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From Species to Protein:

Human-animal relations at sites of Dutch pig meat production

Master thesis

Cultural Anthropology: Sustainable Citizenship

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From Species to Protein

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Abstract

This anthropological thesis demonstrates how human-animal relations are constructed and understood at sites of Dutch pig meat production. The meat industry is, first and foremost, a place where two species meet and entangle: human and nonhuman animals. Through encounter, species are constantly (re)moved from context, function and guise. I suggest that the meat pig – the domesticated nonhuman animal – provides a multispecies perspective that does not separately consider the one (animal) and the other (human), but simultaneously makes sense of one phenomenon for both species. In addition, the multispecies perspective reveals and contests the boundaries of being an Anthropos at sites of meat production. I argue a complexity in grasping and making sense of the other, the other being either a human or nonhuman animal, as processes of meat production may be understood within liminality.

Keywords: human-animal, multispecies, meat industry, meat production, anthropocentrism

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Family de Kaat has been a key figure in the start-up of this research. My first visit in the field was at their fattening farm. At the time I contacted them, they had to say goodbye to the founding father of their family business. Despite I was welcomed at their home. From the first moment, working in the stables felt like an extension of the kitchen table conversations. Early mornings, I was called out of bed, because *"the driver arrived earlier and you should not miss the loading of the pigs. And… can you be here tomorrow as well?"*.

At breeding farm Mentink, I joined student classes multiple times that let me ride along with their learning process. It allowed me to ask endless questions and put into practise all that I acquainted forthwith. I was challenged to explore head to tail. Laying between the sows if I desired.

Butchery van Leeuwen agreed to participate without a single sign of doubt. With all the enthusiasm in the world, I was familiarized with everything the butcher's trade has to offer. One hundred sausages – that I knotted – were named after me, learning how to bone a pig was my *"big day"*, and making blood sausage was an absolute must, so *"can you let Milou know to be here at 10 am tomorrow"*.

The slaughterhouse highly unique opened their doors to me. I became *"the anthropologist"* at their production site for the first time. The world of the production floor was entrusted to me, stories found me from all corners, as such the maze became my back pocket.

During my fieldwork period, I crossed paths with many more people that contributed to the completion of the meat production narrative. I have spoken to many farmers, butchers, slaughters, consolidators, activists, and consumers that equally deserve to be thanked for their openness. Just the encounter of willingness to participate filled me with gratitude. Even more, I have been flattered by a growing interest for the outcome of my research over the past few months. From a great diversity of people with all sorts of (professional) backgrounds – some of whom I had spoken to myself and some of whom had been informed of my research

through others – I received such a stimulating curiosity. I am very much looking forward to hearing their thoughts on my thesis.

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To all my family and friends I want to emphasize that there is no greater gift than being recognized for who you are, and what you are doing. For the past months, I was my research. They knew it was the only way for me. And they celebrated the entire trajectory with me. Even when I did not see the successes. During those moments I was able to find encouragement in their enthusiasm.

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I am very keen on the protection of my valued interlocutors. Therefore, I have decided to entirely anonymize the thesis. A complete anonymization provides an optimal protection of my interlocutors. It minimizes the ability for redirection that may cause conflicts of interest. In the text, I have avoided direct references to persons or the usage of personal pronouns as much as possible. The names in the acknowledgements – apart from my supervisor – are pseudonyms. As my focus has been on an industry rather than a population, the collection and utilization of personal details is irrelevant for the understanding of the research. Such references may, however, be beneficial for the readers' imagination. To carry readers along with me in the narrative, I have added interludes and photo diaries as brief anecdotes of my fieldwork to this thesis instead. I also incorporated a variety of (anonymous) excerpts from fieldwork notes, reflections, interview transcripts [quotes], literature studies and deskresearch within the chapters. The subtitles of the chapters are also quotes from conversations with research participants. Without personification, the interludes, photos and fragments enable an increased comprehensibility by contextual illustrations. It allows deeper engagement with the

research, also in the more theoretical parts. As such, I invite readers to recognize the recurrent voice of the meat industry through the chapters, interludes, photos and fragments.

Introduction

In the Netherlands, and probably also in other Western countries, there is a well-known saying that, nowadays, young children from the city believe that milk is manufactured in factories. Accordingly, this also applies to meat. Meat (and milk) have not come from the animal in the meadow for a long time. Meanwhile, meat predominantly concerns a lot of other things: a crucial nutrient in human diet, a profitable nutritional policy, a sign of wealth, a tradition, a climate polluter, a source of employment and much more (Diener et al. 1980, 175; Austin 1976, 8; Yates-Doerr 2012). The question 'How does meat come into being?', seems such obvious that it is presumed to be something determined, fixed, therefore, irrelevant to think about. Some might conclude that human animals lost the connection with meat, that is also the nonhuman animal (Meerburg et al. 2009, 512). Assuming the saying, this might be true, as there is hardly any greater intimacy between human and nonhuman animals than at sites of meat production.

The narrative of meat production is increasingly being shaped by questions about the enormous amounts of water usage, deforestation for soy production and grazing land, gas emission of livestock itself and many other (environmental) issues. For decades, global nutritional policy has considered meat, an animal protein, to be a crucial nutrient in human diet (Diener et al. 1980, 175). According to the European Court of Auditors (ECA), over 80% of the greenhouse gas emissions from food comes from animal products, even though they only provide a quarter of the daily calories (Dinther 2021). A recent report of ECA concluded that, despite the (Dutch) Common Agricultural Policy (CAP)[1], emissions from agriculture in the period between 2014-2020 have remained stable, instead of showing reduction (ECA 2021). Even more, ECA (2021) states that: *"CAP does not seek to set limits for livestock, nor does it offer incentives to reduce them. The CAP market measures include promotion of animal products"*. Some scholars argue that meat is foremost a profitable nutritional policy (Diener et al. 1980, 187; Austin 1976, 88). Meat is expensive, because it consumes food, water and land that could be used for vegetable and grain production (DeMello 2012, 141). Neither these costs, nor costs for climate change and lost nature, however, are passed on in the price for meat (Bakker 2021). Simultaneously, counter movements are rising in the

[1] Dutch Common Agricultural Policy (CAP) financed €100 billion for mitigation measures of climate change in the period of 2014-2020 (ECA 2021). Amongst others, emissions from livestock farming were supposed to be reduced.

Netherlands: 35% of eighteen years old and over, indicated they reduced their meat intake in 2019, either by having meatless days or by eating smaller portions of meat[2] (Kloosterman et al. 2021). By extension, one in eight of Dutch people joined the yearly National Week Without Meat in 2021, in comparison to roughly 32.000 participants during its first edition in 2018 (Week Zonder Vlees 2021). Furthermore, Dutch supermarkets are increasingly stocking and promoting their supply of vegetarian and plant-based foods (Albert Heijn 2020, Wakker Dier 2020; Bedrock 2020).

Regardless of the growing contestation, meat consumption in the Netherlands has been rising for the past three years (Dagevos et al. 2020; Kloosterman et al. 2021). This contradicting phenomenon may be explained by Yates-Doerr (2012, 2015) who expands on the friction between the material and the symbolic value of meat. She identified a domination of the material value in both the academic narrative, as well as the social-economic thoughts on meat. Additionally, she reflects on the constantly assembled and disassembled realities of (eating or preparing) meat that emerge through practice; the concept of meat is a process rather than a fixed entity. The anthropological perspective is able to demonstrate how and why Dutch society is able to appeal to both the material and symbolic value of meat – such as those mentioned in the first paragraph – at the same time. Drawing from Yates-Doerr (2012, 2015), this thesis adheres to the necessity for more holistic knowledge on Dutch meat production to understand its social contestation. At sites of pig meat production, the Dutch meat industry is explored beyond the juncture of economic and ecological interests. It is considered foremost a place where two species meet and become entangled: the human animal and the nonhuman animal[3].

The multispeciesism of the meat industry instigated my anthropological curiosity to study how human-animal relations are constructed and understood at sites of pig meat production – in the midst of meat consumption contestation. This research contributes to the mitigation of

[2] The Vegetariërsbond [English: Vegetarians' Union] (2020) estimated a 150% rise of vegetarians in the Netherlands over the years 2018-2020. These numbers are hard to verify due to differences between multiple research designs. Three long-term studies by RIVM (2011, 2020), TNS-NIPO (2013) and LEI (De Bakker and Dagevos, 2010; Dagevos, Voordouw, Van Hoeven, Van der Weele and De Bakker, 2012), however, confirm that the number of vegetarians increased in the first 10 to 15 years of this century. The exact number remains unclear.

[3] The term (nonhuman) animal exclusively refers to the (meat) pig. The term 'animal' may serve as a collective name for both human, as well as nonhuman animals (Tsing 2015). Therefore, the thesis will predominantly refer to *human animals* and *nonhuman animals*, instead of human (beings) and animals.

the knowledge gap that exists within human-animal studies. Various scholars claim that many human-animal studies have been predominantly conducted to create a better understanding of solely humans (Boyd 2017; Mullin 1999). As a result, the animal perspective remains underrepresented. The academic relevance of this study is also evidenced by the foundation of the Centre for AnimalHuman studies (the platform consciously refers to 'animal-human' instead of 'human-animal'). In January 2021, the University of Amsterdam (UvA) launched a new platform to promote interdisciplinary animal-human studies in the Netherlands. The platform aims to gain acknowledgment for the academic relevance of animal-human studies, as well as connect physical and social-humanitarian sciences (Centrum voor DierMens Studies 2020). The founders strive to expand the educational offerings for animal-human studies.

This research regards a *multispecies ethnography of a chain*: the pig meat industry[4]. There is a great variety of parties involved in meat production: animal feed producers, breeding farms, fattening farms, veterinarians, National Food and Commodity Authority (Dutch: NVWA), mediators, stable constructors, residual animal-waste processors, consolidators, animal welfare officers, slaughterhouses, butchers and supermarkets are just a handful of those. This research comprised the meat industry to a three-part chain of pig meat production sites: the farm, the slaughterhouse and the butchery. The demarcation allows the study to involve an abbreviated version of the transformation from species to protein. Moreover, it is worth notifying the context of the meat *industry*, as varying from (conventional) anthropological studies with *populations*. For example, this variation opens up the discussion to what extent an Anthropos'[5] positioning differently affects anthropological studies with populations, in comparison to ethnographies of industries. Consequently, this research contributes to the multifunctional application of the anthropological discipline.

The concept of *anthropocentrism* – to essentialize the human species – cannot be excluded from human-animal studies. This multispecies ethnography has aimed to contribute to a "nonessentialist ontology of humanity and nature, and incorporate the perspective of the nonhuman animal as much as possible" (Peperkamp 2021, 9). Following the previously introduced contestation, it seems relevant to challenge the "stable, fixed distinction between

[4] The term 'meat industry' is frequently used as interchangeable with '(sites of) meat production', unless there is a clear explanation for one of the terms to be used significantly different from the other.

[5] Anthropos is another word for human being and/or signifies the 'upward-looking one'

humans and other species" (Yates-Doerr 2015). The aim of this multispecies ethnography is not only to adhere to the new, interdisciplinary field of animal-human studies but also to contribute to an expansion of (reflexive) studies of the Western Self. This thesis allows a modulation of the assumed human dominance at sites of Dutch meat production (DeMello 2012, 133; Mullin 1999, 216). It should be emphasized, however, that anthropocentrism is not claimed to be inherently wrong or invalid by this thesis. Rather, this thesis aims for the recognition and consideration of an inevitable asymmetric relation between the human and nonhuman animal. An illustrative example of this asymmetry is human awareness of swans' seasonal migrations (Boyd 2017 with reference to Brittain and Overton 2013; Ingold 2000, 61). Humans are capable of anticipating animal behaviour in advance. In addition, humans can construct and share narratives of human-animal histories by oral and written speech, in contrast to nonhuman animals who cannot (Ingold 2000, 61). Here lies an opportunity to explore (nonverbal) interspecies communication and recognize nonhuman tracks and traces of history (Tsing 2015, 168). Therefore, the anthropological lens that is fundamental to this research is based on a *multispecies liveability* that suggests an ecological community in which all species co-exist (Tsing 2015). A multispecies liveability does not exclude a human influence, but instead incorporates it in an equal co-existence of all species. By constantly reviewing the boundaries and limitations of my role as a human animal in the meat industry – particularly regarding sensory experiences – the human share within a multispecies liveability is given substance (Hamilton and Taylor 2017, 126).

This multispecies ethnography is predominantly based on three months of participatory observations at two pig farms, a pig slaughterhouse and a butchery. In addition, online and offline interviews have been conducted with a diversity of other farmers, butchers, and more stakeholders. Finally, various desk research activities have been practised, such as the completion of an online course on human-animal interaction at pig farms, the analytical examination of documentaries and podcasts on (pig) meat and farming, and literature studies into relevant concepts.

