualities and personality traits, is scrutinised within the framework of a neoliberal consumer culture that often commodifies pets (Nast, 2006). As such, the chapter provokes contemplation on the ethical responsibilities that accompany the human desire for affectionate connections with pigs. The commodified status entrenched in the history of the pig as a food-producing animal also has implications for their lives in rescue, as shown in Chapter 7. Seemingly detached from life as a commodity, the rescue space must deal with the lingering anthropocentrism embedded in pig care.

Understanding the co-existence of these affective relations is essential for recognising the intricate lived experiences of both pigs and humans. Furthermore, this insight underscores the need for an approach to human-pig interactions that considers the simultaneous presence of both conflicting affective dynamics and aims to be open to the messiness of their outcomes. Ultimately, these affective relations emphasise that human-pig entanglements go beyond utility, creating a complex and indeterminate array of experiences that influence both species. In acknowledging the interplay of care, control, love, hope and domination, we unlock the potential for more compassionate, ethically grounded, and mutually beneficial human-pig relationships.

8.3 Future Human-Pig Worlds

> Theory provides the compass, maps, and studied reflection necessary for effective politics.
>
> (Best, 2009., p.28)

The final research question guiding this thesis asked how an exploration of affective dynamics in human-pig relationships prompts a re-evaluation of their ethical and social implications and facilitates novel worlds for multispecies flourishing between humans and pigs. The focus on affective dynamics in human-pig relationships not only advances comprehension of the socio-spatial aspects of human-animal relationships but also holds the potential to catalyse ethical and political change. The thesis has demonstrated that this must be a reflexive endeavour.

Practices that aim to change human and animal lives often inadvertently privilege some species over others, potentially leading to disparities in care and welfare.

The transformative relations humans and pigs create in their shared worlds uncover fresh perspectives on co-existing with pigs. These kinship relationships within the diverse human-pig encounters explored in this thesis craft spaces where alternative futures with the Other can be explored (Berlant, 2011). Throughout the thesis, this has been explored in the potential rehoming of research pigs where possible (section 5.8), and the shifting of the pig from edible object to inedible companion (section 6.3). This transformation is particularly evident in the context of pig rescue, where care is crafted to ensure the ongoing flourishing of pigs, permitting new worlds where pig identity is reshaped from livestock animal to an individual with inherent value and a right to life beyond the confines of the farm. The implications of this political kinship for pigs, where they are regarded as more than food, and as active agents reshaping human-animal emotional relations, nevertheless contrast with the legal and ethical classification of pigs in society as livestock.

Discrepancies in ways of knowing and categorising the pig create challenges for the people and pigs who are (re)building their shared worlds. This was noted in the challenges of pursuing veterinary care that supported the ongoing flourishing of pigs. As such, it was argued in chapters 6 and 7 that a contextual approach to welfare legislation and veterinary care can facilitate flourishing for companion pigs by attuning to the affective relationships present between humans and pigs. In Chapter 5, the embodied ways of knowing pigs are developed within a broader utilitarian framework that governs and legitimises animal research demands the culling of most pigs involved in research trials. Within these anthropocentric constraints, it is hoped that the greater recognition of the inherent value of pigs themselves, as well as for human wellbeing in the laboratory, may pave the way for further work that challenges and redefines the boundaries of laboratory animal ethical frameworks. As such, the journey towards ethico-political change is gradual, yet the deeper understanding of pig lives that comes with close and embodied encounters can advance this endeavour.

8.4 Implications

This thesis has brought to the fore both practical and theoretical implications. I first outline the practical opportunities that arise from the findings of this research, before exploring the contributions it has for existing scholarship.

This research has demonstrated how the categorisation of pigs as livestock animal lingers with the pig as they transgress borders of identity, carrying potential implications for their welfare.

Namely, such categorisations not only restrict the pigs' identity but also casts a shadow on the quality and appropriateness of veterinary care they receive, as demonstrated in chapters 6 and 7. These normative categorisations stand in direct conflict with the evolving human-pig relations as pigs transgress into alternative spaces. These findings suggest that there may be a knowledge gap in veterinary medicine relating to care for elderly pigs, as older pigs are not typically seen by veterinarians in a farm setting. Furthermore, the concerns of pet pig keepers and pig rescue workers highlight that the treatment of pet pigs akin to their farm counterparts presents considerable challenges for their ongoing flourishing. As pigs increasingly find themselves in rescue and domestic contexts, there emerges an imperative to recalibrate veterinary understandings of pigs. These implications suggest that collaborations with animal welfare organisations or veterinary regulatory bodies could facilitate targeted interventions to enhance veterinary knowledge in this area.