Research setting and actors

The first pig farm I became familiar with is a medium-sized fattening farm of 3.000-3.500 meat pigs. It is an inherited family business that is run by the family. Every two weeks, the farm receives a batch of 300-350 piglets between nine and ten weeks old. After four months, the piglets should be "125 kilograms alive and 100 kilograms slaughtered" for transportation to the slaughterhouse. Meat pigs reach the age of six months. I have been attending both the

loading and unloading of piglets, daily inspection- and feeding rounds, treatment of pigs and sat at the family's kitchen table at least as many times. The nine-week-old piglets come from breeding farms such as the second pig farm where I conducted research. This breeding farm keeps approximately 1.000 sows. Every Monday, Wednesday and Friday, around sixty sows deliver between 16 and 24 piglets. One sow delivers 1.8 times a year, as the gestation period is three months, three weeks and three days. A sow reaches a maximum age of ten years, unless the condition of the new-born piglets are structurally diminished. In that case, a sow will be either slaughtered for consumption or euthanised due to loss of efficacy. The breeding farm I visited forms the basis of a larger organisation that is concerned with educating agricultural personnel. The educational business is founded by the owner of the breeding farm and includes training for pig farming, cattle and poultry farming, tree and plant nursery, gardening, and agricultural contracting and mechanisation (VPO 2021). They also provide single visits or recreational training for organisations all over the globe. Several times, I joined groups of Dutch students from secondary vocational education during their practical weeks.

The next stage is the pig slaughterhouse. In the slaughterhouse I acquainted, between 18.000-20.000 pigs a day are slaughtered, six days a week. There are only eight hours per day during which no pigs are slaughtered. The slaughterhouse has three departments: the headquarter, the clean line and the dirty line, in this particular order. Together, the clean line and the dirty line can be referred to as the *production floor*. The *slaughter hall* is known in-house as an exclusive reference to the dirty line[6]. After passing the slaughterhouse in the particular order of headquarter, to clean line and to dirty line multiple times, I decided to split the practises at the production floor in multiple departments as well and visit them separately (this time from clean to dirty): the packaging hall (including organ cell and Asian production), cutting lines (of hams and middles), the gut room (intestinal package and organs removal), the scalding, flaming and dehairing area (scorching ovens and – baths), the stunning and bleeding area, and the lairage. Out of respect, I included the stunning and bleeding area in two of my dissected visits. It allowed me more time to *see* what happens at this elusive, yet decisive area.

[6] The dirty line is also referred to as the 'black line' (Slaughterhouse, feedback to author, August 6, 2021). Directly translated, however, my interlocutors consistently utilized the term 'dirty line' to refer to the black line. Therefore, I have chosen to stick with this term, also in English language.

> *[Reflection] During my first visit in the dirty hall, I was accompanied by a management employee who was also in a rush for a following meeting. Only at the time we reached the dirty line, the rush became somewhat of a hinder. The screaming, the stunning and bleeding, the blood-spraying, the smell of the pigs travelling from life to death, it did not get the time to overwhelm me. I could not process what I had seen because it felt like I did not see it. It put me in conflict with my ethical principles, both as an anthropologist, as well as personally. Onwards, I have always ensured that I would be capable of giving my full and deserved attention to all that I was going to be exposed to. When my visits went from sporadically to more regularly, I discovered the effect of the mandatory earplugs on the production floor. The further I inserted the earplugs, the more distracting sounds vanished. The earplugs increased my ability to focus, to see, to internalize, and to pay respect.*

Following the slaughterhouse, there is a variety of potential destinations for meat. Depending on the size of the slaughterhouse (inter)national supermarkets, wholesalers, restaurants- and hotel chains, consolidators, or smaller businesses such as butcheries and other specialty food retailers make orders. In this research, the next stage is the butchery as a fragmentation of the slaughterhouse (Vialles 1994). I joined the team of an inherited, family butchery on a weekly basis. The butchery receives and sells approximately four half carcasses of meat pigs a week. This is complemented by additional orders of specific pieces of meat. For example, one pig only contains two pieces of tenderloin, while this is a very popular piece of meat amongst Dutch consumers. By additional orders of individual pieces of meat, the butchery is still able to meet the demands for such popular pieces. This butchery did not receive its carcasses from the slaughterhouse I visited. I did meet with the consolidators of the butchery. Consolidators generally form a chain between the slaughterhouse and multiple butcheries. As mentioned, the butchery receives its carcasses of meat pigs in halves. Half pigs mean a dissected pig in hams and middles. The shape in which butchers receive their meat, however, depends on their degree of autonomy from either franchise formulas, as well as financial circumstances. The butchers I accompanied dissect the carcasses further into pieces of meat that Dutch consumers are familiar with. Material for cooked, smoked and raw ham, ribs and other specific pieces of meat are separated from excess fat, skin, and waste. What remains is a great amount of residual meat for minced meat. Minced meat is used for a lot of meat products, such as meatballs and sausages in various tastes and forms. *"Dutch consumers have a minced meat-culture [Dutch: gehaktcultuur]"*, according to various butchers I spoke with. It is cheap, easy

to prepare, and, therefore, easily customizable with tastemakers. Yet, minced meat is also a devaluation of the meat. Some pieces of meat are more valuable when they are not minced. These pieces are not sold in their original shape because Dutch people are not familiar with them – and, therefore, cannot properly prepare them – or the pieces require processing due to expiry.

Multispecies perspective

Studying human-animal relations is a challenging objective. There is no uniform idea about the relation between nature and society (Tsing 2000; Ingold 2000; Hayward 1997; Diener et al. 1980; DeMello 2012; Boyd 2017; Mullin 1999). There are merely perspectives. An introduction to cultural ecology captures the divergence of perspectives as the following:

> *"The dominant Western view leads to a widespread idea that it is the goal and mission of people to "conquer" nature. Thus, many people today continue to believe that humans are not participants in the environment but that we must overcome it and bend it to our will. (..) Some have conveniently shifted their view on this matter, arguing now that human activity is part of nature and so changes in climate caused by humans (e.g., global warming or climate change) are "natural" and thus not of concern. Many traditional societies do not hold the view that people are separate from nature. This has led to a Western view that such people are somehow "ecologists" living in harmony with their environment." (Sutton and Anderson 2013 with reference to e.g., White 1997; also see Krech 1999; Hames 2007).*

Trying to gain insights in human-animal relations from an *animals' perspective* is even harder. I cannot avoid being an Anthropos and being shaped by this (Hayward 1997, 51). I climbed in transportation trucks, laid in the straw, crawled in piglet tomes, spent hours in stables, listened carefully to pig screams and endless mechanical sounds, kneaded meat, cut meat, and above all, internalised the smell of ammonia in every fibre of my body. In vain, I tried to get a grip on the animal's perspective but I just was not able to. The sensory data demonstrates the complexity of escaping anthropocentrism as an Anthropos. A human animal *senses* things differently from nonhuman animals. Pigs have much stronger and sensitive hearing, for example. They hear tunes up to 40.500 Hertz, whereas human animals reach up to 17.600 Hertz (WUR 2021). Furthermore, a pig's snout is its blind guide – it feels and smells sensitively, and compensates for its limited sight in comparison to a human animal field of

view (WUR 2021). Nonhuman animal's smell, hearing and sight, however, can be mimicked to some extent. The same cannot be said for touch. Fingers cannot be compared to the snout, as they do not commonly function as a crucial part of Anthropos' sight. Human animals cannot avoid approaching the sense of touch through Anthropos fingers. Perhaps, one could say, I was participating too much and observing too little.

Sensory ethnography[7] in terms of *phenomenology*, however, enhanced my multispecies perspective. Phenomenology refers to the incorporation of the sensory experience of the researcher, and how this is researched and written about by the researcher (Bryant 2020). Needless to say, this method requires my participation too, yet, it retracts observation. During fieldwork, I frequently reflected on the experiences I collected with my gatekeeper by means of phenomenology. My gatekeeper and I shared a workfield, yet varied form discipline. My gatekeeper has been a veterinary pathologist for over thirty years. By elaborating about research methods and obtaining data we build a bridge between our understandings. It enabled me to benefit from the veterinary discipline. As a result, I realised over time that I could not grasp the animals' perspective, no matter how I followed it from farm to slaughter to butcher. Human-animal relations in the Dutch meat industry are not constructed and defined by static, uniform actors. The nonhuman animal keeps transforming: (re)moving from sites, contexts and guises. Yet, the body confused and deluded me. The challenge appeared not so much how to get a hold on the perspective of the animal, but the challenge was rather to recognize the nonhuman animal itself as a perspective. I learned to understand the meat pig as the embodiment of the Dutch meat industry.

The meat pig became my matsutake[8] (Tsing 2015). The meat pig constitutes the red thread of this research: A guidance in both processes of production, as well as sense-making of the data on human-animal relationships. The meat pig is a pig breed that is exclusive for industrial meat production[9]. It cannot survive outside, either on pasture and certainly not in the wild. It

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[7] Sensory ethnography considers senses as social infrastructures through which classic ethnographic research is enhanced. It seeks to engage through sharing activities and practices and exploring new form of expression (Bryant 2020; Pink 2009, 6).

[8] The book *The Mushroom at the End of the World: on the Possibility of Life in Ruins of Capitalism* by Tsing (2015, 2, 4) is written through the 'tracking and travelling with matsutake' [a mushroom]. Similarly, this thesis tracks and travels with the meat pig.

[9] Industrial meat production refers exclusively to confined pig meat production. This does not include biological, free-range or nature-inclusive farming (Farmer X, conversation with author, April 20, 2021).

is simply not a pasture pig, nor a wild pig. It is not able to deal with irregular climates, it is not used to look for food in the wild, let alone to process this food. It is neither familiar with signalling dangers from the wild, nor capable of protecting oneself from danger with effective strategies. The meat pig, such as the TN70 or Fatiner, however, is equipped with high reproduction efficiency, large litters with strong and vital piglets, high quality fatness with high feed efficiency, lean growth and good carcass quality (Topigs Norsvin 2021). The life of a meat pig is fully consistent of efficacy examination. As a human-made species, the meat pig embodies the economic structures of the meat industry. Its body is literally the intersection of animal and meat (meat + pig) that is curated by Dutch agricultural expertise. It epitomises the common susceptibility of human and nonhuman animals in the meat industry. Without the meat industry, the meat pig would not be amongst us. The life of a meat pig is devoted to being fit for slaughter. In other words, the meat pig derives its right to exist to its death.

The following sections will elaborate on the meat pig as my matsutake. The first section will set out how economic structures of the Dutch meat industry can be read from the meat pig. The second section demonstrates how the concepts of ‘meat’ and ‘animal’ can be made sense of by the meat pig. Finally, the meat pig – as the concretization of Dutch agricultural expertise – is elaborated on as an indicator of mutual susceptibility.

Economic structures

Looking into Dutch meat production through the meat pig enabled me to perform a multispecies ethnography of a chain. It allowed me to find the human and nonhuman in resources (Marx 1844). It allowed me to go beyond the perception of power distribution and exploitation. According to Ingold (2000), caring for animals is challenged by the “conventional dichotomy between wilderness and domestication”. It raises a choice between exploitation or avoiding all direct contact. Inspired by Boyd (2017, 308 with reference to McNiven 2010), I frequently described the meat industry as a place where two species meet. Avoiding all direct contact is not particularly the case at sites of meat production. Therefore, assuming a Human/Nature dichotomy, the meat industry would be left with a human-animal relation of exploitation. Yet, opposing nature as a category to culture or society is not obvious, especially not in non-Western societies (Mullin 1999 with reference to Descola 1994). Habits of animal consumption visualize the global multiplicity of interpretations with regard to this dichotomy. In the Netherlands, for example, dogs as pets are part of the family. One does not eat members of the family (DeMello 2012, 142). In China, however, dogs are

delicatesse. In India a cow is a holy figure, while in the Netherlands it is one of the most consumed animals. Edible meat is, therefore, a cultural construct and not a given. As mentioned, there are only perspectives. Assuming a dichotomy would be a limited approach to human-animal relations in the meat industry. Denying the fundamentality of the dichotomy, however, is too. Based on the current interpretation of the Dutch meat industry, one can be certain to discern a difference between human and animal. It is generally accepted to kill animals, provided with the right purposes and methods, but it is obviously a serious crime to kill people. In addition, killing people is differently referred to than killing animals. The verb 'to murder' is to some extend reserved for referring to human killing as we speak of slaughtering in the case of killing animals. The current Dutch meat industry is legitimized by the dichotomy. The concepts of life and death are rather ambiguous for the meat pig. As such, the meat pig enables a move away from the Human/Nature dichotomy and incorporates the multispecies perspective that this thesis aims for.

A multispecies perspective explains a chain as a 'polyphonic assemblage': a gathering of (standardized) rhythms (Tsing 2015, 24). At sites of meat production, these rhythms are various schedules of maturation of the meat pig. The evening before my first farm-visit my gatekeeper made sure I was familiar with *key figures*. Key figures give insights in the maturation of pigs and make growth manageable. An example is food conversion, which indicates the amount of food that a pig requires in order to reach the desired weight and subcutaneous fat. According to my gatekeeper, it would be inappropriate if I was not aware of such crucial figures. They are the essence of a farmer. These figures are predominant in the rhythms via which human-animal relations are shaped (Tsing 2015, 25). A polyphonic assemblage also relevantly considers spheres of industrialisation that are inspired by models of scalability (Tsing 2015, 38). That is why I added the word 'standardization' in brackets. Scalable businesses require elements to be 'oblivious to the indeterminacies of encounter'. They are an intraspecies banishment of diversity (Tsing 2015, 38). I refer to 'interspecies banishment' here, because nonhuman animals share interchangeability – a consequence of scalable businesses – with human animals at sites of meat production. In this event, the meat pig is a demonstration of economic structures that transcend the non-scalability of nature. It raises questions about the substance of nature, and the accuracy of an explanatory Human/Nature dichotomy at sites of meat production.

Intersection of animal and meat

In my attempt to get a hold on the animals' perspective I, eventually, decided to just ask for it. In the midst of recognizing the *rite de passage* from animal to meat, I was looking for the turning point. I asked all my interlocutors to explain to me the difference between an animal and meat. Some responded resolutely, others sunk into deep reasoning. More others just did not know. They never really thought about it. To find a pattern in the multiplicity of individual ideas I have drawn from Vialles (1994) who studied abattoirs in France. Among others, her book pays attention to linguistic challenges in slaughter and butchery. A name, or a term gives (too much) existence to the ideally anonymous, invisible industry. Elusive terminology can be understood as attempts of euphemisation (Vialles 1994, 22). The concepts of 'animal' and 'meat' enjoy a similar elusiveness. Again, there are only perspectives. Biologically, for example, 'animal' can refer to both human as well as nonhuman animals. At sites of meat production, the term may regard both living, as well as dead (nonhuman) animals. Meat consumption can also be referred to as animal consumption, although this is not used very often in the Dutch language. Vialles (1994, 44) concluded that within the slaughterhouse "the object is neither an animal, nor even a dead animal, nor yet meat. It is a something from nowhere.". It is a meat pig. A joint of 'meat' and 'pig'.

Similar to the study of Vialles (1994), this research involves a translation, from Dutch to English. Therefore, it is desirable to be aware of the difference in Dutch and English language when referring to meat. In Dutch language, there are no separate words for 'flesh' and 'meat'. In English, however, the word 'meat' is reserved for referring to (animal) consumption. Therefore, the English word 'meat' implies an inherent edibility, while edible meat is actually a cultural construct. This raises confusion, hence requires a nuance. For example, 'meat' may sometimes function as a collective reference to meat (as in 'muscle') and fat. Farms and butcheries benefit from measuring subcutaneous fat, which aims for a desired ratio of fat and meat (muscle). Subcutaneous fat is also referred to as *fat thickness or -coverage*. In Dutch, there is a separate word for *pig fat* [spek], which is neither necessarily edible, nor inedible. Pig fat is variously defined as edible or excess. Fat is not always included in the concept of edible meat. This illustrates why 'meat' cannot inherently refer to edible meat. To facilitate a correct and understandable translation from Dutch to English terms, a consistent distinction is made between meat and edible meat in this thesis.

In the Netherlands, edible meat is – as in many Western countries – slaughtered, eviscerated from blood, skin, tendons, most organs, irregularities such as bruises and preserves an undefined amount of fat. Bones are not always removed, and, therefore, sometimes included in pieces of edible meat. The bones themselves are generally not consumed by Dutch people. On the contrary, animal bones, as well as several organs such as heart[10] and brain – that Dutch consumers predominantly mark as inedible – are eaten by several Asian populations. Edible meat is also a healthy animal, which had not had any antibiotics at least three weeks before slaughtering and is not crippled. Edible meat is also the right colour. Pig meat is, for example, preferably somewhat pink, while pure and unprocessed pig meat is not pink but greyish. Not to be mistaken for PSE meat, which stands for Pale, Soft and Exudative meat caused by stress of a living animal, that turns the colour more to white. Edible meat is also the right size, weight and shape, regardless of meat from sows that have farrowed or swines for breeding. Finally, edible meat can only be derived from a meat pig. Observing the necessity of slaughter is crucial. Slaughter is not merely a transforming capacity but it gives life to meat pigs. Meat pigs are born and raised for slaughter and consumption (DeMello 2012, 130). This intersection of life and death fuses animal and meat. The consideration of the meat pig, however, eliminates the requirement of a differentiation between animal and meat.

By extension, it is desirable to elaborate on the choice of terminology for ‘meat pig’. First of all, in English there is a separate word for pig meat: ‘pork’. On the contrary, Dutch language does not have a separate word for pig meat. In the event of a Dutch research such as this thesis, it seems fitting to move away from ‘pork’ as the referent to the meat pig. Second, pork assumes a natural edibility, which I have argued, is not accurate.

Mutual susceptibility

I can emphasize with the nonhuman animal as much as I want, yet a multispecies ethnography exists by favour of another species. My engagement with the nonhuman animal paired with the decomposing of the human animal perspective. As mentioned earlier, the Dutch meat industry is a place where two species meet and become entangled. As a human-made species, the meat pig is representational for this entanglement. The meat pig is domesticated by the selection of specific traits that are beneficial for the achievement of edible meat and, treated in accordance with Dutch eating habits. The meat pig is shaped and reshaped based on

[10] Unprocessed heart is frequently marked as inedible. However, Dutch consumers eat heart that is processed into meat products (Slaughterhouse, feedback to author, August 6, 2021).

innovative Dutch production processes. The meat pig is not only a result of Dutch expertise but it is also an indicator of Dutch culture. Yet, first and foremost, the meat pig is the symbolization of employment in meat production. The establishment of the correct meat pig dominates meat production sites. What is considered correct (efficient) is not decided on by individual human animals that facilitate this establishment. Sites of meat production are subject to economic interests, political structures, and ethical dilemmas. Human animals are resources to achieve and maintain the scalable business (Marx 1844). Meat pigs are the narrative.

Main arguments per chapter

Chapter 1

The meat industry is an alert entity which facilitates contestation. Three origins of closedness have been identified: an ethical, historical and economic origin. The closedness causes acts of openness that are visible in the duality of the front and the back of the meat industry, and the allowance of footage.

Link to next chapter

Every site examines its degree of closedness differently, because their sight vary from each other.

Interlude: The Activists

Chapter 2

The substance of the human-animal relations differs per site [farm, slaughterhouse and butchery]. There are three areas on which the sites differ from each other, that are decisive for the degree of closedness: scale and scope, relation to slaughter and the guise of the nonhuman animal. This difference is illustrated by the interpretation of the duty of care.

Link to next chapter

The duty of care is a consequence of domestication, yet, domestication is not inherently connected to human animal domination.

Photo diary: The Farm

Chapter 3

There are limitations to human mastery as industrial meat production dismantles human animals from control. There are four indicators that nuance human dominance: dependency on attributes, contradicting law and regulation, dehumanization of the industry and selling labour.

Link to next chapter

Despite human animal subjectivity to the meat industry, they are called for their actions [contestation]. The current Dutch meat industry causes one to speak for those who cannot speak for themselves.

Interlude: COVID-19

Chapter 4

There is no clear-cut referent in the Dutch meat industry. Nonhuman and human animals are both interpreted. The nonhuman animal cannot speak for itself, therefore, cannot explain or define itself. The understanding of the nonhuman animal depends on human animal interpretation. Human animals (interpretation) are shaped by human agency and the unavoidability of anthropocentrism. An example is the cultural construct of edible meat. Edible meat, in turn, comes into being by the transformative encounters that similarly applies to the other concepts of animal and meat. In addition, the human animal can neither explain or define oneself, despite being able to (orally) speak for oneself.

Photo diary: The Butchery

Chapter 1 Entering the field

“We just want to rule out the possibility of another Roos Vonk.”

Whenever I spoke with people in and out the field about my research, there was no doubt about the closed characteristic of the meat industry. It is, indeed, an industry that is hard to enter. In this chapter, I will elaborate on my experience in entering the meat industry. I argue that the balancing between the urge for transparency and initial alertness is a response to continuous contestation. First, this chapter will set out the origins of the closedness of the industry. It seeks to answer the question why the meat industry is presumed to be a closed entity. This search invites one to recognize the attempts of the industry to (re)construct its narrative from closed to transparent. This chapter also demonstrates how such reconstructive activities are constantly reconsidered. The balancing between transparency and reluctance appears to relate closely to what is (literally) in- and out of sight for both the human, as well as the nonhuman animal.

Motives for closedness

Ethical

From the inside of the industry, I was able to identify three origins of the closedness at sites of meat production. The first motive refers to an ethical consideration in which the sensitivity of slaughtering is integrated. Brutality against animals historically signified human dominance over animals (Franklin 1999 with reference to Thomas 1983, 11). Today, however, the legitimacy of such actions is increasingly questioned. Due to the rise of technology and politics, Nature began to be viewed with affection and nostalgia (Mullin 1999, 203 with reference to Ritvo 1987, 3). The Human/Nature dichotomy weakened. The Netherlands may be considered a breeding place for such nostalgia. Dutch politics are unique in the inclusion of a separate political party for animals. The twentieth-century is marked as progressively into animal sentiments (Franklin 1999, 2). Also, the Netherlands are an internationally established centre of agricultural science and technology (Oosting 2004; Meerburg et al. 2009).

> *[Fieldnotes] The moment we [myself, the manager of the slaughterhouse and my contact] approach the bleeding line, the workers observe a hanging pig with rhythmic breathing. Pigs need to be fully unconscious before bleeding, so the workers stunned the individual pig with electricity. When the pig has been stunned, stabbed and is moving forward on the rails, it makes a few more convulsions. When we are taking off*

> *our working clothes after the visit, my contact says: "It was nice to see how the employees dealt with the emergency slaughter of the pig that was not yet completely unconscious. These are experienced workers who have been working at the slaughterhouse for a very long time. How they stopped the production line for a moment and rearranged things. That is craftsmanship. For a stranger, like you, however, the whole event might be a weird observation.".*

Slaughter is inherently assumed to be disapproved. In response, the industry appeals to fragmentation and hybridization of the butchers' trade, and marketing strategies that disable any reference to the animal in meat (Vialles 1994, 28; Fiddes 1992, 96). According to Mullin (1999, 216), Western societies have become less inclined to think of animals as food even while consuming more meat than ever before. In 2020, 95% of Dutch population indicated to be a consumer of meat, of whom 20% eats meat every day and, 30% eats meat 5 or 6 days a week (Kloosterman et al. 2021). As well, the past three years meat consumption has increased in the Netherlands (Dagevos et al. 2020). The paradoxicality of an increased, twentieth-century acknowledgement of animal sentiments on the one hand, and a growing meat consumption on the other, evidences the constant desire to emphasize a distinction between human beings and animals (Franklin 1999, 2). Distinctive strategies aim the avoidance of any commonality, as it would refute the legitimacy of slaughter. Putting oneself in the position of the (fellow) animal at sites of meat production is a place that is preferably left unexplored. When I asked one of the workers in the slaughterhouse for her thoughts on meat production, she replied to me: *"No. I do not want to go there."*. The actual act of slaughter, however, exclusively takes place at the site of the slaughterhouse. Other sites of meat production do not similarly experience the sensitivity of slaughter, which affects their way of balancing between open- and closedness. Nevertheless, the other production sites are inevitably connected to the ethical dilemma. In the following chapters I will further elaborate on the differences between the research sites, and how this is impactful for decision-making processes.

Historical

The second origin of closedness is based on longstanding law and regulation that demand(ed) isolation in order to minimize risk for infections. Various farmers explained to me how terrains of pig stables are historically expected to organize closed windows and dense vegetation around the fence as part of food security policies. That is to say, Dutch law and regulation is based on *animals-as-meat*. Similar to the marketing strategies and the

fragmentation of the butcher's trade, it aims to blur any relation to something that is (equally) alive. It centralizes an animal's destination as meat, and neglects its being as a living creature. Preferably, the animal is entirely eliminated from meat. The meat pig allows such an approach, as it has no further essence in life than becoming edible meat. A reference to meat, hence an elimination of the animal, seems fitting. An evaluation of Dutch law and regulation is all the more relevant because of the exemplary role of the Netherlands in agricultural processes (Oosting 2004, 48-9). The Netherlands is frequently consulted for their expansive knowledge on livestock. According to a progressive sausage expert I spoke with, however, Dutch agricultural expertise predominantly distanced humans from the animal in meat. This corresponds with national law and regulation that aims to distance the animal from meat. The sausage expert suggested to utilize the same, innovative Dutch expertise to *return* the connection. Not insignificant, however, is that efficiency strategies is vital to Dutch expertise (Meerburg et al. 2009, 512). Returning the connection, therefore, could and should not be established without efficiency[11]. At the breeding farm, I was introduced to such initiatives: the viewing stable and the so-called skybox. Without enlarging the risk for transmissible diseases, outsiders are offered a low-threshold glimpse into the farrowing stables. The viewing stable of the breeding farm was located next to the accompanying farmers café. As part of the café, the viewing stable was exposed to Google reviews. Prior to my own visit, I read the reviews of a handful of visitors who experienced insights into the youngest pig stable where locked-in sows are either in delivery or have just delivered a batch of young piglets. The sight was received variously. An attempt to create transparency, therefore, is not inherently beneficial for meat producers. It may stimulate reclosing. Regardless, I was resolutely told: *"..we show it the way it really is."*. Not just by the breeding farmers but by the multiple farmers that welcomed me. Yet, 'the way it really is' – efficiency – is precisely what disconnects, and instigates a contesting society (Meerburg et al. 2009, 512).