Engaging with literature across animal geographies, the thesis has added to understandings of animal transgression (Carter and Palmer, 2017), as well as the lived experiences of both humans and animals in animal research, pet-keeping, and animal rescue and sanctuary. In doing so, the research makes several contributions to existing scholarship.

First, this thesis has challenged the tendency of academic research to focus on pigs within an agricultural context. This focus reinforces the vulnerabilities of pigs that are amplified by human-imposed categories. The dearth of research interested in pig lives outside of the farm inspired this thesis, which has shown the broad entanglements of pigs and humans and the value of understanding these for both human and pig wellbeing. This contributes to discussions about animal categorisations and their social, ethical, political, and cultural implications (Philo and Wilbert, 2000, Wolch and Emel, 1998) and aims to challenge the normative place of pigs in society by exploring their relational becomings with humans. I argue that paying attention to the multiplicity of human-animal becomings is vital in critically reflecting on animal categorisations.

Second, this research has called attention to the human-centric biases prevalent in geographies of affect and challenges assumptions by demonstrating that affective experiences cross species borders. The thesis has emphasised the agency of pigs and has underscored their active participation in shaping our shared worlds. Simultaneously, it has exposed instances where pig agency is manipulated and controlled to consolidate human power and dominance within human-pig hierarchies, adding to existing literature exploring these contradictions across different spaces of human-animal encounters (Tuan, 1984, Nast, 2006, Holmberg, 2011, Giraud and Hollin, 2016)

Finally, to the author's knowledge, this research is the first to take a multi-sited approach to human-pig entanglements. In taking a species-specific approach to the pig, I have

demonstrated how the unique historical, societal, and legislative factors intersect to shape the affective landscapes of human-pig relations. This has revealed aspects about the pig's nature that may have been obscured if the approach taken was not species-specific. For instance, the charisma of the pig combined with the similarities between humans and pigs worked as connection tools, allowing for reciprocal relationships to develop. The 'humanness' of the pig contributes to their continued use in animal research, as well as their appeal as a family pet. Paradoxically, their humanness also amplifies their vulnerabilities in these contexts, as the previous chapters have demonstrated.

8.5 Final Thoughts

I would like to reiterate the context in which this thesis is situated. We are in a time of environmental crisis, propelled further by the way we as humans treat animals. The Anthropocene has signalled significant and often times devastating human impact on the earth, having implications for climate, ecosystems, animals, people and plants. This period of anthropogenic planetary change demands attention to human exceptionalism in multispecies worlds. Whilst this thesis has not sought to argue for solutions to the planetary crisis, it has illustrated how affective dynamics and how they are navigated within human-animal relations can reshape our shared multispecies worlds. Through identifying points of human exceptionalism that amplify the vulnerabilities of pigs, the thesis has contributed to the call to challenge human exceptionalism in human-animal relations that have played a role in the ongoing environmental crisis (Stuart and Gunderson, 2020) and identified avenues for alternative ways of belonging with pigs in the Anthropocene.

These alternative ways of belonging with pigs demand attention to their diverse identities and the multiple roles they can play outside of animal agriculture. By supporting the ongoing flourishing of pigs in these alternative sites of encounter, new futures in-the-making are created. Throughout this thesis, the vivid nonhuman charisma of pigs, often underscored by their apparent 'humanness' is forefronted. I argue that this compels us to cultivate a more nuanced and expansive understanding of how respectful coexistence might unfold in our shared pig-human futures. Highlighting the pig's similarities to humans does not mean to suggest that animals who do not show any similarity to humans are not worthy of such transformative engagements. Nor does it aim to reinforce a hierarchy based on how closely animals are 'like us.' Instead, these characteristics observed in pigs serve as a promising starting point for contemplating how such transformations may take place. It is imperative to also extend this inquiry to animals who are not 'like us' to explore how difference may be reconciled across species borders in future research.