Economic

The third origin is explanatory for Dutch contestation that maintains reluctance of meat production. Concerns for basic needs such as food are generally excluded from Western societies. Meat has become accessible for many Dutch people, which creates room for Dutch

[11] In 2018, Alan Matthews, a Professor Emeritus of European Agricultural Policy at Trinity College Dublin, studied how technological changes that ensure efficiency improvements have caused a so-called "rebound effect": Technology delivers fewer greenhouse gas reductions than if production were not increased. This was the case in animal husbandry for milk production (ERK 2021, 25 with reference to Matthews 2018).

society to be critical (DeMello 2012, 132; Meerburg et al. 2009). As a result, the animal- and climate friendliness of meat is questioned increasingly. Economic situations, however partially, influence ones ethical consideration of the meat industry (Fiddes 1992, 169, 173). Despite Dutch wealth and accessibility, meat remains to be a symbol of prosperity (Fiddes 1992, 165). Consumers derive status from consuming meat, while meat derives its luxuriousness from wealthy consumers (Fiddes 1992, 175). In several conversations I distilled a 'right for status' derived from meat consumption. From this perspective, the ability to consume meat should not be reduced, even if it increases animal welfare. In other words, the same economic situation requires a different approach to the social contestation of the meat industry. Consequently, Dutch sites of meat production are challenged by a constant fluctuation between the material and symbolic value of meat (Yates-Doerr 2012 11-12; DeMello 2012, 127).

Acts of openness

The three origins of closedness, instigate an urge for sites of meat production to reconstruct their narrative to a more transparent character, yet, on their own terms. My allowance into the industry is an example of such an attempt. At the slaughterhouse, I experienced an optimism that my research could gain refreshing insights from a new perspective like anthropology. This would, however, predominantly refer to animal welfare practises and potentially some human resources-like insights. Not (yet) a joining of the two. The insights would be subdividing the one (human) from the other (animal). The presumed categories indicate an unfamiliarity with anthropological research methods. I encountered the subsuming of my research under the heading of 'animal welfare' many times after this. In the period that followed, I tried to emphasize – at all research sites – that my research had no intention to examine animal friendliness, and that animal welfare is only one perspective through which human-animal relations can be studied. My presence was, thus, allowed despite the unfamiliarity with the anthropological discipline. Parties in meat production usually work with veterinary and/or agricultural students and professionals, whose research are predominantly based on quantitative research objects. This caused another reason for reluctance: quantitative research methods provide the ability to defend oneself with hard data, whereas qualitative research methods of anthropological research do not. Qualitative data provide, to some extent, interpretative liberty. An industry that has become used to defend oneself is, consequently, alerted by a request like mine. Therefore, the fact that my gatekeeper could directly introduce me to a board member of the slaughterhouse, was of incomparable

value. There was someone on the inside who vouched for me and my research intentions. Let there be no misunderstanding that my contact was an assurance of approval from the rest of the board members. As I explained, my background in social science was not particularly beneficial. Roos Vonk, for example, is a social scientist who put the meat industry in a vulnerable position (also unjustly, as appeared later) with her multiple researches on malpractices in the livestock industry. Ironically, similar to the meat industry, I experienced assumptions too, about my research intentions and perception. Earlier, I mentioned that the goal of my research was being presumed incorrectly. I also illustrated a situation in which my perception – as a social scientist studying human-animal relations – on meat production events was filled in for me. I cannot blame them, yet, it is at least remarkable that I was presumed of prejudice. I felt a strong desire to prove that social scientists are not one-size-fits-all [Dutch: ‘eenheidsworst’ and directly translated ‘uniform-sausage’]. I hope to achieve this by the establishment of this thesis.

Front and back

On a broader level, attempts to reconstruct the narrative are visible in the determination of what is *in-* and *out of sight*. I refer to this as ‘the front’ and ‘the back’ of meat production. During my visits at meat production sites, I was eventually invited (or not) to ‘come behind’ or ‘go to the back’. Whereas the front has a representational function, the back is assumed to appeal to the origins of meat industry contestation. When I went to visit the pig farms, the farmers always referred to the stables as ‘going behind’. One could refer to ‘the family’ as the front of the farm. I spend many hours at the kitchen table of the fattening farmers before, or after going behind. According to van Voorst (2019, 55), the image of farming as a family business is frequently exposed to people by means of commercial promotion. Recall the marketing strategies of meat products to eliminate, or at least distract one from making a reference to the animal. During Easter, an idyllic video of a farmers’ life, featuring kids and cute lambs in the pasture, was played in the butchery store. It was a promotional video of lamb meat.

[Interview] “B: ..we have those TV screens in the store, advertising and the like, at one point you get a video of fresh food, then you see a lamb walking in the pasture and that is fresh lamb. Then I think, yeah, that's not acceptable.

A: You think the contrast is too great?

> *B: Yes, people who then, for example, just like with chicken or something like that, look, it's good to know where it comes from..*
>
> *A: Because that's just not quite right with the image there.*
>
> *B: Yes, it does, but, uh, yes, I mean, many people will then think, yes....*
>
> *A: Justify it again?*
>
> *B: No, see it is reality, only then, yes....”*

The butcher in this fragment was clearly not entirely comfortable with the video. The complexity he experienced to explain his awkwardness is caused by the fact that families are an undeniable part of (Dutch) farming (Oosting 2004). Yet, their representational function is in flux. The decreasing share of small family-owned farms correlates to the rise of families as ‘the front’ of the farm. At the same time, these representational families are more anonymous. During my first visit at the breeding farm, for example, I was presented a PowerPoint presentation to get to know the ‘business’. The first slide showed a picture of the family. The element of family remains present, yet more anonymous and less accountable. At the slaughterhouse, however, there is a clear difference between the front and the back. The headquarter of the slaughterhouse referred to the production hall as ‘going to the back’. The headquarter was some sort of protection layer that I had to pierce through. Once I entered the production floor, there seemed to be no boundaries. I was free to move around and manoeuvre between hanging carcasses, working employers and (automatic) racing trolleys. Even more, it was myself who decomposed my visits to specific areas. At the butchery, the counter functions as the front. The counter presents all the edible meat that is prepared at the back: the ennobling and boning area. One of the butchers I worked with at the butchery described it as follows: *“I like working at the front [the counter], but here [at the back] I do not have to control myself towards customers.”.* The first time I went to the butchery, I ran into him singing out loud along with the radio. Later, when I was more acclimatised, I caught myself doing the same. I always entered the butchery via the back. The same route as the half carcasses of pigs were delivered. At the back, similar to the slaughterhouse, there are no shields. The counter, however, is representational for the butchery and, potentially even for the entire meat industry. This may require them to sustain a certain image. For example, multiple butchers I spoke with also offered vegetarian options. They acknowledged the

growing demand and were willing to participate in the movement. Nevertheless, the vegetarian alternatives are rarely presented *in sight* in the counter.

Footage

Acts of openness can also be observed in the allowance of making footage. This is a rather literal reference to what is in- and out of sight. The various research sites responded differently to my request for taking photos and/or recording audio. Allowing imagery, however, is not inherently considered open. When I asked for permission to make audio recordings and take photos, the breeding farm told me: *"That is not necessary, we are an open book, you can ask us anything."*. Here, refusing imagery and recordings means there is nothing to prove or justify, while at other places the allowance of imagery and recordings mean to say that there is nothing to hide. The risk of footage, either sounds or imagery, is its selectivity. Footage is not only momentum but it is also subject to one's standing point. At the production floor of the slaughterhouse, I experienced how employers of the cutting room are distant from their colleagues at the bleeding area. Cutting employers have no sight on the practices of bleeding employers, because they take place in another room. What is out of sight, however, does not mean it is not taking place. Especially in this particular example of slaughter, 'out of sight' may conveniently allow an 'out of mind' attitude. In reverse, if a farmer is not brought into view during loving moments, it does not mean it does not exist. Perspectives matter, both ideological as well as 'geographical'. One's ideas about meat determines what one *wants* to bring in sight or see, yet, one's standing position determines what one *can* bring in sight or see. The allowance of footage, thereby, illustrates the constant balancing between transparency and reluctance.

The meat industry is initially alert due to a triplet of ethical, historical and economic origins. Together, they feed and maintain meat industry contestation. The contestation, in turn, also instigates an urge for transparency which is constantly reconsidered. As the argument about the sensibility of slaughtering implied, each production site [farm, slaughterhouse and butchery] motivates its extent of open- or closedness differently. For a great part, the degree of open- or closedness is decided on what is 'in sight' for the individual sites. The sight at individual meat production sites is predominantly limited to their own environment as a result of fragmentation and upscaling (Vialles 1994; Tsing 2015) In other words, the openness of the meat industry is determined by individual sites of meat production that also have only selective sight on the industry. The question "what is 'in sight' for the individual sites?" is

relevant to explore, because it provides insights in the various actors that give substance to the human-animal relation apparent at each separate site of meat production. What is out of sight will appear to be closely related to acts of masquerading, which implies a deliberateness. This will be manifested later.

Interlude: The Activists

In the realm of sight, I would like to pay attention to the multiple ways sensory experiences can be studied. As explained earlier, as an Anthropos, I cannot move away from Anthropos senses. Yet, the following fragment of a particular fieldwork experience shows how sensory experience provides various opportunities for further multidisciplinary explorations.

One Monday, I joined an activist group, at the slaughterhouse where I conducted my research. Every two months, the slaughterhouse welcomes the activist grouping and let them hand 'the last stroke' to pigs on their way to the slaughterhouse lairage. Apart from stroking, the activists adhere to making footage of the pigs in the transportation trucks. In coordination with the slaughterhouse, the activists are allowed to take photos and record videos, as well as share them on social media. The organizer explained that the activists aim to capture the eyes of the pigs; *"There where personalities come to the surface"*. The eyes, she said, reveal anxiety and sadness, and evidence the presence of emotions in pigs. The acknowledgement of animals as sentient beings is a motive to deny, or at least question the legitimacy of (industrial) meat production. The pigs of the first floor in the transportation truck (the pigs of the second and the third floor were too high up to reach), however, are predominantly exposed to cameras and flash lights instead of being stroked. This raises questions about the motivation to bring something in sight and what this means for that which, or who, is brought in sight. Even more, this particular situation invites one to explore whether the connotation that pigs make – if they make them at all – towards human presence are of a pleasant kind. Vialles (1994, 91) elaborates on the paradoxicality of questioning the capability of pigs to make connotations or not: while pigs are accorded more acute senses, they are less frequently credited with any real understanding, or the ability of presenting. Smell, for example, is recognized to attribute a kind of understanding, at least an intuition. Therefore, a very well-developed smell or hearing, such as pigs have, would mean an ability to premonition (Vialles 1994, 92), especially in the situation of 'the slaughterhouse smell'. The pig slaughterhouse where I conducted my research is located near the town I grew up. Many of my friends and family are familiar with the slaughterhouse. Not because they are accurately aware of what happens on the inside but because they immediately recognize the smell. Pig smell is distinguished from other animal smells (Vialles 1994, 90). Consequently, the (pig) slaughterhouse smell does not require much elaboration. Tsing (2015, 46) also describes how smell 'is the sign of the presence of another', which explains how smell is registered before sight (Vialles 1994, 88). The question whether pigs are capable of premonition, however,

remains unclear due to a irreconcilability of a human-understanding of animal senses that I mentioned earlier. Nevertheless, in correspondence with Hamilton and Taylor (2017, 127), this interlude evidences how sensory information "takes us further towards empathy and understanding of the enmeshed life-worlds that encompass a range of agencies, moving through space, having affects and changing things.".

Chapter 2 Relations through guises

"They die because they are living creatures."

The polyphonic assemblage that characterises the meat industry is helpful to understand not only sites of meat production as gatherings of rhythms, but also to recognize the interplay of these rhythms (Tsing 2015, 23). Sites of meat production deal with unique schedules of maturation that are transformative and change the guise of the (same) nonhuman animal. In the event of a chain, such as the meat industry, the emergent effect of encounters becomes relevant (Tsing 2015, 23). Sites of meat production sequence each other, thus, encounter and collaborate, which leads to contamination (Tsing 2015, 28). Sites of meat production, therefore, are not self-contained units. The actors – human and nonhuman animals – are contaminated by encounter. The example of slaughtering in the previous chapter shows how an individual site of meat production deals with custom practises. Through assemblage, it becomes clear that all sites of meat production [farm, slaughterhouse and butchery] encounter, and relate to practices or processes that may take place at only one of these sites of meat production. The separate sites differently relate to these practises or processes as a result of contamination. A farmer has (literally) a substantially different view on the nonhuman animal than a butcher. As a result, I argue that the substance of human-animal relations varies per production site. Species respond to what is in sight. This chapter starts with an elaboration on three decisive areas that differentiate the meat production sites from each other. Moreover, it demonstrates how sight impacts the degree of open- or closedness that I discussed in the previous chapter. Finally, the 'duty of care' will be used to illustrate the different substantiation of human-animal relations.

> *[Fieldnotes] The production floor has three levels. The highest level is one huge space that reaches over the entire length and width of the factory. It looks like a warehouse. Carcasses that are ready to send are collected here. The space is actually a big refrigerated area. Via an automatic rail system, which is utilized on all the other floors as well, the carcasses are rolled in the warehouse. On the left side, the railways go horizontal, on the right the railways go vertical. I guess one railway is about 50 meters. Every meter, there might be 1,5 meat racks with circa 10 pieces of meat. Not only the size of the warehouse but also the endless supply of meat (and pigs) via the railway system does not seem to end. Later, as I am witnessing the continuous supply of just-killed pigs from the scalding process, I ask the manager of the slaughterhouse*

> *who accompanies me: "What do you think about all this?", to which he responds: "It is a massiveness. Sometimes it makes it anonymous to both the animal and the human.".*

Scale & scope

Whereas an average fattening farm, like the one I visited, rears around 3.000 pigs, a big breeding farm breeds 1.000 sows, and a successful butchery sells four pigs a week, the slaughterhouse slaughters between 18.000-20.000 pigs a day. The impact that the farms and butchery I visited have on the Dutch meat industry, is less significant than that of the slaughterhouse I acquainted. The slaughterhouse's impact, even more, crosses nation borders. The urge for transparency and for reconstructing the narrative falls or stands with feelings of responsibility. Scale, however, does not inherently cause an increase in responsibility. On the contrary, a bigger scale requires mass technology such as railways and assembly lines that enforce anonymity. Today, individual farms or butcheries are still less equipped with such anonymizing mass technologies. However, farming is increasingly dominated by so-called factory farms[12] (DeMello 2012, 132-6). Even more, the family-run fattening farm also partially operated with automatised feeding systems. The anonymization predominantly presents itself in the elimination of extensive inspection rounds. The farmers told me they felt less connected with the pigs that were fed automatically, than with those that are still fed manually. A farmer simply sees its piglets less. As a result, pigs are less familiarized with humans.

> *"The experiences that pigs have while interacting with people largely determine the development of their fear of people. Among these experiences, the nature of the contact, the moment and the frequency are important. When very little contact takes place, the nature of the contact is very important." (WUR 2021)*

The above description originates from the online course 'Human-animal interaction in pig farming' by Wageningen University & Research that I followed while doing fieldwork. It states that in cases of less frequent interaction, bad experiences are not easily recovered from. According to the course material, pigs will continue to connect the bad experience to interaction with human beings. In proportion, the fattening farm should experience less

[12] Factory farms are facilities of modern livestock production that provide in the majority of meat, dairy, and eggs that family farm systems cannot satiate anymore since the nineteenth and twentieth century (DeMello 2012, 132-3).

anonymisation than the slaughterhouse. In practise, however, today's scale of small- to average-sized Dutch farms are already too big for an individual treatment of pigs. The meat pig presents itself in such big numbers. In isolation, scale remains a relative concept. Scale is contextually bounded, and, therefore, not easily measured. In addition, not all slaughterhouses operate with such big numbers as the one I conducted my research at. To clarify the decisiveness of scale, it must be complemented with scope. The scope of the slaughterhouse, namely, reaches further than the individual farms and butchery. The slaughterhouse inherently functions as a gathering of multiple farms, and, simultaneously forms a point of departure for various detachments. The scale, supplemented with a scope-examination of production sites, therefore, affect the participation in reconstructing activities.

Relation to slaughter

As the first chapter explained, slaughter appeals to an ethical consideration of the meat industry. Today, the practise of slaughtering is exclusive for the slaughterhouse as a result of fragmentation (Vialles 1994, 17). The profession of the butcher has been thus far detached from slaughtering, that butchers are more likely not to have a relation with slaughtering than that they have one. Several butchers I spoke with considered themselves fundamentally different from slaughters: *"You have to be a 'specific someone' to be fit for the job of slaughtering. I could never do it. I do not do well with blood."*. Blood as life itself, the vital principle, is not part of the butchers' trade anymore (Vialles 1994, 73). If there is anything that illustrates the fragmentation of butchery, it is the given that butchers can carry out their job while 'not doing well with blood'.

For farmers, slaughtering signifies success. It means the pig complied with the criteria for slaughtering within the allocated time. Turning it around, a pig that fails to be slaughtered was a waste of money and time. Only slaughtered pigs may be used for consumption. In contrast to a butcher and the slaughterhouse, a farmer generally invests six months of food, climate control and accommodation in a pig. The sight of a fully-filled, three-levelled transportation truck on its way to the slaughterhouse instigates a feeling of pride for farmers. This also explains why animal welfare is considered to go hand in hand with performativity: *"A pig that does not feel good will not perform well. It will neither produce healthy piglets, nor tasty meat. So if I do not take good care of my pigs, I will do myself damage at least as much."*. The ethical dilemma of slaughtering, then, can be mitigated by economic interests. It is the meat pig speaking.

Questioning the legitimacy of industrial meat production as a consequence of slaughtering seems limited to the dirty line of the slaughterhouse. Over there, seven pigs are simultaneously shoved into a cage. The cage is part of a treadmill with a total of four cages that circle around. After the cage is filled, the first movement is downwards. Once at the bottom, the treadmill pauses. The stagnant cage is shaken back and forth by convulsing pigs. The cage calms down and disappears out of sight as the next cage is following. The first cage returns back up and tips the pigs on a conveyor belt via a slide. Some of my interlocutors understand stunning by carbon dioxide as the most animal friendly method of slaughter, while others described it as if there is no more cruel and painful way to be stunned. Some interlocutors told me that the concentration of carbon dioxide is so high that the pigs are not just unconscious but dead already. If rhythmic breathing is still detected, a pig is stunned by electrocution to ensure it does not experience any pain during the stabbing for bleeding.

Slaughter is isolated at the stunning room, in the dirty line, at the production floor, of the slaughterhouse. It is packaged in elusiveness. Even the stabber is concealed by a curtain of stunned pigs. Or meat. Nobody can tell the tale. Not about what it is like to be slaughtered, nor what it is that is relating to slaughter.

Guise of the nonhuman animal

The transformation from species to protein is akin to a *rite de passage*. Typical of a rite de passage is the elusive *liminal phase*. As Vialles (1994, 24) argues there is no clear moment at which the animal is killed and transformed from alive to dead. "The first man does not really kill, he anaesthetises. The second (or third) does not really kill either; he bleeds an animal that is already inert and, in the terms that are in constant use 'as if dead'. The result of dissociating death from suffering in this way is as follows: since anaesthesia is not really fatal and since painless (or supposedly painless) bleeding is not really killing, we are left without any 'real' killing at all.". There is another evasive shifting moment: from meat to product. In contrast to various scholars, I argue that nonhuman animals in meat production are not merely objects nor resources (DeMello 2012, 133; Mullin 1999, 216). Reducing the nonhuman animals to inherently products suggest consumability at all sites of meat production. A pig destined for consumption, however, is not consumable in all guises. It must be both made, as well as maintained consumable (Blanchette 2018, 193). The guise of the nonhuman animal changes from alive, to dead, to product.

Alive

Both the farm, as well as the slaughterhouse relate to a nonhuman animal that is alive: the animal. At the farm, there are two dominant relational features of the alive animal. First, its 'cuddle factor', that raises cuteness and compassion. At the breeding farm, I could wander between the maternity cages for hours. Sometimes I stopped at a tome and tried to connect with the just-born piglets. After five minutes or so, the 18-some piglets would start nibbling my fingers and keep approaching me all at once. After a while, cuteness makes place for compassion. I realise the life they have in front of them. I imagine the Google reviewers behind the window that were not able to similarly engage. The cuddle factor they experienced was dominated by compassion. At the fattening farm, the cuddle factor is also present, yet the second relational feature of the alive animal dominates: subcutaneous fat. The living animals primarily embody a controllable ratio between fat and flesh (as in muscle). As mentioned earlier, the pigs should be approximately 100 kilograms slaughtered weight. The more this weight consists of fat, the less its economic value. The slaughterhouse relates to the living animal, first and foremost, by slaughter. In other words, the alive animal is ought to be fit for slaughter. Apart from the measurable terms, there is another criterium. A board member of the slaughterhouse explains: *"When the animal arrives at our place, we assume it has had a completed life."*.

Dead

For the most part, the slaughterhouse relates to a nonhuman animal that is dead. A dead animal contains both edible, as well as inedible meat. After a pig is killed, signs of life and death – they are both indicators of each other – have not immediately vanished. It requires multiple actions of boning and cutting to achieve (scientifically) edible meat. Scientifically edible meat refers to meat that is edible, yet it does not have the shape, size or colour that is culturally preferred. In the meantime, Vialles (1994, 44) describes, the nonhuman animal is "neither an animal, nor even a dead animal, nor yet meat. It is a something from nowhere.". This is a capturing of the liminal phase between death and meat. 'Meat' refers here to scientifically edible meat from which culturally edible meat can be made. Butchers, however increasingly less, also relate to a dead opponent. These butchers are frequently traditional butchers who are still predominantly, or exclusively focussing on meat (production). For example, I visited a traditional butcher who received 14 pigs a week of which he makes all his meat products himself.

Depending on the scale of the slaughterhouse, specifications on meat are realised at either the slaughterhouse or the butchery. Making specifications to meat refers to the transition from scientifically edible meat to culturally edible meat. Various butchers told me, however, that Dutch (franchise) butchers are increasingly confining themselves to culturally edible meat. They receive ready-made (culturally edible) meat that is already in accordance to Dutch preferences. Butchers are less boning or cutting the meat themselves, and focus more on other aspects of running a butchery: customer contact, cooking fresh meals, preparing sandwiches and arranging barbecues. This hybridization of the butcher's trade widens the gap between the alive nonhuman animal and the butchery.

Product

Butcheries are, exclusively, in relation with the product of the nonhuman animal, that is, (culturally) edible meat. Butchers are the creators of the product that is consumable. This relation is predominantly shaped by two intertwined factors: the makeability of meat and the autonomy of butchers. Butchers are concerned with aesthetics in terms of shape, size and colours of meat. Aesthetic preferences are based on both clientele, as well as the individual view of butchers on meat production. The latter refers to the autonomy of butchers to implement individual ideas.

> *[Fieldnotes] The butcher tells a story about his veal. It is rosé veal. It is a bit pinker than what the Dutch market is normally used to. It is pinker because these calves have been drinking milk (longer) from the mother, instead of just being fed milk protein. Calves that are only given milk protein are taken away one day after birth and are fed milk protein until they can no longer survive on it. Then they are taken to slaughter. The butcher does not support that at all. This milk protein lacks a lot of iron, which is why the veal turns pale. He tells me that by choosing rosé veal he took a big risk. It really took him years to sell it, because the Dutch people [his clients] were simply not used to veal not being pale, but rosé coloured.*

One can tell the life of an animal by its meat: meat reveals traces of history (Tsing 2015, 168). For example, pigs who live outside produce more dense and rigid meat. Parts of a pig that have been moving more, such as the legs, are more firm than the parts that have moved less, such as shoulders. Stressed meat is pale, soft and exudative (PSE meat). Aesthetic preferences are, therefore, decisive for the lives that pieces of meat have had. As a result, butchers are also able to practise an educative role that reconnects signs of life and death with meat.

> *[Interview] "And the butcher is a bit of a link between life and death, which he can convey to people. The Italian butcher said: 'One of the big problems now is that we all thoughtlessly buy meat in the supermarket and actually are no longer confronted with death.' So it's all gone, outsourced, and it all happens out of sight, which means that, uh, meat actually becomes an anonymous product and that you actually loose the whole relationship of what meat is and how it relates to people."*

The butcher is present at the transformation from dead to product: from meat to edible meat (butchers who receive ready-made edible meat are excluded here). This process concerns ennobling meat. It blurs nonhuman animal tracks and traces of history, hence, removes ethical dilemmas (Tsing 2015, 168). The autonomy that butchers have to decide on this process raises a degree of responsibility. This refers to the scope of the butchery that reaches further than its scale would assume. Precisely this distinction between scale and scope complicates the ability to take responsibility, and reconstruct the narrative. Based on scale, a butcher may not always have the financial ability to be critical and take the risk of not selling rosé veal. Regardless of scale, the tracks and traces of - what is assumed - a responsible life, do not always comply with what is culturally and/or individually defined as edible.

> *[Interview] "But the consumer wants a story, it wants to see a chicken in the grass like that, and, but that chicken, sitting in that grass, not everyone likes it. If you have a real free-range chicken, and you eat [regular] chicken regularly, and you eat that chicken [free-range chicken], then you do not like it at all. Because it is stiff and it is tough, and it is dark in color, a ...rouge chicken for example...."*

Scale and scope, the relation to slaughter and the guise of the nonhuman animal are three areas on which the sites of meat production vary from each other. The areas are decisive for the substance of the human-animal relation per site. Particularly the cuddle factor of the living animal and the aesthetics of edible meat demonstrate how sight impacts decision-making regarding, amongst others, open- and closedness of the industry.

Duty of care

The different substances of human-animal relations are most visible in practise. Executing the 'duty of care', for example, is inherently connected to the way human and nonhuman animals relate to one another; The interpretation of care differs per production site as a result of the

varying relations. The following sections invite one to recognize the perspective of the meat pig.