Crucially, this thesis has demonstrated that transforming relations with animals is not necessarily contingent on reciprocity. Chapter 7 has shown that it is possible to support the flourishing of pigs who may not seek human interaction. Central to this ethos is a respect for the inner lifeworlds of pigs. As such, the transformative relations humans may have with pigs in alternative spaces of encounter are not rooted in their utility to humans, but in an authentic appreciation for their intrinsic worth as sentient individuals. As we navigate these alternative pathways, we inevitably encounter challenges such as prevailing speciesism and utilitarianism in society. Transformative power lies in how we as humans conscientiously confront and navigate these challenges with an understanding of our shared, interconnected lives. It is in our collective approach to addressing these hurdles that greater ethical coexistence unfolds.

To embrace the multiplicity of the pig is to recognise the richness and complexity of their lived experiences and unveils the endless possibilities for human-pig futures.

Appendix A Interview Guides

A.1 Guide for laboratory animal care staff

The interview may discuss some of the following questions. Follow-up questions may also be asked dependent on the nature of the work you are involved in. If you would prefer not to answer a question for any reason, please let the researcher know during the interview and they will move on to the next question.

- What motivated you to pursue this career?
- Did you have experience with pigs before working here?
    - What have you learned about pigs since you began working here?
    - Have you worked with other animals before? How do pigs compare?
- How would you describe pigs to others?
- Can you tell me what your daily routine with the pigs looks like?
- How is the space curated for pigs to live in?
- How would you describe the approach to pig care in this facility?
    - Do you come across challenges or barriers to caring for the pigs the way you want to?
- How would you describe your relationship with the pigs you care for?
    - How do you think the pigs perceive their relationship with you?
- How might your relationship with the pigs change as a research trial progresses?
- How do you make the research process as pleasant as possible for a pig?
    - Do you think there are ways to adapt the research process to allow pigs to experience more enjoyment in their involvement?
- How do you identify if a pig is distressed or in pain?
    - How does this make you feel if you perceive a pig to be in distress or in pain?
    - Are you able to mitigate their distress or pain?

- What does care for a pig look like when they reach the end of a research trial?
    - How is culling carried out?
    - How does this make you feel?

A.2 Guide for animal rescue representatives

Depending on your role and experience, some of the following questions may be asked and discussed in more detail. If you would prefer not to answer a question for any reason, please let the researcher know during the interview and they will move on to the next question.

- Please explain, in your own words, how your organisation became involved with rescuing pigs.
- Where do the pigs you have here commonly come from?
- Do you think keeping pigs as pets has become more popular in recent years?
- In your opinion, do pigs make good pets?
- What makes a responsible pet pig keeper?
- Thinking about your experience with taking in pet pigs, what challenges do you think keepers commonly face when buying or adopting a pig?
- Do you think that there are any prominent welfare concerns regarding the pet pig population in the UK currently that should be addressed?
- In your experience, do you think there are any common health problems that pet pigs face?
- Do you have any thoughts about breeders advertising minipigs as pets?
- Have you ever taken in a pig previously kept on a commercial farm? If so, please explain why.
- Can you outline the steps you take to accommodate a new pig when it arrives here?
- Please describe the space where pigs would spend majority of their time when living here.
- Please describe the pigs' sleeping area, if this is a different space.

- Please outline the day-to-day routines of staff and/or volunteers here in terms of caring for the pigs.
- Can you talk about some of the common health issues the pigs here might encounter and how you approach them?
- What steps would you take if you noticed a pig might be unwell?
- Have you experienced any issues regarding pig biosecurity and how were they dealt with?

A.3 Guide for pet pig keepers

The interview may discuss some of the following questions. If you would prefer not to answer a question for any reason, please let the researcher know during the interview and they will move on to the next question.

- Why did you decide to have a pet pig?
- How did you come to find your pig?
- Did you do anything to prepare for the arrival of your pet pig?
- Did you seek out information about caring for pigs prior to taking your pig home? If so, where did you look for this information?
- Can you recall the first few weeks of having your new pet pig? How did you adjust to life with your new pet?
- Is there anything that surprised you about having a pet pig that you were not expecting?
- Is there any aspect of pig care you struggled with at first?
- Please describe the space where your pig spends most of their time.
- Please describe your pigs' sleeping area if this is a different space.
- Please outline your day-to-day interactions with your pig, from waking up in the morning to going to bed at night.
- If you have other pets, do you feel your relationship with your pig differs in any way from the relationship you might have with your other pets?
- Has your pig had any health problems? Could you explain how you approached them?