Farms interpret care as securing a stress-free life. It became clear that in the spheres of a polyphonic assemblage, a stressful life remains detrimental in terms of PSE meat. Among others, a stress-free life is assured by the suppliance of distraction material (WUR 2021; Ruis 2021) Even more, farmers aspire a happy life based on the pillars of rest, cleanliness and regularity. These pillars stem from the understanding of a pigs 'natural behaviour'. Examples of natural behaviour are rooting, hierarchizing, sleeping and eating. Furthermore, health is a crucial element of care-taking. Healthy pigs have enjoyed an illness-free growth that is achieved by isolation. Thus, if a pig is provided the opportunities to express natural behaviour in the circumstances of rest, cleanliness and regularity it will grow without illness. Other than the assumption of a happy life – after all, one cannot ask the pig – the circumstances are expected to produce risk-free meat for human consumption. Multiple questions deserve to be posed about the 'natural behaviour' of a meat pig. For example, is natural behaviour defined by rooting, hierarchizing, eating and sleeping or by a growth that complies with meat production criteria? Accordingly, DeMello (2012, 133) notices that 'the same social behaviours [kindness, maintenance of social structures] that allowed livestock to be domesticated in the first place, are eliminated' in confined factory farms.". In line with this argument, one could question why pigs need to be distracted. It may be relevant here to consider a claim from the course at Wageningen University, which was also confirmed multiple times by farmers I spoke with, that one can tell from a pigs' behaviour what kind of farmer one is.

In the context of the slaughterhouse, the duty of care is two dimensional: the slaughterhouse relates to two nonhuman animal guises. In relation to the alive animal, the slaughterhouse intends to create a stress-free environment. This is in correspondence with the farm. The slaughterhouse also refers to care in terms of respectful slaughtering, that is, total anaesthesia (complete unconsciousness) and painless bleeding. According to Vialles (1994, 122), total anaesthesia means a dismantling of control and a denial of equal combat. The slaughtering process is designed as such to assure the safety of the workers in the slaughterhouse. This is in consistence with the explanation of quality assurance by one of the members of the slaughterhouse's board, which strives for a streamlined cooperation between human, machine and system. The animal is left out. Whereas Vialles (1994) is questioning the legitimacy of claiming the power to decide on life and death, the slaughterhouse has already taken the

autonomy for this decision. The slaughterhouse appeals to the explanation of Vialles (1994, 44) that I earlier referred to: the nonhuman animal is "neither an animal, nor even a dead animal, nor yet meat. It is a something from nowhere.". The intangible 'something from nowhere' suffices an interpretation of painlessness that cannot be confirmed by the meat pig. Respect reappears in the relation to the dead animal in terms of hygienic treatment to minimize waste of potential edible meat. It protects the usefulness of slaughtering: *"The animal must not have been slaughtered for nothing"*.

The minimalization of waste at the slaughterhouse, is expressed as the optimal utilization of potential edible meat at the butchery. In other words, producing as much culturally edible meat from a dead animal as possible. The cultural element implies that care does not only refer to quantity but also to quality. Assuring quality means the production of culturally edible meat. It regards boning, cutting and slicing meat in shapes, sizes and colours of Dutch preference. That is to say that interpreting the duty of care in relation to the product is inherently connected to the human animal. The human-animal relation at the butchery, therefore, not only includes the butcher in relation to a dead animal and, later on, a product. The human-animal relation at the butchery also involves the customers of the butchery in relation to a product. At this moment, returning to the statement of one of my interlocutor seems appropriate: *"And the butcher is a bit of a link between life and death, which he can convey to people."*.

The different substance of the human-animal relation per production site does not only affect the open- or closedness of the separate sites. It also impacts the interpretation of the 'duty of care'. The reason why I wanted to specifically elaborate on the duty of care is because it derives from the domestication of nonhuman animals. Domesticated nonhuman animals need to be taken care of. Domestication, I argue, is not inherently a consequence of human dominance as is frequently assumed (Ingold 2000, 74; Diener 1980, 183; Singer 1975, 6; Tapper 1988, 52-3; Fowles 2011, 899). According to Boyd (2017, 306) "human dominance only exists insofar animals are not domesticated yet". This raises the question whether human dominance can be seen as part of the Dutch meat industry at all, considering the creature of the meat pig. Sequentially, the following chapter demonstrates that industrial animal domestication *complicates* the domination of nonhuman animals by human animals to some extent. The exploration of the establishment of nonhuman animal transformation in the meat industry does not only contribute to the understanding of the human-animal relation. It also

provides insights how the relation between human and industry affects the human-animal relations apparent at Dutch sites of meat production.

Photo diary: The Farm

► Photo 1: Meat pigs at the fattening farm, February 3, 2021. © *Milou Peperkamp*

▼ Photo 2 & 3: Ten-week-old meat pigs at the fattening farm, February 16, 2021. © *Milou Peperkamp*

Chapter 3 Transcendence of species

"Well, I think we always have to be on the defensive. And so we are afraid to talk."

Domestication is inherently connected to a Human/Nature dichotomy that assumes a Human transcendence over Nature (Ingold 2000, 63). Unlike the dichotomy suggests, I argue that there exist resemblances between human animals and nonhuman animals at sites of Dutch meat production. Processes of upscaling create an industrial meat production that dismantles human animals from control (Tsing 2015, 38). This chapter revisits the concept of domination in relation to domestication as part of the Dutch meat industry by drawing from theories of Ingold (2000). The exploration will clarify that industrialisation transcends over species. Briefly, established theories of Marx (1844) on estranged labour will be included. This exploration simultaneously challenges the need for alertness that was introduced in the first chapter. Finally, the nature of meat industry contestation is questioned.

According to Ingold (2000, 63), domestication presupposes the transcendence of humans over the natural world. The *act* of domestication results in domesticated animals. After domestication, Ingold (2000, 63) refers to domesticated animals as 'man-made' and 'an artificial construction put together like a plough'. A relevant nuance by Boyd (2017, 306) should be added here, who states: "Human dominance only exists insofar animals are not domesticated yet.". This explains how human dominance refers to the act of domestication, rather than, for example, practising the duty of care for already domesticated animals. Domesticated animals are not considered part of the natural world (anymore) – earlier I questioned the natural behaviour of a meat pig – due to the removal of wildness. In the slaughterhouse, acts of domestication are detected in the removal of both a contract, as well as combat in the stunning process (complete unconsciousness and bleeding) (Vialles 1994, 113-24). Contract and combat refer to *legitimized* human-animal relations of killing that are apparent *outside* industrial animal production. Such acts of domestication, that distant slaughterhouse workers from the animal, imply an understanding of wildness as an equivalent of nature – and oppose it to human civility (Vialles 1994, 113). It refutes that "one cannot appropriate that within which one's being is whole contained." (Ingold 1986a, 135). As such, it preserves the Human/Nature dichotomy, legitimizes meat production, and protects economic interests. As I proposed earlier, however, questions may be raised to what extend the acts of domestication are practised with already domesticated nonhuman animals: the meat pig. In addition, the economic interests of nonhuman animal domestication occur in

scalability. Scalability is, as explained earlier, the banishment of *intraspecies* diversity (Tsing 2015, 39). Key figures such as '125 kilograms alive and 100 kilograms slaughtered', sizes of stables, spatial measurements on railways and conveyor belts, and standard consumption weights make nonhuman animals interchangeable, whereas working clothes, fragmentation of jobs and financial dependency make human animals interchangeable. Industrial meat production such as the Dutch meat industry, therefore, deprives both nonhuman, as well as human animals from autonomy. As a result, domination, or human mastery, does not suit the situation. There are a few ways to distil the limitations of human animals.

Attributes

First of all, human animals in the Dutch meat industry depend on attributes, such as tools and technology to establish the transformation of the nonhuman animal. This is easiest exemplified with the tools of butchers and slaughters at the production floor with which they cut-out and bone the dead animal. Knives, saws, moulds and abrasive machines transform the dead animal into meat, or at a later stadium into a product. These tools make the dead animal manageable. Attributes can be considered extensions of human capabilities. Yet attributes are also interrupters of the human-animal relation. Tools are literally *in between* the human and the nonhuman animal. According to a butcher, and my personal experience as an employer of the meat department in a supermarket during high school, being able to directly touch the meat contributes to understand the substance of it. Attributes may also make dangerous situations for human animals. During every visit on the production floor of the slaughterhouse, I was first explained how to circumvent the dangers of the specific department I entered. Those dangers were inherently connected with attributes such as forklifts, hooks, and racks of meat. As a result, the attributes complicate mobility on the production floor. Mobility is interrupted in other ways. The fattening of pigs causes not only a limited mobility for pigs but also disables human animals to interfere effectively. Human animals rely on tasers, rattles and automatic dividers to boost movement as the pigs are generally too heavy to manually move or guide them. Simultaneously, pigs experience the limitation of movement themselves. One early morning at the fattening farm, a matured pig on its way to the transportation truck left its stable backwards. It entered the small hallway of the stable with its bottoms directed towards the exit door. In vain, the pig tried to turn around its own axis, yet it was too fat for the small hallway. The difficulty of matured pigs to move cause stressful situations (WUR 2021). Recall how stress was emphasized as something to avoid at all times. Both the additional tools, as well as the experience of immobility may

activate behaviour of a pig that goes beyond human controllability. A matured pig on its way to the transportation truck once stood on my foot. The pain in my foot lasted the entire day.

Other techniques that human animals rely on are meat tumblers for minced meat at the butchery. The machines can process large amounts of meat at the same time. As a result, Dutch butchers are able to comply with the high demand of a *minced-meat culture*. On a similar note, conveyor belts and railways enable the circulation of high numbers of just-slaughtered meat pigs. The technology allows to meet the global demand for meat. Also, feed computers at farms automatically control and manage the food intake of 1.000 sows or 3.000-3.500 meat pigs. However, the second chapter already briefly mentioned the limitations of this technique. Technologies tend to rule out human intervention. Not only does this enlarge the gap between human and animal but it also increasingly neglects, and supersedes, human touch. Later, this chapter will further explore how the input of the human animal is challenged at sites of meat production.

> *[Fieldnotes] We wonder through the evisceration area. Intestinal package and organs are removed here. I notice a machine that looks like an arm with a giant pizza knife. It cuts open the belly of a pig. I ask: "Why is this cut automatised?" and he [an employee from the headquarters] answers: "This is one of the few automatised cuts on the production floor. It measures the correct dimensions per individual pig by an advanced camera, so it does not mistakenly cut open the stomach of the pig. The content of the stomach, namely, is full of bacteria. It is one of the few cuts that does not need human precision". It requires* more *precision.*

Finally, a brief gathering of fragments and reflections from my fieldwork describe the attribute of working clothes. As extensively as this thesis has elaborated on the perspective of the nonhuman animal, a multispecies ethnography also includes the human animal.

> *[Reflection] In the hygiene vaults at both farms I would collect a set of working clothes and underwear to wear in the stables. In the visitors room in one of the office buildings at the slaughterhouse, a particular order was instructed in which I was required to change myself into working clothes. At the butchery I grabbed a working blouse and -apron in the laundry room before I returned downstairs to the shop and the boning area. All of a sudden I am one of them. I am part of the human animals in at sites of meat production. The clothes cover my identity as an anthropology student who maneuvered her way into the meat industry.*

Working clothes for meat production are more than just layers of fabric. They are layers of identity. As the first chapter explained, it was not easy for me to put them on and obtain the desired identity. Yet, once I was granted access, I could dress and undress from the working clothes, and simultaneously strip away the identity that comes with it at any time. I could go back and forth between identities. One who relates to the meat industry as an employer, might easily put on working clothes but cannot easily take them off. One cannot just like that escape from having to wear the working clothes, and obtain the accompanying identity, again. The story would not be complete without revealing that the term *dressing* is also used for nonhuman animal carcasses. It refers to getting carcasses ready to be cut up for wholesale (Vialles 1994, 49). Dressing, therefore, is actually *undressing* "because it strips the flesh of its animality, detaching the organic substance form its biological foundations." (Vialles 1994, 51). In contrast to the human animal employer, a nonhuman animal cannot escape being stripped away from its identity. It can neither go back and forth between identities. Both human, as well as nonhuman animal do not have the same autonomy as I have. The reason for that is that they are *both* resources of the meat industry (Tsing 2015, 38).

Contradicting law and regulation

Second, the scalability of meat production is accompanied by contradicting law and regulations that determine the process of transformation, yet, deny input of human animals. Rules for animal welfare frequently contradict with rules for climate friendly farming, hence, meeting any requirement almost automatically means failing the other. One simple example refers to keeping pigs outside as part of animal welfare. It causes an extreme increasement of ammonia emissions, therefore, meeting animal welfare regulations means failing the climate criteria.

> *[Fieldnotes] The butcher tells me: "European regulations once aimed to shorten the ultimate preservability of minced meat. Minced meat is assumed to be heated in Dutch food culture, which eliminates all sorts of bacteria. In other places within Europe, however, minced meat is also eaten raw regularly. This shortens the ultimate preservability of the product according to European guidelines. Yet, minced meat is a key product in Dutch meat production; A lot of meat is sold as minced meat, therefore, a shorter (allowed) preservability would cause a lot of food waste. This would cause serious problems for us Dutch butchers."*

Complying with national law and regulation of meat production is complicated. On the one hand, the problem originates from law and regulation that are bounded by Dutch nation borders. On the other hand, law and regulation are considering nation borders to little.

> *[Fieldnotes] We are sitting at the kitchen table when she [a fattening farmer] says something that made me think ever since: "Where climate pollution is transboundary, law and regulation regarding animal welfare is not. For animals, policies for animal welfare in meat production are much more favourable in the Netherlands than in other countries. The situation in other countries is relevant, because demand for meat is not decreasing. The gap of a reduction of livestock for meat production in the Netherlands will gladly be filled by countries such as Russia, China, or countries from Eastern Europe. They build mega stables of 100.000 pigs. They do not have animal welfare regulations like us. They are not in that position to be critical, because food is not an obvious commodity like here. So who is the real victim of contestation? The meat pig."*

Standardizing law and regulation fail to consider discrepancies in the industry. The construction of meat production sites is based on measurable units. The attributes mentioned in the previous section also assume standard sizes and numbers. One could, however, question the measurability of a descendant from nature. For example, one sow may deliver 16 living and 4 stillborn piglets at one time, yet 18 living and 0 stillborn piglets at the other. There is no completely controlling feature that standardizes a farrow. Another example is teaching pigs to create the habit to separate areas of excrement from their food. While it is assumed to make pigs happier, not all pigs manage to internalise the habit. Some pigs will just never learn. To make this argument, it is important to revisit the identification of the domesticated nonhuman animal in the meat industry as a man-made artificiality. This assumes a complete controllability. However, the section on attributes already explained how the meat pig remains, or even increases unmanageability. I argue that artificialities can be added to natural processes, yet natural processes cannot be added to artificialities. In other words, the meat pig may be a man-made artificiality, yet it remains a descendant from nature. The meat pig as an intersection of meat and animal, here, appears accurate. Life cannot be entirely removed. Therefore, I argue that meat pigs can never be entirely controlled. It raises the question to what extent human animals can be (literally) billed – at a stage where the autonomy to decide on life and death is already taken – for discrepancies that they simply cannot entirely control? The dilemma of openness versus reluctance that is discussed in the first chapter gradually applies to the conflicts of (national) law and regulation.

Dehumanization of meat production

Sequential to the previous paragraph, some laws and regulations are described by farmers, butchers and slaughters as 'humanizing the animal'. This description predominantly refers to the increasing rules for animal welfare and the accompanying administrative tasks. Put differently, it delegitimizes industrial meat production. I argue that acts of humanizing the animal, as it is described by my interlocutors, cause a dehumanization of meat production. First, however, I want to elaborate on the perspectives in which choices of terminology are funded. DeMello (2012, 261 with reference to Hyers 2006) and Vialles (1994, 64) understand the same event – increasing rules for animal welfare – as a "legitimated myth that validates the abuse of animals and justifies the slaughtering" and refer to it as 'de-animalization'. While the referring terms assume a correspondence, my interlocutors and the scholars adhere to opposing considerations about the same event. Humanizing the animal regards the crediting of animals with human features, and, thus, delegitimizing industrial meat production. This is an approach that believes a clear-cut Human/Nature dichotomy. De-animalizing the animal means to deny animal characteristics of animals, which, from a multispecies perspective, legitimizes industrial meat production. De-animalisation does not inherently mean a humanization of the animal as the definition of the term depends on the perspective.

Similar to DeMello (2012) and Vialles (1994), Ingold (2000, 64) claims that law and regulation has liberated humanity from nature. Herein, law and regulation are understood as exclusively part of a supposedly separate humanity. This understanding appeals to the statement of Ingold (1986a, 135) that "one cannot appropriate that within which one's being is whole contained.", which means humanity cannot appropriate nature in which humanity is whole contained. Humanity's law and regulation, as a result, can neither control appropriation as it simply does not apply to anything outside itself. Law and regulation, in other words, only liberate humanity from nature insofar a Human/Nature dichotomy is complied with. Yet, as I aim to demonstrate by this chapter, 'liberating' humanity from nature does not inherently create human dominance. Even more, 'humanizing the animal', I argue, causes a dehumanization of meat production. There are a few indicators that support this argument: First, the costs for increasing animal welfare are commonly too high for family businesses to meet (Meerburg et al. 2009, 515). All the more, because the criteria for animal welfare are tightened on a regular basis and frequently require new, and more investments. Second, the skills for being a farmer in practise – which used to be the only requirement – varies heavily from being a farmer in theory, which refers to the addition of administrative skills.

[Interview] "C: It used to be: if you can't learn, you can always be a farmer.

B: Well that's not the case anymore.

C: Well if you can learn a little bit, it's also a question of whether you can become a farmer.

A: Yes, how do you mean? Just because...?

C: Yes, you have to do so much nowadays, it's much more, yes, if it's actually just actions [practise], then anyone can become a farmer, but it's more the full..."

In other words, the profession and the attractiveness of being a farmer is changing unfavourably for the individual farmer (Meerburg et al. 2009, 521). The succession of family farms is decreasing simultaneous to the expansion of factory farms in Dutch meat production (Oosting 2004, 50). According to DeMello (2012, 136), factory farms, or vertically integrated facilities, are "dominating processors of animal products who are in control of every aspect of production". The automated facilities do not only exclude the nonhuman animal as a sentient being but also exclude the human animal from practising meat production. This invites one to reconsider the reference of animal welfare regulations as a 'liberation' of humanity from nature. 'Humanizing the animal' and the dehumanization of meat production that follows does not appear like a deliberate choice by the farmers, slaughters and butchers themselves.

Selling labour

The degree of autonomy continues to indicate a nuanced human dominance at sites of meat production. Human animals primarily relate to the meat production as labour; Human animals sell their energy, which makes them resources of the industry (Marx 1844). In addition, the Dutch meat industry as a scalable business requires interchangeability, which concerns both the nonhuman as well as the human animal. Human animals and nonhuman animals are not interchangeable for each other but they are both subject to the anonymity and dependency that interchangeability withholds (Tsing 2015, 5). Similar to the cane mill that Tsing (2015, 39) refers to, the speed of the connecting conveyor belt and railway on the production floor of the slaughterhouse are key for the operation. Only thereafter come individual skills of workers. I experienced several moments of interruptions on the production floor: the conveyor belts at the clean line had to be stopped when discrepancies occurred on the rails at the dirty line. Workers of the clean line are, therefore, dependent on the activities of workers at the dirty

line. This is the particular order. Earlier, I stated a mitigation of the Human/Nature dichotomy as a solid legitimization for meat production. This section showed how economic interests as a fundament for the dichotomy simultaneously nuances human mastery.

The above chapter clarified how both human animals, as well as nonhuman animals, however differently, can be considered as subjected to economic and political structures that have grip on meat production processes. Yet, as the first chapter on contestation demonstrated, human animals at sites of meat production are being called for their activity. This is particularly reasoned by the fact that their actions inherently involve an actor that cannot speak for itself (the nonhuman animal) in relation to one who can (the human animal). It automatically puts the human animal in the responsible position (Boyd 2017 with reference to Gittins 2013, 131). In these encounters, however, questions such as who are 'those who cannot speak for themselves', how they are spoken for, and who are 'those who can speak for themselves', do not naturally result in the same answer. People within the very same conversation, from any kind of discipline, may answer those questions different from their interlocutors and be unaware of this inconsistency. The intangibility of the human and nonhuman actors is also demonstrated in the second chapter. Human-animal relations in the meat industry predominantly rely on interpretation. Again, *"we cannot ask it the pig itself"*. Even more, if people are not referring to the same pig – either the pig or the meat pig – the interpretation of the nonhuman animal can never be consistent. One may imagine the friction and the contestation that follows, with which I started my thesis. Contestation maintains closedness, which maintains contestation and so on.

Interlude COVID-19

Not too long ago, my father celebrated his 31st jubilee at his work. For the occasion, he prepared his famous monchou pie and brought it with him to work. His famous pie is made on a base of Bastogne biscuits and has a specific fruit theme. He picks a specific fruit or a combination of two matching fruits, which he incorporates in the monchou and uses for decoration on top of the cake. On my birthday, for example, he always decorates the pie with pieces of fruits that tell your newly acquired age, like a 17 written with mandarins. This time, however, my father did not just fruit-write the number of 31. He hollowed out strawberries and filled the centres with blueberries to mimic animal cells. We had a great laugh. The top of the cake was a copy of what my father and his colleagues see through the lenses of the microscope every day: studying animal cells, seeking for epidemic or other virus-related signs, only this time in the shape of the number 31. After our laugh my father told me that the National Institute of Public Health and the Environment in the Netherlands [Dutch: RIVM] was looking for external laboratories to expand test capacities. Among the collaboratives resulted the laboratories at my father's work. The human health care disciplines, however, repeatedly questioned: "What would the animal health care know about human health care proceedings?". I noticed how my father was personally affected by the little trust they received from the human health care: "First of all, where does the idea come from to draw a line between human and nonhuman animals when it comes to biological processes as such? We are both animals. As well, how can one deny the work we perform on a daily basis like that? It is as if the animal health care is not granted any relevance. Again, we are both animals.".

The pandemic originated from a moment of physical contact (eating) between the two species. Not only does it refer to an undeniable entanglement, but the pandemic is also the prime example of how human and animal worlds can be uncontrollably intertwined. It shows how our species cannot be inherently separated and how there is a transboundary element at play. It seems to rise awkwardness when human and animal worlds are colliding. Regardless of my father and his colleagues' longstanding experience in epidemiology, it was not initially acknowledged as relevant due to its foundation in animal health care.

Chapter 4 Are we talking the same pig?

"These pigs do not want to be born."

The previous chapter nuanced the human dominance in the meat industry by elaborating on the concept of domestication. Domestication dismantles human animals in the meat industry from control in various ways. Discussing domestication in the meat industry, however, also acquires a reference to the 'meat pig'. As the introduction explained, there is a conceptual (and existential) difference between the meat pig and the pig; The meat pig *is* the domesticated pig. In this chapter, the multi-layeredness of other vital concepts within this research are explored. I argue that, due to the multi-layeredness, there is no clear-cut referent in the meat industry. Neither human animal, nor nonhuman animal are definable. First, I will explain why a uniform definition of both the human, as well as nonhuman animal is complicated to achieve. An Anthropos' interpretation appears prevalent to the understanding of concepts and actors within the meat industry. By a brief elaboration on a variety of perspectives, the fluidity of the Anthropos' interpretation is illustrated. This exploration invites one to recognize how the direct objects in human-animal relations at sites of Dutch meat production are constantly (re)moved from context, function and guise. The interpretation of the nonhuman animal can, therefore, never be fully consistent.

Those who cannot speak for themselves

Achieving a clear-cut definition of the nonhuman animal is complicated for multiple reasons. First of all, nonhuman animals cannot speak for themselves, and, therefore, cannot define or explain themselves. Neither can they construct narratives of their relation with human animals (Ingold 2000, 61). In the introduction, however, I suggested further studies into nonverbal interspecies communication. This is in accordance with Tsing (2015, 168), who claims there is no reason to assume that nonhuman animals do not cooperate in the making of history. It is a challenge however, to detect nonhuman tracks and traces in the transformative setting of Dutch meat production. In the first place due to high turnover rates, which enables only brief moments of history exploration. DeMello (2012, 143 with reference to Adams) recalls the animal as the *absent referent* in meat: "Without the animal there is no meat, yet they are absent from meat because they have been transformed – via slaughtering, butchering and marketing – into food.". What happens prior to slaughter can be read from meat. These are the bruises and other irregularities that are removed to allow dead animals to become edible meat. It blurs, or entirely eliminates nonhuman animal tracks and traces of history that could

facilitate and enrich a multispecies perspective (Tsing 215, 168). Assuming a nonhuman disability to speak up, there remains a dependency on Anthropos' interpretation of the nonhuman animal. There are a few elements that shape the establishment of human animal interpretations. First, within foundations of human animal interpretation, it seems appropriate to recognize the asymmetry of human-animal relationships (Boyd with reference to Gittins 2013, 131). An Anthropos' inability to remove its humanity, however, deserves to be reflected on (Hayward 1997, 51). By extension, as the first and the second chapter elaborated on, human animals at sites of meat production have only selective sight that is frequently limited to their own environment. Altogether, the open ends of a pigs' perspective are substantiated by sense-making that is subject to *human agency*. In this case, human agency does not only refer to individual and cultural interpretation but also includes an element of anthropocentrism. As a result, a mutual understanding or fixed interpretation regarding the nonhuman animal is rather complex to achieve. It is not unlikely that an individual's understanding does not match with that of another, be they human or nonhuman. Regardless, concepts such as animal welfare are centrally defined and regulated within these spheres of incoherency. This was illustrated earlier by the question about the measurability of a descendant from nature in the previous chapter as part of nuancing human dominance.

Those who can speak for themselves

Similarly, it is difficult to define human animals in the Dutch meat industry despite being 'those who can speak for themselves'. Human animals are not always granted the opportunity to speak up and, explain or define themselves. This occurs in meat industry contestation, however, *justifying* oneself differs from *defining* oneself. The Netherlands is traditionally an agriculture-oriented country, and according to various interlocutors and scholars, it is not easy to deviate from the norm when you are working in agriculture in the Netherlands (Oosting 2004, 48).

> *[Interview] "B: I, I can definitely relate to it, because I think it was also kind of driven by society, so I don't think, it wasn't the individual farmer who chose that we were going to scale up. It was, there are banks, policies, uh, a societal demand for food, uh, a, a societal way that we look at food. So I mean, if you look at, at supermarkets for example, and at what prices meat is in the supermarkets... yes, you can also seriously ask yourself if a farmer is going to keep his animals in a different way. Or it should, and, you can put that whole individual choice with the farmer, and there are farmers*

who do it differently, but it's not easy. Farmers who do it differently, who we work with, don't have it easy either. So for example, uhm, yes we work, for example, with him [a farmer], we are going to work together now, I don't know if you've heard of him? That's someone who really does things differently, so they need a different price for their meat. Uh, but, and that's not always easy. That guy, you know, he's a real pioneer, and the other farmer, he's also a real pioneer, and we can deal with that, but yes, it is... so as a farmer you also have to be brave to swim against the tide and do things differently.