Appendix B Interview Participants

Pseudonym	Participant Category	Date of interview	Place of interview
Zoe	Animal technician	14 March 2022	In person at participant's place of work
Clara	Animal technician	15th March 2022	In person at participant's place of work
Zack	Animal technician	15th March 2022	In person at participant's place of work
Helen	Animal technician	16th March 2022	In person at participant's place of work
Sam	Animal technician	16th March 2022	In person at participant's place of work
Peter	Animal technician	31st March 2022	Online video call
Nicola	Animal technician	5th July 2022	In person at participant's place of work
Kimberly	Animal technician	5th July 2022	In person at participant's place of work
Lewis	Animal technician	5th July 2022	In person at participant's place of work
Gina	Animal technician	5th July 2022	In person at participant's place of work

Maya	Pet pig keeper	3rd February 2022	Online video call
Vicky	Pet pig keeper	3rd February 2022	Online video call
Angela	Pet pig keeper	20th June 2022	Online video call
Rachel	Pet pig keeper	21st June 2022	Phone call
Sandra	Pet pig keeper	21st June 2022	Online video call
Kath	Pet pig keeper	29th June 2022	In person at participant's home
Alice	Pet pig keeper	29th June 2022	Online video call
Louise	Pet pig keeper	29th June 2022	Online video call
Janice	Pet pig keeper	30th June 2022	Phone call
Beth	Pet pig keeper	1st July 2022	Online video call
Carmen	Former pet pig keeper	6th July 2022	Online video call
Linda	Pet pig keeper	7th July 2022	Online video call
Claudia	Pet pig breeder	30th June 2022	Phone call
Jessica	Pig sanctuary founder	6th November 2021	Online video call
Kelly	Animal rescue charity manager	23rd November 2021	Online video call
Grace	Animal rescue charity manager	23rd November 2021	Online video call
Jacqui	Pig sanctuary founder	25th November 2021	Walking interview, in person at participants' sanctuary
Chloe	Pig sanctuary volunteer	26th November 2021	In person interview at participants' sanctuary
Mary	Pig sanctuary volunteer	27th November 2021	Walking interview, in person at

			participants' sanctuary
Keira	Animal rescue charity worker	18th January 2022	Online video call
Julie	Animal rescue charity founder	18th January 2022	Online video call
Ben	Farmed animal sanctuary founder	8th February 2022	Online video call
Sara	Animal rescue charity founder	22nd February 2022	Online video call
Max	Farmed animal sanctuary founder	27th February 2022	Online video call
Jack	Farmed animal sanctuary founder	1st March 2023	Online video call

Appendix C Participant Recruitment Posters

C.1 Recruitment poster for animal research staff

C.2 Recruitment poster for pet pig keepers

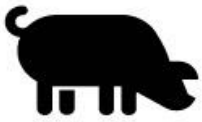
PET PIG OWNERS WANTED FOR RESEARCH

I am a PhD student at the University of Southampton looking for participants for my research project which explores practices of care in pig-human relationships. I am interested in pet pig keeping and how owners care for and form relationships with their pigs.

CRITERIA FOR PARTICIPATION

To be considered for this research, you must...

- Currently have a pet pig
- Be over 18 years of age
- Live in the U.K.



WHAT WILL BE INVOLVED?

- You will be invited to an interview on Zoom, which is expected to last approximately one hour
- Interviews will be video recorded for transcription and analysis purposes. Recordings will be deleted once this is completed.
- Discussion topics will include your motivations for obtaining a pet pig, your day-to-day routine with your pet pig and your relationship with your pet pig. A full list of discussion topics will be provided prior to the interview.
- You will also be asked to share a photo of your pig and the spaces they live/sleep in.

If you wish to be considered for participation in this research or would like more information, please email the researcher with the subject heading "pet pigs":

Kate Goldie

Kg5g14@soton.ac.uk

University of Southampton · SC.DTP South Coast Doctoral Training Partnership · UKRI Economic and Social Research Council

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