A: Yes, yes, it's funny that, at least that was the content of yesterday's discussion, but, um, we also talked about this, to what extent is this a sort of taboo for farmers in general? Because it is very difficult to be open about the fact that you think differently than the average. Do you also think that this has an influence on the fact that, uh, intensive livestock farming still exists?

B: Pfoe. Yes, I do think so. Look, there are so many farmers who, I don't know if that answers your question, but there are so many farmers who have, uh, interests, you know, who are so, so stuck in their current system. So for them to stand behind that system is maybe not that crazy, because that's their daily, that's how they feed their family, and that's what allows them to make a living. So, yeah, that there's a whole big farming community, or movements. So I can empathize with it. It is just that it keeps, it keeps the system... it's one of the factors that keeps the system going."

A multiplicity of complications for human animals at sites of meat production have passed this thesis. They evidence decreased opportunities to innovate or change working methods, regardless of one's willingness (Bos and Grin 2008, 494-8). Being a farmer, a slaughterer or a butcher does not automatically make one align with the current narrative of the meat industry.

[Fieldnotes] While I am driving to his farm, I notice the pasture and the pigs from a distance. I recognize the place from his website. His website also taught me that he became a 'pig whisperer' after he experienced the swine fever epidemic in the nineties as a practising veterinarian. I cannot wait to ask him all about his title. We are in conversation when he grasps his laptop and opens an academic article by Jörg Luy. It is a German study. He translates and I listen. The study discusses ethical conflicts within industrial farming: how do human animals manage to live with ethical

> *dilemmas such as slaughtering? We talk about ethics for hours. The pig whisperer says: "It is like a jar that you keep filling with dilemmas, and close afterwards every time. But the dilemma is not gone. And at one moment, you cannot close the jar anymore. It just does not fit in anymore.". Just like he experienced himself. Similar to Luy, the pig whisperer claimes there is just no such thing as compromising in suffering. It reminds me of the book 'Imagined Communities' by Anderson (2006, 187-206), and specifically the chapter 'Memory and Forgetting'. The chapter elaborates on 'knowing what to forget'. And I wonder: what if one does not know what to forget? What if one does not know what one does not know?*

Individual and collective humanity – human agency – decide whether one experiences an ethical conflict; whether one is deliberately, or not, forgetting the one and remembering the other.

Liminality

In the realm of indefinability, the cultural construct of 'edible meat' deserves to be mentioned. At an inconclusive moment, the nonhuman animal takes the shape of edible meat. The cultural construct facilitates a personalized relation to meat in both symbolic, as well as material terms (Yates-Doerr 2012, 11-12; DeMello 2012, 127). A material relation to edible meat may concern protein intake, whereas the previously discussed 'right for meat' derives from a symbolic feature of edible meat (Diener et al. 1980). Distinguishing a meat pig, however, adds another dimension to making sense of edible meat; Meat pigs are considered to be solely born and raised for slaughter and consumption (DeMello 2012, 130). Meat pigs derive their right to exists by slaughter, because being unfit for slaughter eliminates possibilities for consumption. Therefore, if meat is defined as culturally edible, it is at least a meat pig. If a meat pig is not defined as culturally edible, it (immediately) loses its right to exist.

Furthermore, both the human as well as the nonhuman animal are challenged by contamination (Tsing 2015, 28). It is difficult to identify a specific turning point that captures the exact moment at which the shape of the nonhuman animal is being transformed. It is a process rather than a single moment. The process of transformation, therefore, is more accurately referred to as a liminal phase. As mentioned earlier, what is in- and out of sight is influential for one's – both human and nonhuman – framework of reference. The transformative acts are either masqueraded by fragmentation, marketing strategies and/or

regulated policies, or masquerade themselves by ennobling. In other words, not only the guise of the nonhuman animal is subject to encounters but also the framework within which the meat industry is moving, is constantly being (re)shaped. Farmers frequently admitted: *"I am not even finished with the implementation of one regulation, when a newer rule is already gone into effect."*.

Perspectives

A clear indicator of fluid Anthropos interpretations is the consideration of the meat pig. For example, not all human animals that relate to the meat industry as employment inherently share the same perspectives. Some employers consider the meat pig as supply or money that is alive (DeMello 2012, 130). In this case, animal welfare frequently corresponds with economic proceedings, and there is no further essence of a meat pig's life than consumability. This is a clear understanding of a meat pig that is exclusive for meat production. Other employers believe meat production does not rely on meat pigs, and are confident about reciprocity. In a reciprocal relation, human and nonhuman animals are at the service of each other and sustain one another. The concept of the meat pig is recognized here, yet called into question. The second group of employers is critical about the current processes of Dutch meat production. The first time I met one of the butchers I worked with, he practically opened our conversation with: *"There is no such thing as animal-friendly meat."*. Again, being a farmer, a slaughterer or a butcher does not automatically make one align with the current shape of the meat industry.

Sites of meat production are not solely occupied by employers of the meat industry. Meat industry contestation make meat production sites also gathering places for activist resistance. The activists acknowledge the pig as a sentient being, and, thereby, eliminate the function of animals-as-food. A pig is first and foremost a fellow species. Activists argue that pigs have a right to live, for dignity, to be pain-free and acknowledged emotion and personality. The right to life, in this context, however, has two seemingly contrasting explanations: 1) pigs do not want to be killed 2) meat pigs do not want to be born. The first explanation is based on the natural desire of pigs to survive. Activists argue that, as a fellow species, human animals do not have the right to decide on life and death of other species. This explanation cannot refer to meat pigs, because meat pigs derive their life from slaughter. Simultaneously, the second explanation specifically refers to a life that is destined for slaughter: the life of meat pigs. According to the activists, not living at all is better than having to live the life of a meat pig.

The consideration of either a pig or a meat pig, therefore, is crucial for the understanding of the perspective on the nonhuman animal. Meat pigs *need* to be killed, and pigs want to be born.

These are just a few perspectives but there are many more. The purpose of this chapter is not just to acknowledge the variety of perspectives but to demonstrate their fluidity. The chapter aims to demonstrate the complexity of sense-making in the Dutch meat industry, because its actors are constantly (re)moved from context, function and guise. As I explained, the perspectives are largely dependent on interpretation. This raises the overarching question: "What gives one the right to claim the voice of the pig?". Yet, in case of a meat pig, I argue that the voice is not claimed but rather created by the meat industry.

Photo diary: The Butchery

► Photo 4: The butcher's counter, April 1, 2021. © *Milou Peperkamp*

► Photo 5: Carcass of half a meat pig, March 9, 2021. © *Milou Peperkamp*

▼ Photo 6: "Milou's sausages", April 15, 2021. © *Milou Peperkamp*

► Photo 8: Moulds for schnitzel- and hamburger shapes and texture, March 16, 2021. © *Milou Peperkamp*

Conclusion

The meat industry is, first and foremost, a place where two species meet and become entangled (Boyd 2017, 308 with reference to McNiven 2010). Through encounter, the nonhuman animal constantly (re)moves from context, function and guise (Tsing 2015, 38). The nonhuman animal is an animal that is alive or dead, it is meat that is dead or alive, and it is edible meat that is (becoming) a product. These guises are linked to the various meat production sites that I visited. Human animals at these sites are being challenged by the transformative nonhuman animal that embodies economic and political structures, ethical dilemmas and culture-historical matters. Both human and nonhuman animals are 'undressed' from autonomy and 'dressed' in identities (Vialles 1994, 49). Both species are constantly contaminated. Neither human animal, nor nonhuman animal, I argue, are bound to a fixed denominator. They change, are ambiguous, multi-layered and fluid, therefore, they are in a constant process of (re)creating contestation. How does one make sense of that? How does the other do that? And how does one relate to the transforming, sense-making other? Be one a human or nonhuman animal.

To make sense of the understanding and construction of human-animal relations at sites of Dutch meat production, in the midst of meat industry contestation, I have argued the meat pig as the embodiment of the industry. The meat pig provides a multispecies perspective that does not separately consider the one (animal) from the other (human), but simultaneously makes sense of one phenomenon for both species, with the phenomenon being their relation. The meat pig is a human-made species that embodies the economic structures of the meat industry, the intersection of animal and meat, the common susceptibility of human and nonhuman animals within meat production, and the Dutch expertise in agricultural science and technology. Yet, most vital to the understanding of the meat pig is its existence by favour of slaughter. Without the legitimacy of slaughter, meat pigs would not be amongst us. It raises questions about the decision on life and death, as the latter concepts obtain an elusiveness through the being of a meat pig.

Human-animal relations at sites of Dutch meat production, I argue, must be understood and constructed within a closedness that is funded in an ongoing dilemma of transparency versus reluctance. Ethical, historical and economic motives for closedness give cause to social contestation. The Human/Nature dichotomy as the legitimization for meat production is being questioned. As a result, sites of meat production are challenged to (re)define oneself instead

of justifying oneself by the dichotomy. The meat pig invites one to notice how Human (animals) at sites of meat production do not transcend over Nature as they are presumed (Ingold 1986a, 135; DeMello 2012, 136; Mullin 1999). Inspired by Ingold, I argue that humanity – in terms of law and regulation – cannot appropriate nature as humanity simply does not apply to anything outside itself. It does not mean, however, that humanity as liberate from nature is not acted upon. In fact, it is this acting that is increasingly being questioned (Franklin 1999, 2).

The dependency on Anthropos' interpretation in the meat industry, however, is as much a glorification, as well as an indicator of anthropocentric limits. The cultural construct of edible meat, for example, finds itself on a fault line of material and symbolic value (Yates-Doerr 2012, 11-12; DeMello 2012, 127). Meanwhile, the animal in meat is masqueraded parallel to the blurring of transformative encounters (DeMello 2012, 130; Vialles 1994, 17). Human animals have only limited sight on the industry, whereas the nonhuman animal travels through all sites. Anthropocentrism does not consult nonhuman animals for complementing narratives. Anthropocentrism assumes that nonhuman animals only have economic or symbolic utility, therefore, cannot participate in the making of history (Boyd 2017, 300; Ingold 2000, 72). In accordance with Tsing (2015, 168), this thesis illustrated how nonhuman animal tracks and traces of history can evenly be read through behaviour and (meat) appearance. This perspective adheres to Taylor and Hamilton (2017, 126) to conduct sensory ethnographies as a way to increase nonhuman understanding. Sensory ethnographies are capable of rejecting the asymmetrically of human-animal relations as Boyd (2017) explains it, but certainly do not deny the existence of the asymmetry. Rather, this thesis explains the meat pig as the domesticated nonhuman animal, which implies previous acts of domestication. Yet, as the elaboration on the duty of care aimed to illustrate, domestication is not inherently followed by human animal dominance. As the third chapter set out, there are various reasons to assume limitations to human dominance. Thereof being most fundamental the relating of the human animal to the meat industry primarily as employment.

The trajectory from species to protein may be considered a rite the passage. Human-animal relations are constructed and understood in a variety of liminal phases that are intangible and elusive. The meat pig as a perspective provides the opportunity to recognize both human, as well as nonhuman animal liminality. From here, I suggest a continuing of multispecies explorations of embodiment, these bodies being human and nonhuman species. It provides opportunities to move beyond the limitations of seemingly unavoidable anthropocentric

perspectives. Yet it also seeks to increase the ability to make sense of intangible structures, interests and matters that are pulling and pushing through life worlds. By extension, I have elaborated on the relevance of what is in- and out of sight in the meat industry. The broader theme of *visual communication*, I suggest, is a field that could be further explored in spheres of interspecies communication. In addition, I argue that industrial settings, or chain ethnographies call for more exploration. Tsing (2015) introduced the (academic) world, including myself, to life in the ruins of capitalism. I believe an exploration of fields prior to ruins remain to be filled with unknown intimacies. Especially those that are finding themselves on fault lines of grand social debates that are facing today's contestation. On a final note, I wish to emphasize the anthropological reach that has proven to move across disciplines and perspectives by this 'multispecies ethnography of a chain'. Anywhere, at any time, there is a search for 'how' and 'why' that deserves to be explored through anthropological possibilities.

Afterword

This master's thesis is much more than its academic output. Establishing a thesis, in my experience, is predominantly a personal achievement. I am happy I have been very much aware of the educational trajectory of this research, and especially those apart from the academic objects.

This research was my introduction into doing anthropology. Being able to do anthropology does not solely refer to conducting ethnographic fieldwork. Rather, it is a process in which a researcher does not *witness* the coming together of the bits and pieces of one's research but *makes* them unify. As such, it involved the designing and managing of a project that did not seem feasible at first. It involved convincing others of my expertise and proving the relevance of anthropology, while still familiarizing with the discipline myself as well. It involved maintaining relationships of trust in times of the COVID pandemic. It involved writing up an ethnography in a way that does justice to the stories and experiences that I collected. It involved taking readers along the narrative while simultaneously making academic statements.

From Species to Protein represents my personal, as well as my academic eagerness to contribute to the enhancement of a sustainable global food system. I am proud to say that I stand by the result, as much as I appreciate the process.

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